IN THE CIRCUIT COURT OF JACKSON COUNTY, MISSOURI
SIXTEENTH JUDICIAL CIRCUIT, DIVISION 12
Honorable Jennifer M. Phillips, Judge

KATHERINE O'HAVER,	)	
	)	
Plaintiff,	)	
	)	
vs.	)	Case No. 1816-CV30710
	)	
3M COMPANY,	)	
	)	
Defendant.	)	

TRIAL TRANSCRIPT

Beginning on September 27, 2022 through and including October 13, 2022, the above cause came on for jury trial before the Honorable Jennifer M. Phillips of the Circuit Court of Division 12 of the Jackson County Circuit Court in Kansas City, Missouri.

Gail M. Eckert-Conaway, Certified Court Reporter No. 0836
Sixteenth Judicial Circuit, Division 6
Kansas City, Missouri

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[REPORTER'S NOTE: This transcript contains quoted material.

Such material is transcribed as read.]

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THE COURT: The Court calls Katherine O'Haver versus 3M Company, Case Number 1916-CV21030. May I please get the parties' entry of appearance.

MR. EMISON: Brett Emison and Danielle Rogers here on behalf of plaintiff Katherine O'Haver.

MR. TORLINE: Steve Torline and Jerry Blackwell and Lyn Pruitt for 3M.

THE COURT: Ladies and gentlemen, welcome to Division 12. I know we already met this morning across the hall but I want to welcome you to my courtroom. And the first thing I want to do is introduce my staff to you. To my left is Gail Eckert-Conaway. She's the court reporter for this trial. And I think there's a really good argument that she has the most difficult job because she has to take down every word that's being said and there's some rules that go along with that. So we'll talk about that in just a minute.

To my immediate right is Carly Ross. She's the law clerk for Division 12. If you are selected to serve as a juror in this matter she will be there and you will have the most contact with her. Any questions you have she will help you out during your time as a juror.

Next to her is Ian - I'm sorry Ian I don't know your

last name.

A Krause.

THE COURT: He's a new law clerk to Jackson County. He's actually Judge Roldan's law clerk. Finally, Josephine Saputo the JAA. She's been with the court for many years and the entire time she's been in Division 12. She kind of holds a fort down behind the scenes and you'll have some interactions with Jo as well. So thank you, Jo.

I'd like to first explain why we're here today. This is a civil case. A civil trial is different from a criminal trial, whereas, a defendant charged with the crime could go to jail. A civil trial involves a disagreement between parties for the claims that have been brought here to be resolved.

At this time, I'll give you a brief description of the case you will hear and the meaning of important legal terms. This is to help you understand the nature of this case and assist you in evaluating the evidence. The plaintiff is the party who filed this case. Let me introduce the plaintiff to you. Katherine O'Haver plaintiff, Brett Emison, Danielle Rogers, Genevieve Zimmerman and Kyle Farrar are her counsel. This case has been filed - let me introduce the defendant too. 3M Company is the defendant. Jerry Blackwell, Lyn Pruitt and Stephen Torline is their counsel.

This case involves the Bair Hugger patient warming system, a medical device used to maintain patient's normal body temperature during surgery. The Bair Hugger system is manufactured and sold by the defendant 3M company which acquired the product - which acquired the product when it acquired Arizant Healthcare Incorporated in October 2010. Arizant Healthcare is now part of 3M. Ms. O'Haver is suing 3M because she claims that Bair Hugger patient warming device used in her 2016 knee replacement surgery was defectively designed and unreasonably dangerous for use in orthopedic surgery and caused her to develop a deep joint infection.

3M denies that the Bair Hugger caused Ms. O'Haver to develop a deep joint infection and contends that the Bair Hugger system is safe and effective for use in knee replacement surgeries like Ms. O'Haver's. The plaintiff claims that the Bair Hugger system was defective and negligently designed and that plaintiff was injured and should be compensated. Further, plaintiff claims defendant should be responsible for punitive damages to punish defendant.

I will determine whether the evidence is sufficient for you to consider an award of punitive damages in addition to damages to compensate the plaintiff. The defendant disputes the claim of plaintiff and deny that the

Bair Hugger system was defective or negligently designed and deny that the Bair Hugger system injured the plaintiff.

The term negligent or negligence as used in this instruction and any other instruction I may give to you meets the failure to use that degree of skill and learning ordinarily used under the same or similar circumstances by expert defendant's businesses.

The burden of proof is as follows. Your verdict will depend on the facts that you believe after considering all the evidence. The party that relies on any disputed fact has the burden to cause you to believe that such fact is more likely true than not true. In determining whether or not you believe any fact you must consider all of the evidence and the reasonable conclusion you draw from the evidence.

There's a different burden of proof that applies only to punitive damages. A party seeking to recover punitive damages has the burden to cause you to believe that the evidence is clearly and convincingly established the facts necessary to recover punitive damages. Your verdict must be based on the final instructions given to you after all the evidence.

Justice requires that you not make up your mind about the case until all the evidence has been seen and heard and all of you are in the jury room for your deliberations and

your verdict.

The trial of a lawsuit involves a considerable amount of time, effort and expense and the parties are entitled to have their rights finally determined. The failure on your part to follow the rules and instructions I give to you may result in a miscarriage of justice and a new trial may be required.

You have been summoned today as prospective jurors for the trial of a civil case. Civil cases begin with the selection of qualified and impartial jury. You will be asked a series of questions to determine if you have any personal interest in or knowledge of the case that would make it difficult for you to be fair and impartial. The questions asked are not meant to pry into your personal life. They are simply a necessary part of the process of selecting a jury. Your answers must be truthful and complete. Therefore, please listen to the questions carefully and take your time in answering. If you do not understand a question raise your hand and it will be clarified. If later during the questioning process you remember something you failed to mention earlier raise your hand and let us know.

Following the questioning process some of you will be chosen as jurors and some will not. Please understand that not being chosen does not reflect on your ability or

integrity. You will now take an oath to honestly answer these questions. If you could please stand and raise your right-hand.

(THE COURT SWEARS IN THE JURY PANEL.)

THE COURT: Thank you. The parties have the right to have this case decided only on the evidence presented in this court. You must not conduct your own research or investigation into any issues in this case. You must not attempt to obtain any outside information whatsoever about the case. You must not comment, discuss or communicate with anyone by any means not even among yourselves what you hear or learn in trial until the case is concluded and then only when all of you are present in the jury room for deliberation of the case under the final instructions I give to you.

During this jury selection process, I want to emphasize you are not allowed to use any electronic communications, devices or the Internet to search for, receive, send or post information about the parties, the lawyers, the judge, the witnesses or any evidence or locations mentioned. Do not discuss or to attempt to research what the law in the case may be. This ban applies to all electronic devices such as smart phones, laptops or iPads, all forms of electronic communication such as email, text messages or blogging and Internet research tools and

social media like Google, Facebook and twitter.

Justice depends on careful and fair decisions based upon a conscious and unbiased analysis of the evidence in this case. It is the duty of every juror to determine the facts based upon the evidence presented at trial. Automatic or reflective responses influenced by conscious or unconscious preconception or stereotypes should not enter into the determination.

Bias based upon factors such as race, sex, gender or gender identity, religion, national origin, ethnicity, disability, age, sexual orientation or marital status has no role in the pursuit of justice. Your conclusions in this case should be based on a fair and unbiased consideration of the evidence and respect for the views of other jurors' backgrounds and perspectives may be different from yours.

Each of you have been given numbers. I'm sorry if this seems impersonal but it makes it easier for the court, the attorneys and the court reporter to identify you for the record here we are making. Please hold your number up at the beginning of your response. Make sure you speak up. Don't just nod your head and avoid saying uh-huh or uh-uh. We all do that from time to time so I or an attorney may remind you. If the attorneys for myself or the court reporter cannot hear they may request that you stand to

answer. Unfortunately, for those the back of the courtroom soft spoken you are just the distance we may ask you to stand whenever you're answering that will give you directions in that regard.

As I stated earlier, the questions asked are not meant to pry into your personal affairs. However, it is necessary to ask those questions. If your response to any particular question would require you to disclose information that is extremely personal or private please let me know or would cause embarrassment to you please let me know and I'll give you the opportunity to respond at the bench out of the hearing of the rest of the jury panel.

If selected as a juror your job will be to decide what the facts are based upon the evidence you will see and hear. It's my job to instruct you regarding the law which you will apply to those facts.

Is there anyone here that would not or could not follow the instructions that I will give during the course of the trial? If so, please raise your number. I see no numbers.

The lawyers and the court believe that this case - that this trial will last two and a half to three weeks. Jury duty will be a hardship to some degree on anyone selected as you will be away from your job, your family or both during your service as jurors. But jury duty is a

civic responsibility that we all share. Recognizing that it is a hardship to everyone called to jury duty, my question to you is this. Is there anyone on the panel who believes that serving on this jury would impose a hardship greater than that of your fellow jurors sitting next to you? If you believe that your service as a juror would create a hardship for you that is greater than that of your fellow jurors can you please raise your number.

Once I call your number you can put it down. Number 10, four, five, 13, 17, 20, 21, 23, 28, 35, 36, 39, 46, 51, 56, 57 and 59. Thank you.

Will each of you who has been able to hear me please raise your number. If you've been able to hear me raise your number. I think I see all the numbers. Thank you very much. I used to say can everyone hear me but I realized that was very flawed question so I changed it up.

Is anyone here who has any other physical or health problems which would make it impossible or extremely difficult to serve on this jury? If so, please raise number. Thirteen, thank you, sir. Number 18, thank you, ma'am. Anyone else?

Counsel representing the plaintiff will be questioning you first. Then counsel for the defendant will question you. Counsel for the plaintiff, you may proceed.

MR. EMISON: Thank you, Your Honor. May it

please the court, Your Honor.

THE COURT: Counsel.

VOIR DIRE QUESTIONING BY MR. EMISON

MR. EMISON: Good morning everybody. My name is Brett Emison. With me today is Danielle Rogers from my office. We also have Aubrey Reed and Lisa Ball here with us as well. And this morning we have the honor to speak on behalf of Kathy O'Haver. Going to be racier hands a lot today so we'll get started. Show of hands, how many people really wanted to be here for jury duty this morning? I have one. Number 4 and number 33. Show me - and number 28 and 39 and 52. That's great. Usually there's nobody.

Jury service can really be a thankless job. The first thing that Kathy told me is she wanted me to thank each and every one of you for being here as part of this your civic duty.

I make a joke about jury service when I do this there lots of jokes about trying to get out of jury duty. I will tell you that at some time I got called for jury duty. It's been a while now 2005 at the courthouse downtown. It was pre-COVID and there was about 200 of us in the jury selection room where you all just came from. I walked in there and I didn't know a soul but I see a face that looks vaguely similar from back in high school. So I walked

over. We started chatting.

I grew up in a small town called Higginsville. This person grew up one town over Lexington. So we'd seen each other in passing during our high school days.

We never made it this far. We didn't get called. We did what you all are going through and we had to sit and wait in the big jury room all day. So we got to hang out and have lunch and I will tell you next June we're going to celebrate our 15th wedding anniversary and we've got two kids. So you never know what might happen during jury selection.

You have all taken an oath in this case. You've taken an oath to tell the truth. We've got a limited amount of time together. There's a lot of ground that were going to cover. So for some these questions I'm simply going to ask you a question. I'm going to accept your answer without much follow-up.

So show of hands, how many feel that the oath is something that's important to follow? Raise your card if you feel that way. It looks like everybody. Thank you.

In our country we have a symbol of American justice that you might be familiar with is the blindfolded lady and she's holding the scales. There's nothing on the scales and those scales are perfectly balanced. They're not tipped in favor of one party or the other when the case

begins. That's important symbolism of how we have a system of justice in America. Nobody starts out a little bit ahead. Nobody starts out a little bit behind. Show of hands, how many feel that's a good way to have a justice system in this country? Great, that looks like everybody. Thank you.

And so in this process both parties are going to be asking questions to see if there's something about this case that causes one party to start out a little bit ahead or little bit behind the scales are tipping even just a little bit before the evidence is heard in this case. And that's okay because I believe everybody in here is a fair person.

There's lots of different kinds of cases in this courtroom. There's criminal cases. There's business cases. There's contract cases, others injury cases like this there might just be something about this case that makes it not the right fit for some the people here.

And for example, my daughter loves peas. She will eat peas on anything with anything all the time. I cannot stand peas. I refuse to eat them. I hate them even when my wife put some on the part of the kitChan. My daughter and I were judging a casserole contest and one of the casseroles is a pea casserole, that would not be a good fit for me. I could judge a pie contest. I could judge some

other kind of contest, but if it was a contest where I was going to have to eat peas, whoever made that dish is going to be starting out behind because I'm not the right kind of person the judge that contest.

That's really what this process is about here today. Does everyone understand that? Great, thank you.

And Your Honor, I should have asked this before. Kathy sometimes needs to stretch her knee. Is it okay if she does that during this process?

THE COURT: Sure.

MR. EMISON: Show of hands, how many of you and by you this is a collective you. You, your spouse, significant other, close friend or family member has experience in the medical field if you'd raise her hands. I'm going to go down the list to get the numbers. Number two, number three, number four, number eight, number nine, 10, number 15, number 16, 21, 25, 26, 27, 31, 34, 35, 36, 39 I'm sorry ma'am, yours is backwards, 41, 42, 43, 45, 46, 51, 52, 53, 56, 58 and 60. Of the folks who have experience or a family member has experience in the medical field how many have ever assisted in a surgical operation? Show your hands. Have you ever assisted in surgery? Number 39, 42.

VENIREPERSON NO. 16: My sister.

THE COURT: Ma'am, can you speak up please.

VENIREPERSON NO 16: My sister works in emergency surgery.

Q I will have a couple more questions for you. 33, I see 35, 26, 56.

VENIREPERSON NO. 41: Can you ask the question again?

THE COURT: Which juror just asked that? Juror 41.

Q And your question was what was my question?

VENIREPERSON NO. 41: Yes.

Q My question was actually, have you assisted in an operation or surgery?

VENIREPERSON NO. 41: Okay.

Q Number 26, tell me about your experience?

VENIREPERSON NO. 26: Well I'm a nurse and I haven't worked in surgery but I have assisted with surgical things.

Q Have you been in the operating room during the surgery?

VENIREPERSON NO. 26: Just in nursing school.

Q In this case as the Court told you, this case involves a medical device that was manufactured by 3M, the Bair Hugger that's used in some surgeries. Do you have any familiarity at all with the Bair Hugger?

VENIREPERSON NO. 26: Well my mother had a

knee replacement and also, I worked in that inpatient rehab where we did a lot of surgery.

Q With the Bair Hugger?

VENIRE PERSON NO. 26: I don't know.

Q Do you have any experience at all with the Bair Hugger during surgery?

VENIREPERSON NO. 26: No.

Q And some of the evidence in this case will be about how operating rooms are designed and about a protective airflow that's used in an operating room that blows clean air down from the ceiling over the surgical table. Are you familiar with that concept?

VENIREPERSON NO. 26: I am.

Q The operating room that you worked in didn't have that kind of protective airflow that blew the clean air from the ceiling down over the operating table?

VENIREPERSON NO. 26: I'm assuming so. It was years and years ago.

Q And in this case that's going to involve questions about these things and evidence about these things. Is your experience dealing with that something that's going to be weighing on your mind as you hear the evidence in this case?

VENIREPERSON NO. 26: As far as the airflow thing?

Q In general, patient warming or the Bair Hugger,

anything about that including the airflow?

VENIREPERSON NO. 26: Not that.

Q That's something that you'll listen to the evidence that's presented at trial and not put your own experiences with those things in addition to that weight on those scales?

VENIREPERSON NO. 26: I would hope not.

Q Okay, thank you, ma'am. And number 35, what's your experience with surgery?

VENIREPERSON NO. 35: I was a medical assistant for a podiatrist and assisted in surgeries but it was just in the office.

Q See you don't have experience in an operating room like Juror 26?

VENIREPERSON NO. 35: No, I do not.

Q Thank you, ma'am. I appreciate that. Juror number 39.

VENIREPERSON NO. 39: I was a fire fighter/EMT after college so lots of field training.

Q Have you had any experience in an operating room while surgery was going on?

VENIREPERSON NO. 39: Just clinicals in college.

Q In your experience as they are do you have any recollection of whether or not the surgical patient was being warmed during that surgery?

VENIREPERSON NO. 39: No, I don't.

Q Do you know if a warming device like a Bair Hugger was used in that surgery?

VENIREPERSON NO. 39: I don't know.

Q Do you remember if the operating room you were in had the protective airflow from the ceiling?

VENIREPERSON NO. 39: I believe it did.

Q What's your understanding of the airflow?

VENIREPERSON NO. 39: It's a sterile layer that prevents infection in the room.

Q And this case is going to be involving evidence and issues about airborne contamination in an operating room. Is there any chance at all with your experiences in being in clinicals in the operating room and have that kind of protective airflow the might be adding weight from those scales over and above whatever you hear?

VENIREPERSON NO. 39: I don't believe so.

Q Thank you, sir.

VENIREPERSON NO. 17: Can I ask a question?

Q You're number?

VENIREPERSON NO. 17: Seventeen. My daughter's an emergency nurse but I don't have any knowledge of if she's been in surgery or anything.

Q Okay, thank you. Number 17, thank you for that because sometimes you hear a question and you don't raise your

number but something jogs your memory a little bit later on. If that happens, please do what number 17 did and raise your paddle and let us know. Number 34.

VENIREPERSON NO. 34: I was an emergency medical technician in a very small community. So limited staff in the ER and they did a lot of emergency surgical procedures.

Q When you were there do you have any memory or any knowledge about whether or not the patients were being warmed during that surgery?

VENIREPERSON NO. 34: It was in the 1990s.

Q In the 1990s did that operating room have that protective airflow?

VENIREPERSON NO. 34: I was never in the operating room. I've always been in the emergency room.

Q Thank you, sir. Forty-two, yes, ma'am.

VENIREPERSON NO. 42: My sister, she works ....

THE COURT: Could you maybe stand up. If you could speak up so the court reporter can hear you.

VENIREPERSON NO. 42: I can speak louder. Well my sister, she was an LPN at KU. She worked in the emergency surgery. She talked to me about surgeries that they did.

Q Did she ever talk to you about patient warming during

surgery?

VENIREPERSON NO. 42: No.

Q Did she ever talk to you about what kind of airflow the operating room had that might have some protective airflow to try to keep containments out of the surgical field?

VENIREPERSON NO. 42: No.

Q Thank you, ma'am. Forty-three, yes, ma'am.

VENIREPERSON NO. 43: I worked in a small hospital emergency room. We did minor procedures, suturing and so forth. I was not exposed to airflow.

Q Thank you for letting us know that. Juror Number 56, yes, ma'am.

VENIREPERSON NO. 56: I work for a vet so I've done surgery on animals.

Q I'm not as familiar with veterinary surgery. Is there any patient warming involved in that?

VENIREPERSON NO. 56: There is. We do use the Bair Hugger.

Q You do use the Bair Hugger?

VENIREPERSON NO. 56: Yes.

Q And in this clinic, is there also that protective airflow?

VENIREPERSON NO. 56: Positive pressure, yes.

Q Why does your clinic try to keep that positive pressure?

VENIREPERSON NO. 56: Trying to keep all the contaminants out of the sterile surgical field.

Q Again, in this case where a lot of the evidence and a lot of the issues are going to be about whether there was a disruption in the airflow to that sterile field and whether that was caused by the Bair Hugger, is your experience using the Bair Hugger in that kind of a clinical setting going to be weighing on your mind even just a little bit as you hear the evidence?

VENIREPERSON NO. 56: Potentially, I don't know because I don't know what the evidence is.

Q I understand. It's part of the process to find out if there's anything potentially tipping the scale about now before any evidence is put on. Since like with that experience maybe there might be.

VENIREPERSON NO. 56: Possibly, yes.

Q Even if you tried hard, it's hard to take that life experience off of that?

VENIREPERSON NO. 56: Correct.

THE COURT: Can you finish that last part of your answer?

VENIREPERSON NO. 56: The successful surgeons we have are using the Bair Hugger to keep patients warm, yes.

Q Thank you, ma'am. I appreciate it. Related to that as you can guess there's going to be some testimony about

airflow and HVAC systems. How many of you, and again this is a collective you involving you, a spouse, a loved one, a close friend or family member have experience in HVAC or a building engineer? I see 14, 15, five. And over here I see 21, 24, 25, 34, 33, 34, 39, 40, 47, 56, 57, 59 and 60. Did I call everyone's number who raised their hand? Number five, can you tell me about your experience?

VENIREPERSON NO. 5: General contractor. I have 30 years-experience working with general contractors.

Q Have you ever been involved in designing or working on and operating a hospital airflow system?

VENIREPERSON NO. 5: Hospital, no.

Q In this case where there may be testimony about this specific kind of specialized HVAC system, is there anything in your background that would be weighing on you as you hear that evidence?

VENIREPERSON NO. 5: No, just general installation.

Q So if there's evidence about how that HVAC system is designed or how it's supposed to work, you could listen to the evidence and judge just on that evidence?

VENIREPERSON NO. 5: Yes.

Q And, Number 14.

VENIREPERSON NO. 14: Yes. I've built some houses down in Texas, general contractor, landlord here in

Kansas City. I've installed several HVAC systems.

Q Anything commercial HVAC like a hospital operating room?

VENIREPERSON NO. 14: No.

Q Anything about your experience that's going to be weighing on those scales at all?

VENIREPERSON NO. 14: Not that I can think of.

Q Number 50.

VENIREPERSON NO. 50: My father-in-law is a supervisor with the City of Wichita HVAC.

Q Could you speak up just a little bit?

VENIREPERSON NO. 50: My father-in-law is a supervisor with the City of Wichita, HVAC Supervisor.

Q Has ever been involved in anything to do with hospital or operating room HVAC system?

VENIREPERSON NO. 50: Not to my knowledge.

Q Anything about his work in HVAC that would be weighing on the scales at all before you heard this case?

VENIREPERSON NO. 50: No because I'm not really familiar with it. He talks about it but I'm not familiar with it.

Q Thank you. Twenty-one.

VENIREPERSON NO. 21: Yeah. In the past I've worked with mainly technicians and HVAC systems.

Q Anything about that that would be weighing on the

scales before the case starts?

VENIREPERSON NO. 21: No.

Q Twenty-four.

VENIREPERSON NO. 24: I'm an electrical engineer. I design controllers for power plants and oil refineries. They have air conditioning systems. Usually we're designing them to keep the personnel and computer equipment temperature controlled. And we work sometimes in interaction with fire control systems.

Q Anything about your specialized experience in providing and working on HVAC systems that would be causing those scales to tilt one way or the other?

VENIREPERSON NO. 24: I haven't heard any evidence so I don't know.

Q As you hear the evidence would you be having your own personal experience about that design on the one side of the scale or the other?

VENIREPERSON NO. 24: Yeah, my experience with that background.

Q So as you're hearing that evidence you are also applying your specialized knowledge to that either for or against, it doesn't matter which side. Is that something that's going to be weighing on your mind?

VENIREPERSON NO. 24: Yes, it's unavoidable.

Q Unavoidable. Thank you. I appreciate that. Number

25.

VENIREPERSON NO. 25: Yes, sir. Yes. I work in-house maintenance and I have quite a bit of knowledge about HVAC. I used to work at KU Med Center and two community colleges.

Q When you worked for KU Med Center, was that involving HVAC in operating rooms potentially?

VENIREPERSON NO. 25: Yes, I worked for the hospital authority so I know quite a bit about that.

Q And like Juror Number 24, you'll hear evidence about airflow and airflow systems, even if you did your very best to set your personal expertise aside, is that something that's gonna be adding weight to one side or the other on those scales?

VENIREPERSON NO. 25: It kind of depends but I can't get away from the knowledge and all the stuff I've seen.

Q So even if you did your best to set aside your own personal expertise, that's going to be part of your consideration no matter what?

VENIREPERSON NO. 25: Probably so.

Q Thank you sir. Juror 26, you raised her hand also?

VENIREPERSON NO. 26: I realized my brother was the head of maintenance but I don't think they call it that. He's an electrician by trade and head of maintenance at a hospital here in town.

Q Anything about his experience that would be weighing on the scales one way or the other in addition to the evidence?

VENIREPERSON NO. 26: I wouldn't think so.

Q And 33.

VENIREPERSON NO. 33: I'm an air filteration design engineer.

Q Okay.

VENIREPERSON NO. 33: I specialize in filtration media, not the system, so actually an HVAC position but memory that goes into applications.

Q I'm sorry. I didn't mean to cut you off.

VENIREPERSON NO. 33: Yeah. So I'm more in vent and filtration but I make the materials, not the systems.

Q And in this case, there's going to be discussions about filtered air. There's going to be discussions about filters on machinery components, that sort of thing. And, again, like Juror Number 24 and 25, in hearing evidence about potentially filtration issues and airborne contamination, is it going to be possible at all for you to set aside your specific expertise in the very specialized field?

VENIREPERSON NO. 33: I believe I can remain unbiased. I mean I do have a certain understanding of how design works and whatnot, system filtration mechanisms. It's hard to discount that background knowledge but I

believe I can remain impartial.

Q I believe you. I'm not questioning anyone's bias or prejudice. But sometimes like in my pea example there certain things about the case like maybe in this case where there may be evidence from experts or witnesses or technical evidence about filtration and about airborne contamination. Is it even possible that your own personalized expertise is going to be weighing on those scales in addition just because of your background or knowledge?

VENIREPERSON NO. 33: It's hard to say.

Q Okay, thank you. I appreciate that. Thirty-four.

VENIREPERSON NO. 34: Yes, sir. I work for the federal government oversight. I work for the United States Department of Justice Federal Bureau of Prisons. I oversee 20 institutions in the north central region. I'm not HVAC by trade. That's not my area of expertise. I do security electronics. We relate HVAC generally, fire alarms, shutting down HVAC in the event of a fire. I do some operational reviews of HVAC operations by making sure that they're following policies.

Q Again, in this case where there's going to be testimony about HVAC systems and airborne contamination, is there anything about your specialized knowledge in those areas that might be weighing on the scales in addition to what evidence you hear?

VENIREPERSON NO. 34: No, my review of HVAC systems is simply following policy. Are they doing the maintenance that they're supposed to be doing.

Q Thank you very much. Number 39, yes, sir.

VENIREPERSON NO. 39: Similar to a couple of the first guys over there, I run a construction department for restoration. So with that obviously I assist with HVAC systems and mold contaminants.

Q Anything about that experience that may possibly be weighing on those scales in addition to the evidence?

VENIREPERSON NO. 39: No.

Q Thank you sir. Number 40.

VENIREPERSON NO. 40: I work in the training center and we do medical so that's 99 percent recertification for installation. We also have HVAC classes.

Q In this case where there's likely to be testimony about HVAC and airflow and airborne contamination, is there any chance at all again that your specific background is going to be weighing on those scales one way or the other in addition to the evidence?

VENIREPERSON NO. 40: Likely, no. I don't have enough specialized information.

Q Thank you. I appreciate your answer. Forty-seven.

VENIREPERSON NO. 47: Yes, sir. I'm the owner

of a mechanical solutions company for commercial.

Q Do you ever design or install HVAC systems for residential?

VENIREPERSON NO. 47: No.

Q Is there anything about your work with commercial systems in general where there may be testimony about how those are designed and how they work or how they're supposed to work and other issues of airborne contamination that may be weighing on those scales in addition to the evidence?

VENIREPERSON NO. 47: No.

Q Thank you, sir. Number 56, yes.

VENIREPERSON NO. 56: My husband owns a product management company here in town.

Q And your work with your husband, do you talk about work when he comes home?

VENIREPERSON NO. 56: Sometimes.

Q With that knowledge, both your husband's knowledge and it sounds like that may be something that would we weighing on those scales even potentially in addition to the evidence in this case?

VENIREPERSON NO. 56: Possibly.

Q Again, even if you're trying to do your best. I choked down peas, I did my best, is that kind of the situation here?

VENIREPERSON NO. 56: Possibly, yes.

Q Number 57.

VENIREPERSON NO. 57: Building and property manager for a large church complex so HVAC repairs are my responsibility with a contract designing high filtration systems.

Q With your specific knowledge designing high filtration systems and this case is going to involve discussions about their air filtration and HVAC and airborne contamination. Again, is that something – this might not be the right particular kind of case for you with your specific background and knowledge?

VENIREPERSON NO. 57: I wouldn't think so.

Q Is there any chance at all that in weighing this evidence that you're not going to hear until trial, that your own personal knowledge and expertise might be tipping those scales one side or the other?

VENIREPERSON NO. 57: Not that I could see.

Q Thank you, sir. I appreciate your answer. Number 59.

VENIREPERSON NO. 59: I work for a general contractor. And we do installation of HVAC systems on the piping side. All the air goes through those to the different facilities.

Q Again, with your involvement with that is that something that might be weighing on those scales even just a little bit as you hear the evidence in this case?

VENIREPERSON NO. 59: I'm not involved in the design side of it. We just do the install and we follow specifications that we have to follow. We install and the designers control the system.

Q Thank you, sir. Number 60.

VENIREPERSON NO. 60: My grandpa owns a ...

Q Could you speak up just a little?

VENIREPERSON NO. 60: My grandpa owns a heating and air company.

Q And does he talk with you about his work at all?

VENIREPERSON NO. 60: No.

Q Anything about grandpa's heating and air that might be tipping the scales even just a little bit as you hear the evidence?

VENIREPERSON NO. 60: No.

Q Thank you. Did I miss anybody? The next question then. A show of hands. How many have experience and again this is the collective you, a spouse, a partner, a friend, a family member or a loved one. How many have experience working with bacteria or how it's dispersed? Number two, number 17 and 39 and 10. Did I miss anybody? Fifty-two. Anybody else that has that kind of experience. Number two, tell me about that?

VENIREPERSON NO. 2: I do home health and take care of a quadriplegic with bedsores, infections.

Q Thank you very much. In this case - well let me go

on. Number 17.

VENIREPERSON NO. 17: I direct a child care center and I've been in the business for over 30 years and so I deal with bacteria and germs. The only experience I have about air filtering is when the COVID happened, you know, making sure that our filtration system was on par and able to keep the facility and the children safe, the children and staff safe. But we have to learn a lot about bacteria and germs and, you know, proper handwashing and you know all that stuff.

Q Okay, thank you. Number 10. I missed Number 10 over here.

VENIREPERSON NO. 10: I used to be a CNA and my mom's a nurse practitioner.

Q And so you were around bacteria, germs and how they dispersed in the hospital and clinical setting?

VENIREPERSON NO. 10: Yes.

Q Tell me just little bit about that please.

VENIREPERSON NO. 10: When I was a CNA I was in a clinic and I also worked at St. Luke's where I interacted with patients and just following protocol with how to maintain cleanliness.

Q Was that an important thing in your clinical settings to make sure that patients and surfaces weren't contaminated with bacteria or infectious diseases?

VENIREPERSON NO. 10: Yes.

Q Why was that?

VENIREPERSON NO. 10: To ensure that I am not transferring bacteria onto the patient and just making sure that the environment was sterile in order to keep whatever - just bodily functions.

Q Number 39.

VENIREPERSON NO. 39: Like I mentioned, firefighter background, catastrophe response for lighter fluids, cross-contamination.

Q Thank you, sir. And Number 34 and 46 and 26 and 25. Anybody else? 36 and Number 8. Thank you. Let me restart my numbering and go over to Number 8. Sir, what was your experience?

VENIREPERSON NO. 8: My husband is a nurse for KU Med and he would be - so he helped prevent the spread of C diff.

Q C diff around the unit?

VENIREPERSON NO. 8: Yes.

Q Thank you, sir. I appreciate that. And Number 25, yes.

VENIREPERSON NO. 25: I work at KU so we had to deal with the infectious disease. So we are being told what to do and what not to do when we entered the rooms and things of that nature.

Q Thank you, sir. Twenty-six.

VENIREPERSON NO. 26: I know I should have raised it before, but working as a nurse, of course, I had to prevent C diff. And I've worked where I had patients in reverse flow rooms.

Q Again, we're going to hear evidence about patients in reverse flow rooms and airflow and spread of bacteria and that sort of thing. In this case, really the question is going to be whether bacteria was able to invade that sterile area above an operating table. Is your background and experience going to be weighing on those scales even just a little bit as you hear that kind of evidence?

VENIREPERSON NO. 26: I mean I would hope that I would listen to everything, but you know I've been on the other side of it.

Q And again, thinking about I hope I'd be able to eat those peas but my feelings might be weighing on how I would weigh that on those scales. Is that kind of the same for you?

VENIREPERSON NO. 26: My mother had C diff for 20 years.

Q There would be an issue for you in this case?

VENIREPERSON NO. 26: Probably. I mean I hate to say that.

THE COURT: I'm having difficulty hearing her. Can you please speak up. What was your last answer?

VENIREPERSON NO. 26: And said my mother had chronic C diff for 20 years. We had to deal with that.

Q And, again, having those experiences then maybe a contract case might be a better fit for you when you don't have those issues weighing on you and hearing that evidence. In this case is the evidence going to be weighing on your experience and background when you hear the evidence in this case?

VENIREPERSON NO. 26: I would hope not but it might.

Q Thank you, ma'am. I appreciate that. And Number 34.

VENIREPERSON NO. 34: I having training as a first responder.

Q Thank you. And 36.

VENIREPERSON NO. 36: I do home healthcare now but I used to work for A long-term medical facility. We've learned how to prevent cross-contamination and wash your hands before procedures.

Q And 46.

VENIREPERSON NO. 46: I'm a nurse. I take care of patients with Lyme disease so I go to hospitals and take care of patients that have infections to go home on IV antibiotics.

THE COURT: I'm sorry, ma'am. What's your number?

VENIREPERSON NO. 46: I'm 46.

Q Number 52, yes.

VENIREPERSON NO. 52: I'm a pharmacist so I help people with autoimmune disorders, not to touch eyes, nose or mouth and things like that.

Q And so for those of you who've raised your hand with your experience working in and around bacteria, I'm going to focus on you all first. But we've heard the initial instructions and the Court generally describing case. In general, the plaintiff in this case is going to be that the Bair Hugger caused some disruption that allowed bacteria to move inside a sterile field over an operating table.

And bacteria is microscopic. It just is. Nobody can see where the bacteria came from or where it started. There's not going to be evidence about that. And some people who work in and around bacteria need to have conclusive 100 percent surety about where exactly that bacteria came from.

Show of hands, is there anybody that feels that way at all? I don't see any hands. And that question is out to everybody. Again, is there anybody here that would need 100 percent proof of where that bacteria started or where it came from? I don't see any hands there either. Thank you. Number 41.

VENIREPERSON NO. 41: I need to use the restroom.

THE COURT: We can go ahead and take a recess then because if one person needs to go, we all go. That's okay.

No worries. It's okay. So I'll read you guys an instruction at this time. I'll read to you the instruction and then if you could just leave your numbers in your seats you come back to the same seat where you are.

(INSTRUCTION READ.)

Please be back in your seats at 10:40 please. Thank you.

(BREAK AT 10:30 AM)

(RETURN AT 10:42 AM)

THE COURT: Welcome back. We will continue with the plaintiff's questioning. Mr. Emison, you may proceed.

MR. EMISON: Thank you, Your Honor. During this process both sides will be asking you questions whether it's my side or the lawyers for 3M will be asking questions also. And many of the questions that they ask you will be about what you believe or how you feel about certain things that might be involved in this case.

But during this process no one wants a commitment from you without hearing the evidence. I only want to know what's true for you as you sit here now before the trial starts. And I want you to understand that you are not bound to give any verdict by the answers that you give us here during jury selection. Show of hands. Does everybody understand that? It looks like everybody. Thank you.

Some people feel like surgical infections are risks of

any surgery and if a surgical infection happens that it's something we know about and it's not necessarily anyone's fault and a plaintiff should not recover for that no matter what the evidence is at trial. Show of hands, how many feel like that to any degree? I don't see any numbers. Thank you.

And for those of us who have ever been to the hospital we know that sometimes they hand you a stack of papers to sign. And sometimes in that stack of papers is something called an Informed Consent that talks about the risks of whatever procedure is going on. And some folks have an idea in their mind about what a document like that means.

And some people feel as a medical patient that signing an Informed Consent Form that that patient should never be able to file a lawsuit or should never be able to recover for injuries no matter what the Court's instructions are or no matter what the evidence is at trial. Show of hands, how many feel that way to any degree? I don't see any numbers. Thank you.

Show of hands, how many have ever heard the term beyond a reasonable doubt? That looks like just about everyone. Beyond a reasonable doubt is the burden of proof. That's a proof that's required in a criminal case. A criminal case is where somebody can be put in jail and have their freedom and liberties taken away from them.

This is not a criminal case.

This is what's called a civil case. And no matter what you decide at the end of the trial no one is going to go to jail. No one's freedoms or liberties will be taken away. And for that reason, for Kathy O'Haver's compensatory damages the burden of proof is lower than it is for a criminal case.

In this case the burden of proof is whether you believe the facts are more probably true than not true. Whether you believe the facts are more probably true than not true. This is sometimes called the greater weight of the evidence.

And if we remember an example of American justice, the blindfolded lady holding the scales, more probably true than not true is tipping those scales ever so slightly even if it's just a little bit that. That tips the scales more probably in the direction of one side or the other, more probably true than not true.

And some people just have a problem with that standard with more probably true than not true. Some people feel like it makes it too hard on a company like 3M to defend a case and it makes it too easy for a plaintiff like Kathy to win a case. And show of hands, how many people feel that way to any degree? I don't see any hands. Thank you.

In this case at the end of the trial we're going to be

asking the jury to award Kathy damages to compensate her for her injuries and the harms that were inflicted on her because of her injury. And in this case, we're going to be asking for large amount of money. That's just going to be something like eight or $9 million that we're going to be asking the jury that's seated to award.

And in talking about the burden of proof more probably true than not true, the greater weight of the evidence, some people feel the greater weight of the evidence tipping those scales just a little bit might be okay for a smaller amount of damages. But if they're going to award something like eight or $9 million they've gotta make sure those scales are tipped more than just a little bit to award that kind of money. They need the scales tipped more than just the greater weight of the evidence, more than probably true. By a show of hands, how many people feel that way? Number 11. Anybody else hear the jury box? Number 28, Number 39, Number 41, Number 59 and Number 60. I see somebody shaking their heads in the back row. Is there anybody else that feels that way at all?

A Can you repeat your question?

Q Sure. We've talked about the burden. The Court's going to give you more probably true than not true. But in this case where we're going to be asking for millions of millions dollars, eight or $9 million, do you need to tip those scales

more than just slightly, more than just probably true? Number 11, thank you, sir. Tell me about how you feel about this.

VENIREPERSON NO. 11: You're saying that the large amount of money is more true?

Q Do you feel that way? In order to award $9 million in this case is it going to be enough if we tip those scales ever so slightly more probably true or are we going to have to tip those scales more and provide you more evidence?

VENIREPERSON NO. 11: Probably for that much money, yeah.

Q On a scale of 1 to 10 and 1 is not a real strong feeling about that and 10 is a very strong feeling about that, where are you on that scale on this issue?

VENIREPERSON NO. 11: Probably 8.

Q An 8 so a pretty strong feeling about that?

VENIREPERSON NO. 11: Yes.

Q And in this case where Kathy is going to be putting on that evidence, that strong feeling is something she's gonna have to overcome and she's going to have to tip those scales more than just probably true than not true, is that a fair assessment?

VENIREPERSON NO. 11: Yeah.

Q And again there's nothing I can say as a lawyer and anybody can say here that would talk you off of that strong feeling, is that fair?

VENIREPERSON NO. 11: I don't know.

Q You just don't know? I appreciate that. Number 28. Yes, tell me how you feel on this issue.

VENIREPERSON NO. 28: It probably wouldn't be - it would have to be more probably true for that amount of money.

Q If we would need to tip the scales more, we would.

VENIREPERSON NO. 28: You would need to.

Q Probably is just not gonna cut it with you?

VENIREPERSON NO. 28: No.

Q So it sounds pretty strong?

VENIREPERSON NO. 28: Yes.

Q If the Court tells you do your best, you're still gonna want to see more evidence than just probably true?

VENIREPERSON NO. 28: Well I think so.

THE COURT: Counsel, can your approach.

(BENCH CONFERENCE.)

THE COURT: So I'm not allow them to do their best. I'm going to ask them to follow the instruction of the court. So I would ask you to refrain from telling them to do their best.

MR. EMISON: Okay.

(RETURN TO OPEN COURT.)

THE COURT: I'm sorry. Juror Number 28. And so even if the instruction is more probably true than not

true, that's all we have to show. In your heart and your mind, we've got to move those scales even more if you're gonna be able to award even 8 or $9 million no matter what we do?

VENIREPERSON NO. 28: I guess I could say that if it's not more probably true than not true, that's enough.

Q It is enough even for the large amount of money? We just have to tip those scales just a little?

VENIREPERSON NO. 28: If it's more probably true than not true.

Q Beyond a reasonable doubt, we wouldn't have to tip those scales a whole lot. More probably than not true is greater weight of the evidence?

VENIREPERSON NO. 28: For that kind of money, yes, more probably true than not true.

Q So tipping those scales a little bit is going to be okay for you?

VENIREPERSON NO. 28: Yes.

Q Thank you. Number 39, tell me how you feel on this issue.

VENIREPERSON NO. 39: I believe that that large sum of money I would have to have a little bit more than just probably.

Q How strongly do you feel like that ON a scale of 1 to

10?

VENIREPERSON NO. 39: Eight or nine.

Q Very, very strong. So, again, even if the instruction is more probably true isn't enough, you're going to be require more evidence than that?

VENIREPERSON NO. 39: Yeah, I would.

Q Number 41.

VENIREPERSON NO. 41: I'm going to have to go along with them.

Q You'd need more than just tipping the scales a little?

VENIREPERSON NO. 41: If it was awarded some, but with that amount of money I'd need more. I'd be 8 to 10.

Q Eight to 10, strong feeling on that. Even if the Court instruction to you was was more probably true than not you're gonna need me to tip those scales even further?

VENIREPERSON NO. 41: For that amount of money, yes.

Q Thank you, ma'am. Number 59, yes, sir.

VENIREPERSON NO. 59: Yeah, I'd want still more evidence, more facts.

Q On a scale of 1 to 10 how strongly do you feel about that on this issue?

VENIREPERSON NO. 59: Probably a 7 to 10.

Q So very strong on this issue?

VENIREPERSON NO. 59: Yes.

Q And if the Court's instruction tells you that more probably true tipping the scales ever so slightly isn't enough, I'm going to have to tip those scales more, is that fair?

VENIREPERSON NO. 59: Yeah. I also haven't heard all the evidence.

Q And, I understand. I don't know that information. Like I said, all we can ask is what's true for you right now. And in order to even think about awarding that kind of money no matter what the evidence is, you're going to have to see more evidence to get there, is that what I hear you saying?

VENIREPERSON NO. 59: I would have to know there was fault, yes.

Q And more probably true that there's fault?

VENIREPERSON NO. 59: More evidence seriously.

Q I'm sorry. If I'm not able to convince you as to meet our burden or convince you that there was fault or negligence, are we going to have to tip those scales just ever so slightly probably true or are you going to need to see more evidence in order to award a large amount of money like eight or $9 million?

VENIREPERSON NO. 59: Probably more evidence.

Q So you would need more evidence even if the Court's instruction was that probably was enough?

VENIREPERSON NO. 59: At that point I have to follow the Court's instructions.

Q I understand. I'm sorry for not being clear. Is that something you can set aside, your 7 to 10 strong feeling and follow those instructions? Or even if those are the Court's instructions it's going to be weighing on you and you're just gonna want to see more proof in order to award that kind of money?

VENIREPERSON NO. 59: I just want to be convinced.

Q And in convincing you are those scales going to have to be tipped more?

VENIREPERSON NO. 59: Quite a bit more, yes.

Q Forty-five and 57. I'll circle back around and see if I missed anybody else too.

VENIREPERSON NO. 45: Basically, I feel the same way he does. That's a lot of money and I think it at least needs to be more evidence.

Q How strongly on that scale of 1 to 10 do you feel?

VENIREPERSON NO. 45: I'd go all the way to 10.

Q And, again, even if the instruction that the Court gives you is that more probably true is enough, in order for you to even think about awarding that kind of money I've got it tip the evidence scale?

VENIREPERSON NO. 45: Probably true wouldn't be enough.

Q Thank you, sir. I appreciate your answer. Number 60. We'll come back to the other folks that raised their hand. How do you feel about that?

VENIREPERSON NO. 60: I would need a little more than just that.

Q In a case like this where the damages are severe we're going to be asking for millions of dollars. Even if the Court's instructions are more probably true than not true is enough to meet that burden, you're going to need us to tip the scales even more than that for you, is that fair?

VENIREPERSON NO. 60: Yes.

Q Thank you, ma'am. How strongly do you feel about that on a scale of 1 to 10?

VENIREPERSON NO. 60: Like a seven.

Q Pretty strongly?

VENIREPERSON NO. 60: Yes.

Q And then I know - who else now that you've heard people talk about this that feels that same way? I need to write your number down. Is there anybody else that needs to raise their hand on this question? I don't see anybody over here. On this area Number 20, Number 44 and 57. Did I miss anybody else?

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, the standard is the law in Missouri. He's said they're not willing to follow the Court's instruction. And I think two of these people are confused by the manner of questioning when they say follow the Court's instructions. And I don't think - it doesn't look - it doesn't look fair not to have them understand the context in which they're being asked this question. And he needs to back up and say, can you set this aside. I think he needs to give them the whole thing so they can factor that into whatever they say.

THE COURT: Do you have any response, Mr. Emison?

MR. EMISON: The standard in Missouri, Your Honor, is whether or not the juror has expressed bias or knowledge or concern about the facts that are at in the trial. And if a juror expresses any doubt about their ability to be impartial they are to be excluded. I'm asking the question about whether or not they can do this. I'm asking the question in a way that I think describes the standard and asking specifically if the Court's instruction was more probably true than not true is their burden, if they would require more than that regardless of the Court's instruction. These jurors have indicated they would require more than that and I think that's sufficient.

THE COURT: So you've not done that consistently. You have not referenced the Court's instruction

consistently and that's the risk that you run into about whether or not I consider their answers to be a strike for cause is the notion that you feel like you might need more. This scale of 1 to 10 will not bear a great deal of worth with the Court when it comes to strikes for cause.

The fact of the matter is the question is can they follow the instruction of the Court and you have not consistently done that. It's one of the things I brought you up before to remind you that I didn't ask them to do their best. I asked them to follow the instruction of the Court. So your concerns will be taken into consideration in determining what the appropriate answers are in strikes for cause.

MS. PRUITT: Thank you, Your Honor.

(RETURN TO OPEN COURT.)

MR. EMISON: And forgive me I need to go back and ask a couple of follow-ups. Jurors 20, 44, 57. Juror Number 11, on this issue about needing more proof if you were to award a very large amount. If the Court's instruction was that the burden that we had to meet was more probably true than not true, what I hear you saying is you cannot follow that instruction and you would require us to tip the scales even more. Do I have that right?

VENIREPERSON NO. 11: Yes.

Q Thank you, sir. And Juror Number 39, same question

for you. On the one issue on being able to award - Juror Number 39, on this one issue if the Court has instructed to you that the burden is probably more true than not true and that's the burden that we have to meet to prove the case even for eight or $9 million, did I hear you say that that's not an instruction that you could follow, that you will need more evidence in order to award the kind of money?

VENIREPERSON NO. 39: Yes, that's correct. Me personally I would need more than that.

Q Thank you. Juror Number 28, same question to you. If the instruction is more probably true than not true is that an instruction that you could follow in order to award eight or $9 million or you would require us to tip those scales even more?

VENIREPERSON NO. 28: Well if it's more probably true than not true, it's probably more true.

Q Right.

VENIREPERSON NO. 28: That's enough for me.

Q Thank you. Juror Number 41.

VENIREPERSON NO. 41: I would require it to be tipped.

Q So even if the Court's instruction is more probably true than not true that's not an instruction that in his case you can follow?

VENIREPERSON NO. 41: I'd require more.

Q You do require more. If the Court's instruction was

just a little is enough, you would still require more?

VENIREPERSON NO. 41: For that sum, yes.

Q Thank you, ma'am. Juror 59, again, just to clarify again with the other jurors. If the Court's instruction is a little bit is enough more probably true than not true, even if that's the construction?

MS. PRUITT: Objection, Your Honor. A little bit is enough, it's not the standard. I'd object.

THE COURT: The objection is sustained. Please rephrase.

MR. EMISON: Sure. If tipping the scale ever so slightly probably true than not true is the instruction the Court gives you, is that an instruction that you can follow or are you still going to need us to tip the scales with more evidence in order to award something like eight or $9 million?

VENIREPERSON NO. 59: I would probably need a little more, yes.

Q Thank you, sir. Juror Number 60, same question to you. If the Court's instruction is more probably true than not true, is that an instruction you will be able to follow in this case or are you just going to need to see more proof than that?

VENIREPERSON NO. 60: I could follow the Court's instruction.

Q Thank you. Juror Number 20, tell me how you feel ON

this issue.

VENIREPERSON NO. 20: Well, for the about that's requested I would need to hear a little bit more. But if what the Court is saying kind of changes because I cannot go against what the Court says. So in the balance there - so I would say I'm between seven and eight.

Q Seven and 8. I understand the Court is on the bench and the Court is telling you here is the rule. Everyone wants to follow it.

VENIREPERSON NO. 20: Of course.

Q And if the Court was judging a casserole contest and I had to judge a pea casserole, I would do my best to choke it down. But I don't know if it could follow the Court's instruction to be absolutely impartial about that pea casserole because it's just not the right fit for me. And, again, there's other kinds of cases in this courtroom that might be the right fit where you wouldn't have to fight yourself to follow the Court's instruction.

So what we need to find out in this process is is this the right case for you. And on this issue, is that something that you could absolutely for sure follow the Court's instruction on that burden or is it even possible that you're going to require more than that and can't follow the Court's instruction?

VENIREPERSON NO. 20: I would say I would require a little bit more depending on the evidence they

would provide.

Q You would require even more even depending on the Court's instruction?

VENIREPERSON NO. 20: I would say a little more.

Q Thank you, ma'am. Juror Number 44. Yes, sir. How do you feel on this?

VENIREPERSON NO. 44: With your pea casserole $8 million is a lot. It strikes me you haven't provided us - no offense to you, but you haven't provided the basis for compensation.

Q Right.

VENIREPERSON NO. 44: Right. And so if the Judge instructed me that it was appropriate at this level to compensate eight to $9 million, I could take the Judge's instructions. But without a basis for compensation, it seems extreme and it seems healthcare costs are so high. So I would have a problem with choking down that pea.

Q And, again, we're not asking for you for a commitment here today and you won't hear any evidence until the trial starts. So all we can do is figure out sitting here today without hearing anything if this is the right kind of case.

So in this case we have to prove our case. But if the instruction is we have to prove our case by tipping the scales ever so slightly more probably true than not true, is that going

to be enough, can you follow that instruction or in order to award something like eight or $9 million you're going to need to see more proof from us than just tipping the scales ever so slightly?

VENIREPERSON NO. 44: I'm going to need to understand the basis for compensation. So I would have to say yeah, I would need more unless you're going to provide me a basis for compensation in which case I would be able to in clear conscience take the Court's instruction.

Q I will provide you. If I'm going to win this case I have to provide you a basis for compensation. I guess the question is if the Court instructs you that an adequate basis for that compensation was tipping the scales a little bit, is that an instruction you can follow or am I going to need in order for you as a basis for compensation I've got to tip those a lot?

VENIREPERSON NO. 44: No. If your basis for compensation is convincing then I can follow the Court's instruction.

Q And, I'm sorry if I'm talking in circles. If it's convincing to you is tipping those scales a little bit convincing enough?

VENIREPERSON NO. 44: As a basis for compensation, yes.

Q Thank you, sir. And 57. Yes.

VENIREPERSON NO. 57: When you said the amounts, that sort of struck me and made me think there's a standard for a tipping point. I'd like to think there would be. I thing I would be a 4 or 5.

Q Whether you're a 4 or 5 or 7 to 10 on this issue, what it comes down to is can I convince you to – whatever the evidence is at trial is it even possible for me to convince you of that. If the Court's instruction is to convince you that I would need to tip the scales ever slightly more probably true, is that enough for you to award something like eight or $9 million or do I have to tip the scales more?

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: There is nothing in the instructions that say I just have to tip the scale just a little bit. That means something different to jurors than more likely more probably true than not true. And what we're doing here is just getting off anybody because they don't know about this stuff that they don't understand yet what they're going to understand by the end of the trial. And to suggest I just have to tilt it a little bit, it sounds like an attempt to reduce the burden of proof that they actually do have which is more probably true than not true.

MR. EMISON: I think I've accurately described

the burden of proof. I think I'm entitled to explain in an accurate way what that means. Other courts have used that language. It's in our pretrial brief on jury selection that that is an appropriate way to describe the burden of proof to the jury.

THE COURT: It's an appropriate way - I don't disagree with that necessarily. But where I have issue is you using that in conjunction with the Court's instruction and your mixing them together. And that's misleading to the jury. We must refer to this instruction more likely true than not true, not the tipping of the scales. There's nowhere in the Court's instruction where we talk about tipping the scales.

If that's how you want to define more true than not true, I don't have an issue with that. Where I have an issue is you mixing that with the Court's instruction.

MR. EMISON: I understand. I'll be more precise.

THE COURT: You have 62 minutes and 18 seconds.

Q. Fifty-seven, we were talking about this. And, again, the Court's instruction will be more probably true than not true. And when I tried to define or describe what that means I used the term tipping the scales ever so slightly. Tipping the scales is not going to be in your instruction. That's just the way that I talk about that with you that.

Again, I'm understanding that the Court's instruction is

going to be more probably true than not true. And understanding that the way I talk about that is just tipping the scales. Is that going to be an instruction that you can follow in order for me to convince you on awarding compensatory damages like eight or $9 million or are you going to need more proof that?

VENIREPERSON NO. 57: I would like to think so. Like I said, coming from moving the balance a point higher but I'd like to think I could be.

Q I'd like to think I could. Is this the right kind of case for you if there's a doubt in your mind about whether you can follow the Court's instruction or whether even in hearing the evidence you said that points going to move? Is there any possibility at all that that point's going to move and you could not follow the Court's instruction?

VENIREPERSON NO. 57: I would try to be and I would hope not.

Q Thank you, sir. I think I missed Number 45 when I circled back around. Again, hearing this discussion I understand the Court's instruction is going to be more probably true than not true. And you understand when I talk about that I use my hands and tipping the scales. Is that an instruction that you're going to be able to follow or is that something that in order to award or even think about awarding that kind of money you're going to need more proof?

VENIREPERSON NO. 45: I would have to have a

high probability.

THE COURT: And that was 45, right?

VENIREPERSON NO. 45: Yes.

VENIREPERSON NO. 17: I have a question and it's been bothering me.

THE COURT: And this is juror number?

VENIREPERSON NO. 17: Seventeen. So I'm here using my time and everybody else's time. I'm certainly hoping that both parties believe in their case and that the burden of proof that's on both of you and it's not likely that we're sitting here making that decision. That's my thing.

I don't know where that eight million dollars came or where the 2 million came from or how much of a cut you get as a lawyer. I don't know these things ore how much the court costs this. I just want to be as honest.

If the Judge is going to tell me that I have to make a decision because this is a civil court, the money thing does throw us off because it's a lot of money. That's a lot of money.

But I can understand if the person needs that money to take care of and help correct them or get them through life. I mean there's all these contingencies that are going around in our minds.

And so you keep asking us those questions and, you

know, I'm going to - if I was here and the person gets $2 million and it covers the cost, I want proof. If it's $8 million which I still want proof. I want to believe both parties are in this to do the best they can so this never happens again. So I don't know if that's bad for me to have that opinion.

Q It's our job to prove the case. This is not the evidence. We are not putting on evidence and we aren't proving our case now. This is to find out what's true for you and if there's feelings or things about this case that make it not the right fit.

And in this case on this particular question is if the Court's instruction to you is that to convince you to award compensatory damages of millions of dollars if the burden of proof is more probably true than not true. And how I explained that is can you follow that or will you need more proof?

VENIREPERSON NO. 17: I will look at the proof that is provided by both people. I mean, you know, the plaintiff and I don't know what the names are.

Q And the defendant?

VENIREPERSON NO. 17: And the defendant. I will look at that. But I think what confuses people here is OH, well 2 million or 200 million, that's not too bad. We get the person through life or whatever. But isn't it true that after all this is judged, that they can come back

and say well, we want to renegotiate down to a lower amount? That person is hurting and she's come for us to look and judge what is the truth.

THE COURT: Mr. Emison, I'm going to step in here for a second. So because there's only so much that the attorneys are able to say. So here's what - you know, it's very difficult for you guys to answer these question and that's not lost on me.

But what's really important is that the plaintiff is going to present evidence. The defendant may present evidence. And then I'm going to give you instructions.

It's important that the decision that you guys make is based only on what you see and hear in this courtroom. So if you have those concerns and those concerns weigh in on your decision, then that's not appropriate. You only can base your decision on what you see and hear in this courtroom.

If you have those concerns about something that may go on later or who's getting the money and where and that affects your decision, that's fair but it's not appropriate in this case.

So if there's no judgment for anyone that has these other influences and these other thoughts about civil cases and things like that, but it's important that the folks that are making the decision in this

case come into it with an open mind, a blank slate. No one's ahead of one another at the starting line. So that's kind of I think where kind of the more people answer the more kind of thoughts come into people's minds which is okay. But what's important is that you make your decision based upon what you see and hear in the courtroom and that you follow the Court's instruction as it relates to burdens of proof and so forth.

So with that, Mr. Emison, I'll let you continue.

MR. EMISON: Thank you, Your Honor. I appreciate it. So understanding that the end of the trial the instructions will be read. And your decision has to be based only on the evidence presented at trial.

And lots of folks have different ideas and different knowledge and different thoughts about other things like you've been discussing. Is there any chance at all that those other things would be weighing on how you weigh the evidence in this case?

Like my hatred of peas would be weighing on me in judging that casserole. Are there other things from outside the evidence that may be weighing on you if you consider it?

VENIREPERSON NO. 17: Yes.

Q And even if the Court's instruction to you is that you may only consider the evidence, that's not something you can follow because those other things would still be weighing on

you?

VENIREPERSON NO. 17: Well I think there's another question that needs to be asked. You've asked about the people that have worked in the medical field. But I'm on the side of and I have to say this. I want 3M Company to prove it because I've had two knee surgeries.

I've had a sister that almost died from hip replacement and the glue was wrong in 1972. And she not wanting to sue people is now in a wheelchair due to that that problem, which he had to have three other surgeries in her life. So no amount of money that she would get would give her the quality of life that she deserves. Now my sister is not in the mood – she doesn't want to sue but ...

Q I had to stop you but I've only got a limited amount of time. So I appreciate your ...

VENIREPERSON NO. 17: So I guess I'd have to be recused.

Q That'll be for the Court to determine.

THE COURT: So here's what I will say.

VENIREPERSON NO. 17: I think that's what everybody is thinking as we go through this. I think everybody is I have this and I have that.

THE COURT: So we're going to let everybody think their own thoughts and I appreciate your perspective. I think that we have a good idea of your thoughts that we're

starting this.

VENIREPERSON NO. 17: I'm sorry.

THE COURT: No, no. No apologies. We love people that talk. We want people to talk. I'm sorry for what you've gone through and what your sister has gone through. It sounds to me like this would be a difficult case for you to come in with an open mind.

VENIREPERSON NO. 17: Yes.

THE COURT: Fair enough. Thank you, ma'am.

Q We appreciate your thoughts. We talked about the burden of proof and more probably true than not true. And related to that is us proving that the medical device that 3M manufactured caused Kathy's surgical infection. And one of the instructions the Court may give you is that 3M is responsible for Kathy's injuries, if it's product either directly caused or directly contributed to cause Kathy's surgical infection. Hugger can contribute to cause the infection along with some other factor whether that's just one factor or several other factors.

And some people have a problem with the concept of directly contributed to cause. Some people don't like that a defendant like 3M can be responsible for all the plaintiff's damages even if its product was not the only cause of the infection.

Again, some people feel like that makes it too easy on a plaintiff like Kathy and too difficult on a defendant like 3M.

Show of hands, how many people feel that way to any degree? Anybody in the jury box? Number 14. I see 20, 11.

VENIREPERSON NO. 3: Can you repeat the question?

VENIREPERSON NO. 20: Can you repeat?

THE COURT: And I'm sorry, was that Juror Number 3 that asked to repeat the question as well as Juror Number 20?

VENIREPERSON NO. 3: Yes.

VENIREPERSON NO. 20: Yes.

Q Sure. We talked about the burden of proof more probably true than not true. And part of that burden of what we have to prove is that 3M's medical device, the Bair Hugger caused Kathy's infection. And one of the instructions the Court may give you if you're on the jury at the end of the case is that the Bair Hugger – I'm sorry, let me find my spot so I read this the right way. That 3M is responsible that the Bair Hugger either directly caused or directly contributed to cause Kathy's surgical infection.

And directly contributed to cause means that the Bair Hugger doesn't have to be the only cause. So that the Bair Hugger can contribute to cause the infection along with some other factors, whether that's one other factor or several other factors. Some people have a problem with that concept of directly contributed to cause because they don't like the defendant like 3M to be responsible for all of Kathy's harm, all

of her damages even if the product was only partially responsible, only contributed to cause the infection. And how many people have a problem with that, feel that way to any degree?

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Again, we have counsel telling the jury what the instruction may entail. He can use the language directly cause or directly contributed to cause but he can't characterize. What the Court is going to do is read that instruction. We're going to go to this same road again that we've just been down with regard to this other question where he was asking about burden of proof. And I want to ask the Court to put a stop to it right now because the instruction says -

Instruction 6 says the proof will be what the proof will be. But for him to start characterizing and trying to get them to be thinking along the way of well, if there's any evidence other than the fault, you can't be fair. I'm just going to object to that because it's not Mr. Emison's interpretation of the instruction. He can't tell them what the instruction means.

MR. EMISON: Again, Your Honor, it was in our brief on jury selection. We are entitled to explain the

instruction in a fair manner to allow the jury to understand what it means. When they hear that phrase in a vacuum they have no understanding what that means. I'm asking them whether they have informed any express bias or prejudice on this issue and it is something that we have to get into and I think I'm explaining it fairly.

THE COURT: The objection at this time is overruled. I would just caution you to, as you continue to ask questions the language of the instruction.

MR. EMISON: I will.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q How many people feel that way?

VENIREPERSON NO. 41: I'm - the white noise is on.

THE COURT: Stop, stop. So if you're talking, we need to know who's talking. So it was Juror Number 41 I believe that just ...

VENIREPERSON NO. 41: The white noise.

THE COURT: White noise, God bless it. Juror Number 41 was the one that spoke. And then I think that Juror Number 20 said something after that.

VENIREPERSON NO. 41: That was me. He spoke to me and I told him I'm still trying to figure out the question.

Q If you feel that way on this issue of directly cause or directly contributed to cause, if you have a problem at all, again would you raise your paddle numbers so I can write that down. Number 24 and Number 20. Were there other folks that had their paddles up?

VENIREPERSON NO. 44: Counselor, can we have a point of clarification to follow-up?

Q Yes.

VENIREPERSON NO. 44: It seems as if and I mean no offense. It seems as if you're asking us two questions. One is proving they caused it and the other is proving they contributed to cause. And I apologize but it seems as if you're asking us two questions and it's difficult for me at least to answer you honestly to both.

THE COURT: And that was Juror Number 44, correct?

VENIREPERSON NO. 44: Yes.

Q And so if the Court's instruction may be that 3M is responsible if the Bair Hugger directly caused and then there's an "or" - or directly contributed to cause. And my understanding of that instruction is that the Bair Hugger doesn't have to be the only cause of that infection. It can directly contribute to cause.

So do you need more proof to prove more likely than not that the Bair Hugger contributed to cause or acted in

conjunction with anything else that caused infection is enough to prove that case?

Some people have a problem with that, that they think the Bair Hugger should be only cause and that if the Bair Hugger acted in conjunction with anything else they just could never award a verdict for Kathy even if that's contrary to the Court's instruction.

So my question is how many people feel that that contributed to cause is just not enough for them on causation? They're going to want to see that the Bair Hugger acted alone and didn't act with anything else. I see paddle 41 and 11 and three and 24, 21.

VENIREPERSON NO. 21: I have a question not related to that answer. Do you want me to ask it now?

Q Let me write that down and let me follow up on that and then I'll circle back. Number 3, tell me about your concerns.

VENIREPERSON NO. 3: I want to know how many people have gone through this surgery before?

Q Let me stop you. I can't talk about any of that here. That goes into what the evidence is gonna be at trial and we can't really get into that. We can't put on evidence here. What we have to know is if there are factors other than the evidence and other than the Court's instructions that are going to be weighing on you as you listen to the evidence and render

your verdict.

And just this question, if the Court tells you that in order to prove our case we have to show that the Bair Hugger contributed directly or directly contributed to cause Kathy's infection or that it combined with something else to cause that infection. And if so, 3M's responsible for all of the damages, 100 percent of the damages even if the Bair Hugger only contributed to cause the infection with something else. Is that something you have a problem with?

VENIREPERSON NO. 3: Yes, I'd have to see more proof.

Q For you that's not an instruction you can follow.

VENIREPERSON NO. 3: I'd have to see more proof, 3M in its own words the only one.

Q Even if the Court's instruction is that it can work with something else?

VENIREPERSON NO. 3: I cannot go by what you say in the court.

Q With my pea example, if that's the Court's instruction, are you are still going to want to see that 3M was the only cause?

VENIREPERSON NO. 3: Yes.

Q Thank you, sir. Juror Number 11, how do you feel on this issue?

VENIREPERSON NO. 11: Well if there's more

contributors to the issue, it could be hard to put sole blame on 3M.

Q So if the Court's instruction is the Bair Hugger doesn't have to be the only cause, it could be more than one cause, if so, 3M is 100 percent responsible, is that an instruction you're going to be able to follow?

VENIREPERSON NO. 11: Actually, I guess. In my mind there's more weighing on the issue against 3M.

Q If in your mind there's more weighing on the issue than 3M, are you going to be able to give Kathy a verdict?

VENIREPERSON NO. 11: Possibly.

Q Okay. Is there any chance at all that if the Court's instruction says that Bair Hugger - proof that the Bair Hugger combined with anything else, that 3M is 100 percent responsible, is there any chance at all that you could not follow the Court's instruction?

VENIREPERSON NO. 11: No.

Q Thank you. Number 14.

VENIREPERSON NO. 14: Yes. After hearing all this talking around, it's all fine. I can remain impartial.

Q Thank you, sir. Juror Number 12, how you do you feel? Juror Number 20, how are you feeling?

VENIREPERSON NO. 20: Going back it's really like it's a question, a little confusion. But if, again,

they're saying that they are responsible and they're the only ones, that 3M is the only one responsible to take care of it, well then yes. But if there's another one that's part of it, another company, then why only one?

Q If the Court's instruction is that we make our case and you have to find for the plaintiff if we prove to you that the Bair Hugger directly contributed to cause Kathy's injuries even with something else, if something else was also involved, that the Bair Hugger was also involved. The Court's instruction is you have to find for plaintiff and you have award her damages and 3M's going to have to pay hundred percent of those damages, is that an instruction you can follow?

VENIREPERSON NO. 20: I guess I would have to but it would be on my mind. If there are two people that did this harm why then would only one be responsible for it?

Q And, again, this is kind of - I understand you're going to do your best.

VENIREPERSON NO. 20: Yes, I will do my best.

Q If the Court tells you what to do, I'm going to do my very best to do what the Court tells me to do. But in this kind of case, again, is that something that either they - it's just going to be very hard and you're not going to be able to follow this instruction on this?

VENIREPERSON NO. 20: I would do my best.

Q I understand you'll do your best. We all do our best. At the end of the day is that an instruction you could really follow and it's okay if you can't. That's why we have this process.

VENIREPERSON NO. 20: It's hard. It would be like I said in the back of my mind.

Q It would be hard for you to follow the Court's instruction?

VENIREPERSON NO. 20: Yes.

Q Thank you. Did you raise your hand? I'm sorry.

A No.

Q Twenty-four?

VENIREPERSON NO. 24: So I would say by the time I look at mostly true, partially at fault, I get to the point where I'd like to see mostly at fault or something that would help me understand that the Bair Hugger was the cause even if there are other things contributing to it. And preemptively I'll say, yes, I can listen to the Court's instruction.

Q And just to dig down on that little bit. So if the Courts instruction to you is that we prove our case and you have to find for Kathy if we show that the Bair Hugger directly contributed to cause her infection even if there were other factors involved and it wasn't the only cause. And so 3M is responsible for 100 percent of the damages. That's an

instruction that you can follow?

VENIREPERSON NO. 24: And can work with the words "directly contributed," yes.

Q Thank you, sir. And 44.

VENIREPERSON NO. 44: I don't think I raised.

Q Okay. And 41. How do you feel on this?

VENIREPERSON NO. 41: I feel that one company can't be the only company if there's someone else involved.

Q And so if the Court's instruction to you is that you have to award a verdict if we show that Bair Hugger directly contributed to cause even if there's other factors involved. And if so 3M's responsible for 100 percent of the damages, that's just not an instruction that you can follow for this case?

VENIREPERSON NO. 41: I'm struggling with it, no.

Q Not something you can follow? Did I get that right?

VENIREPERSON NO. 41: Right.

Q Juror 21, what was your question?

VENIREPERSON NO. 21: You answered it.

Q Good. Did I miss anybody? Anybody here that didn't discuss it feel like they need to raise her hand? I don't see any other hands.

And, again, kind of like the burden of proof. In a case like this where we're going be asking for millions of dollars

for Kathy's compensatory damages, some people feel like they need more proof than just more likely true or probably true than not true.

Same thing on this. In a case where we're going to be asking for millions and millions of dollars, does anybody have a problem with this concept of directly contributed to cause or in order to award something like millions of dollars is not going to be enough that the Bair Hugger just contributed to cause Kathy's infection, that it has to be the only cause? Does anybody feel that way?

VENIREPERSON NO. 41: Can I respond?

Q I have your answer. I think I understand yours. Anybody else? I don't see any other hands.

The jury that serves in this case will never have on the verdict form anywhere to place blame on anyone other than 3M. There will be a place to blame any doctor, any hospital, any patient, any other company. This case is about whether 3M was negligent or whether 3M made an unreasonably dangerous product. And if that product contributed to Kathy's injuries then 3M is responsible for all of the harm.

Show of hands, how many would even consider the possible fault of somebody else like a doctor or a hospital or even a patient no matter what the Court's instructions are what the evidence is at trial? How many feel that way? I see juror Number 41 and Juror Number 10 and 48. Anybody else feel that

way? Juror Number 10, tell me about your thoughts?

VENIREPERSON NO. 10: The parties that are involved in the surgery can affect what happens in the surgery. It can affect the materials that are used throughout the surgery. So if there was negligence on the part of the surgeons or the staff involved that either enhanced or deteriorated the way 3M's product worked, that would be - that would raise question.

Q And in this case where there won't be anybody to infer that. And ...

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Again, this is a mischaracterization of what the jury is going to hear in this trial. We're entitled to put on a defense. And just because nobody's on stand it doesn't mean this jury can't see all evidence that they hear. They're going to hear a ton of evidence about the person, the environment, the surgeon. What Mr. Emison is trying to project is that when they hear that evidence that they can't let that influence their decision because it's only 3M in this.

MR. EMISON: That's not what I'm suggesting.

THE COURT: You did say what the evidence is going to be so I'm going to sustain the objection. I would

instruct you to refrain from discussing specifically what the evidence is going to be.

MR. EMISON: I apologize. I said that without knowing and I apologize.

THE COURT: That is how I interpreted it but just a word of caution. The objection is sustained. You have 30 minutes remaining.

MS. PRUITT: If I can be heard one more time. This particular potential juror, I would ask that you ask him to move on cause he's going to go back into that same topic and try to get all the other jurors to believe that they can't consider the personnel in the OR and the surgeons and that kind of stuff and they're going to hear evidence about it.

THE COURT: I'm not going to give that instruction. I would just caution you regarding additional inquiry regarding Juror Number 10 and in any specific references to the evidence that the jury will hear.

MR. EMISON: Thank you, Your Honor.

Q Is the white noise on?

THE COURT: I got it. I got it.

MR. EMISON: May it please the Court.

THE COURT: Counsel.

Q And thank you for your answer. I think I understand where you're coming from. Number 41.

VENIREPERSON NO. 41: That's me.

Q And the question again, the jury that is serving in this case will not have on the verdict form anywhere to place any of the blame out any other person or entity, no doctor, no hospital, no others.

And this case is about whether 3M's product was negligently designed and whether it was unreasonably dangerous and whether it contributed to cause Kathy's infection. And if that product contributed to cause Kathy's injuries even just a little bit then 3M is responsible for all of the harm.

And some people have a problem with that. They feel like they would need to consider the possible fault of a doctor, hospital, someone else even if there's evidence that 3M's product contributed to cause the harm. A show of hands, how many people feel like that to any degree, that they would need to consider the fault of other potential causes even if the Bair Hugger directly contributed to cause Kathy's injuries?

VENIREPERSON NO. 41: It's still the same answer.

Q Same answer for you?

VENIREPERSON NO. 41: Yes.

Q Thank you. I appreciate that. I saw some hands go up. I'm sorry, 56 and 45.

VENIREPERSON NO. 45: I think you've definitely have got to consider other sources; the doctor, the

hospital. I mean you have to consider others.

Q And in this case the Court's instruction that that if we show that the Bair Hugger directly contributed to cause Kathy's injuries and that's enough for 3M to be the only person at fault and there's nobody else on the verdict form?

VENIREPERSON NO. 45: And that's been proven?

Q That 3M contributed, that the Bair Hugger contributed. Even if there's other potential contributing causes; even if that's a doctor or a hospital or some other product or anything else, if they're not on the verdict form would you still be able to find against 3M?

VENIREPERSON NO. 45: The full thing?

Q Yes.

VENIREPERSON NO. 45: No, I couldn't go with that.

Q Even if that's the Court's instruction, you couldn't do that?

VENIREPERSON NO. 45: No.

Q Thank you, sir. And 56.

VENIREPERSON NO. 56: Same for me. Knowing other parties are involved and all the other factors going in and knowing just 3M being the sole contributor to the harm.

Q And so if the Court's instruction is we prove our case and you have to find the verdict for Kathy, can you show that

the Bair Hugger directly contributed to cause and there's nobody else there to share in that blame with 3M on the verdict form, that's just not an instruction that you can follow?

VENIREPERSON NO. 56: I don't think so.

Q Thirty-nine.

VENIREPERSON NO. 39: Yeah, a quick question. In my past experiences I've seen companies represented in the operating room with the surgeon. Can you tell us whether there was a representative from 3M that was in the operating room?

Q I can't tell you.

VENIREPERSON NO. 39: Fair enough.

Q Anybody else raised their hand? Twenty-three and 48 and 20? Forty-eight, I forgot you. I apologize. Tell me how do you feel?

VENIREPERSON NO. 48: If there's gonna be negligence by anybody else other than 3M then I probably wouldn't be able - in good conscience be able to do what you're asking.

Q So if the Court's instruction is that we prove our case - we prove our case and we show that 3M's product was one of the causes that contributed to cause Kathy's infection but there's nobody else on the verdict form, you couldn't apply 100 percent of the fault to 3M if there were other potential sources of that infection along with the Bair Hugger? You could not do

that, correct?

VENIREPERSON NO. 48: No.

MS. PRUITT: Your Honor, may we approach again.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Again, Your Honor, we're entitled to put on a defense. What Mr. Emison's trying to do is based on this jury is they can't consider all of that because there's not a line on the verdict form for those people. And I've never heard that, that we can't present our defense and that a lawyer in voir dire can suggest that there is no defense and that's basically the inference. And there are people out there that know it and have expressed it. And what he's trying to do is get them to think they can't consider that evidence. That's part of our defense.

MR. EMISON: That's not accurate at all. I'm being very precise in talking about this. And every time asking about if they find the Bair Hugger contributed to cause this. I've couched every one of my questions with an assumption that we prove our case that the Bair Hugger contributed to cause the infection. Missouri law is clear. They do not get to argue nonparty for fault. The jury cannot consider any other potential cause ...

THE COURT: Hey, guys, I'm sorry. It's very

difficult for Gail to hear all of us. So if you guys could just be quiet. Thank you.

MR. EMISON: A jury cannot consider any other potential cause unless there is the sole cause of Mr. O'Haver's infection. I've couched my words very precisely. I'm not talking about sole cause. I'm only talking about an incidence in which the jury already decides that the Bair Hugger is partially involved.

THE COURT: The objection is sustained at this point. I understand your concern. I just think that when you have a follow-up question sometimes that's not - that you don't follow that script as closely. So I would just caution you to make sure that you're following that script even with your initial questions and with your follow-up.

MR. EMISON: Okay, I will.

(RETURN TO OPEN COURT.)

Q Juror Number 48, again, just to make sure you understand my words. I want you to assume that we have to prove that the Bair Hugger was at least partially at fault or directly contributed to cause Ms. O'Haver's infection. And that the Court's instruction, that's enough. And if so 3M is 100 percent responsible for that, but there may be other causes whether it's a doctor or a hospital or another product. If those other potential causes aren't on the verdict form is that and instruction that you can follow?

MS. PRUITT: Objection, Your Honor.

THE COURT: Overruled.

VENIREPERSON NO. 48: And that's not on the verdict form?

Q I can see it's real hard.

VENIREPERSON NO. 48: If it's not on the verdict form then I'm going to be fairly impartial. Yes, I feel like a could go ahead do what I'm mandated to do by the Judge.

Q So even if you think if you think - we prove our case and you think there's three at fault. And one of them is the Bair Hugger. And even if the Bair Hugger is a small cause and the other two are big causes?

VENIREPERSON NO. 48: If there was other things that are brought into the case, it may sway my opinion as to whether they are fully at fault or not. But just off of only this company right here being the ones who are at fault and that's it and that's all I'm looking at as far as in this case, if I'm mandated to do that, then I would do it.

Q Let me give you an example. If you think that there are three causes and you think we have proven to you that the Bair Hugger is 20 percent at fault and that there's some other thing that's 50 percent at fault. There's some other that's 30 percent at fault. Are you going to be able to award Ms. O'Haver

a hundred percent of her damages against 3M if you think the Bair Hugger's only 20 percent at fault?

VENIREPERSON NO. 48: No.

Q You could not do that?

VENIREPERSON NO. 48: No.

Q Show of hands. How many other people feel that way at all if you haven't raised your hand yet? How many people feel that way at all? Hold your paddles up so I can get your numbers. Number 42, 51, 57, 45, nine, two, 11, four, 16. Did I miss anybody? Forty-three and 59.

MR. EMISON: Your Honor, how much time do I have?

THE COURT: You have 22 minutes.

Q So Number 4, on that example, this is not the evidence. This is an example to illustrate a point. So, again, if you decide after our proof that we have proved to you that there's three causes and the Bair Hugger is one of those that directly contributed to cause Kathy's infection but it's 20 percent of the cause; something else is 50 and something else is 30. Can you award 100 percent of Kathy's damages against 3M?

MS. PRUITT: Objection, Your Honor. May we approach.

(BENCH CONFERENCE.)

MS. PRUITT: He's just told this jury that there's not going to be another line on the verdict form. Now he's telling them that if we proved 20 percent on 3M

and 50 percent on this one and 10 percent on this one, that's completely inconsistent with what he's already said.

There's not going to be another line and I'd agree with that. But now he's saying - giving them a hypothetical. Use these different lines on the verdict form and saying that 3M is only 20 percent liable, are you going to decide against them. People are going to say no.

They can follow the instructions. They know when they hear the proof they're going to know how to decide this case. Mr. Emison can't direct that even if 20 percent - you think in your mind they're only 20 percent liable.

And he's already gone through this on contribute to cause which he can do. I agree with that. But this is going to suggest that, you know, there's going to be these lines where somebody's 50, somebody's 30 and somebody's 20 and that's improper.

THE COURT: I'm not comfortable with this line of questioning because you're creating a hypothetical that is incredibly specific where you're saying 20 percent an if they were to say something like 10 percent, I don't believe that's appropriate. Creating this hypothetical that gives very specific percentages of fault I think is misleading to the jury and gives them some notion that they have to attribute a certain percent to whatever that they think are involved. So I don't think that is appropriate.

If you want to say something specific without giving a specific number I think that's appropriate. But saying 20 percent and then saying are you going to give them 100 percent of the damages, that's misleading. And I think that it causes the commitment to be caused by the jury that I don't think is appropriate whether it's 10 percent, 20 percent or eight percent.

MR. EMISON: Can I characterize it quantitatively as a small percent? A small part of the contributing cause of something else in a large part of the contributing cause.

THE COURT: I don't necessarily have an issue with that. But I think again you're trying to get too specific and causing these jurors to make a commitment that is inappropriate for jury selection.

MR. EMISON: I can rephrase my commitment question. I don't not want them to make a commitment. What I'm really getting at is they believe that the Bair Hugger directly contributed to cause, but that it was only a small part of that cause, could the award all of the damages. That's all I'm trying to get at.

THE COURT: I don't have an issue with that. Ms. Pruitt, do you want to make any further objection to that?

MS. PRUITT: Now he's replanting the seed, Your Honor. I'd ask the Court to take that into consideration

about this one for cause. Because now we've all heard the percentages and he knows he's going to go right back to the directly contributed to cause language. That's proper.

But now it's all mixed up and these individuals are thinking in their minds if there's a 10 percent responsibility on the lack of 3M. I'd actually ask the Court ask him to move on.

THE COURT: So I'm not going to ask you to move on. I will allow you to either say - moving away from the percentages because I don't think that's an appropriate way to ask a question or I could do it. If you're comfortable doing that, then that makes more sense. Explain to them why you're not doing the percentages anymore.

MR. EMISON: I will. I'm sorry how much time do I have?

THE COURT: Twenty-one minutes.

(RETURN TO OPEN COURT.)

Q Number 4. So I'm going to get away from percentages here. I don't want to suggest to you what you might think. What I'm trying to get at is, again, the Court's instruction is going to be that we can prove our case if we show that the Bair Hugger was a contributing cause, directly contributed to cause Kathy's infection even with anything else. And so, again, I'm not asking anybody for a commitment here. This is not evidence. What we're hearing here is not evidence. It's simply to

understand your thoughts and feelings about issues that will come up in this case or may come up in this case before the case starts.

So understanding that, assume again that you're a juror in the case. You've heard the case. At the end of the case you believe that we have proved our case, that the Bair Hugger did directly contribute to cause Kathy's injury or was a small cause and you believe that there's something else that might be a big cause.

The only name on that verdict form is going to be 3M. You can't write in the name of whatever that other cause might be. So even if you think that the Bair Hugger was a small cause could you award 100 percent of the damages to Kathy and against 3M?

VENIREPERSON NO. 4: I believe it be a struggle just based on the complexity of the case as well as I am a patient that has dual knee replacements and had an infection in my left leg. And I just considered it a risk of the surgery. But yeah, still sitting here today I need to stretch my leg. But I would have a hard time awarding damages because I know - I used to work at Children's Mercy Hospital and I know there's problems. I couldn't follow the instructions of the Court.

Q So it would be difficult for you to follow the Court's instruction but you would try to?

VENIREPERSON NO. 4: I would try to but it would be difficult.

Q In addition, you have had surgery and an infection in your knee like Kathy had?

VENIREPERSON NO. 4: I don't know the type of infection I had but I did have an infection following my left knee replacement in 2016. My right was fine in 2020.

Q Juror Number 2, again, we prove our case to you that the Bair Hugger contributed to cause Kathy's infection but there was a small cause. And you believe that something else was a big cause. Whatever that big cause is is not in the verdict form. Could you sign the verdict form holding 3M responsible for Kathy's infection?

VENIREPERSON NO. 2: I'd have to listen to the whole case.

Q You understand we can't tell you the whole case now. All we need to know is if that something that you can do. If you believe if we prove our case to you, if we do it and you believe that Bair Hugger was a small part of that cause and something else was a bigger part of that cause, could you award a verdict against 3M for 100 percent of the harm?

VENIREPERSON NO. 2: I've got no idea.

Q You could not do it?

VENIREPERSON NO. 2: No.

Q Thank you. Juror Number 11. Same question. If you

believe the Bair Hugger did directly contribute to the infection but it was a small cause and something else was bigger and you could apportion that fault to the bigger cause, could you find 100 percent of the fault against 3M?

VENIREPERSON NO. 11: No, not if there's more plaintiffs.

Q If the instruction to you is the only person you can find fault on is 3M, the instruction is to prove our case we would only have to prove that the Bair Hugger directly contributed to cause that and you thought the Bair Hugger at the end - we convince you the Bair Hugger was the cause, it was a small cause and something else was bigger, could you award 100 percent of the damages against 3M?

VENIREPERSON NO. 11: No.

Q Thank you, sir. Juror 16, same question to you. Do you want me to repeat it for you?

VENIREPERSON NO. 16: Probably. My short-term memory is lousy.

Q What's my name? Just kidding.

VENIREPERSON NO. 16: I don't think it's fair. If it's proven that somebody else was part of it I don't think it's fair to blame one person or company.

Q And so if the Court tells you and instructs you that that's the law, if show that 3M was a small cause and you believe something else was a big cause but you can't award any

of the harm against that big cause, can you award 100 percent of the fault against 3M?

VENIREPERSON NO. 16: Award hundred percent?

Q Find 100 percent of the fault against 3M?

VENIREPERSON NO. 16: You keep saying the Court will rule that way, that will be the Court's ruling.

Q If that's the Court's instruction?

VENIREPERSON NO. 16: You say if.

Q Yes.

VENIREPERSON NO. 16: Is that a fact. Is that the way the Court's ...

Q For this question I want you assume that that would be the Court's instruction; that we prove our case if we show that the Bair Hugger directly contributed to cause the infection.

VENIREPERSON NO. 16: Will we have the opportunity to choose less of a settlement than what you would be asking and then proportion?

Q Not proportion. There's nobody else you could apportion that to. So if you believe Bair Hugger was a small and ...

VENIREPERSON NO. 16: Is it possible to go lower?

MS. PRUITT: Your Honor, objection on damages.

(BENCH CONFERENCE.)

MS. PRUITT: I hate to keep approaching, Judge,

but you can't say on damages to somebody that the jury doesn't have discretion to apportion. They're the ones that are the finders of fact. They're going to be listening to the testimony and evidence.

You can't suggest to a potential juror that, you know, 9 million is it. That's what they're here to decide. And you can't suggest to them that that if it's proved that they don't have any discretion to go below that because they do. They absolutely do on credibility. That's confusing this juror. It's going to confuse other jurors. And we've been listening to it all morning and I object.

MR. EMISON: I didn't understand that to be his question, Your Honor. I understood him to be asking if they could reduce the amount of the damages by whatever other faults that they found.

THE COURT: I think that that was the question so I would just - I would overrule the objection at this time. I'd ask you to clarify exactly what you're talking about.

MR. EMISON: Yes.

THE COURT: Because obviously the jury can award whatever damages think they think is appropriate. The question is are they willing to award damages to the plaintiff if 3M is not the cause of fault.

MR. EMISON: Thank you.

(RETURN TO OPEN COURT.)

THE COURT: Ladies and gentlemen, I just want to let you guys know, we're going to go closer to about 12:30 today. I know that that's probably - we have some - I would like the plaintiff to finish their questioning before so just so you guys know, you're going to get lunch. I'm not going to starve you guys through lunch but we're just going to go to closer to 12:30. Mr. Emison.

MR. EMISON: How much time?

THE COURT: Eighteen minutes.

Q And, again, Juror Number 16. I do want to be clear because the jury will decide. We have to prove damages. So whatever you decide as Kathy's damages will be up to whatever jurors are empaneled here. We have to prove what those damages are.

And so my question so little bit different than that. It's that if we prove that Kathy's damages are X and if we prove that the Bair Hugger was a contributing cause, that it did contribute to cause her infection but it was a little cause and something else - u believe something else was a big cause, could you award all of Kathy's damages against 3M even if 3M was only a small part of the cause?

VENIREPERSON NO. 16: If that's the way it's put.

Q If that's the way it's put, you can do that?

VENIREPERSON NO. 16: For the integrity of the

jury, yes.

Q Thank you, sir. Number 9. I apologize, I think I missed you.

THE COURT: Hold on, Mr. Emison. Juror Number 16 just indicated he wouldn't think that is fair, is that right?

Q And, again, I don't think it's fair that somebody would ask me to eat peas and I wouldn't like to do it. I would try hard but it would be weighing on me in judging that casserole contest. At the end of the day do you know for certain that you could follow the Court's instruction?

VENIREPERSON NO. 16: For certain, maybe not but I would do my best.

Q I would do my best to choke down the peas. But at the end of the day I might not be able to do it. And understanding that we all do our best, but is this not the right case for you if that's what the Court going to be asking you to do?

VENIREPERSON NO. 16: I would have a hard time with it but I would try to follow the instructions.

Q Thank you, sir. Number 9, do you need me to restate the question again or do you understand?

VENIREPERSON NO. 9: I would have trouble following the Court's instruction.

Q You would? That's something you wouldn't be able to do even if that was the Court's instructions?

VENIREPERSON NO. 9: Correct.

Q Thank you, sir. Number 5, you also wouldn't be able to follow the Court's instructions?

VENIREPERSON NO. 5: No.

Q Anybody else here in the jury box that feels that way? Moving back over here. Number 42, yes, ma'am.

VENIREPERSON NO. 42: I would think I would have a problem because I know in the hospital ...

Q Can you stand up and talk a little louder please?

VENIREPERSON NO. 42: I can talk louder. I would have a problem because I know in the hospital setting not everybody, the nurses and stuff wash their hands. It's possible to get an infection that way when you're changing a dressing.

Q I don't want to get into possibilities. We're not talking about that. Just generally speaking, if the Court's instruction to was that we prove our case that we showed that the Bair Hugger was one of the causes. And we prove our case to you that we believe the Bair Hugger was one of the directly contributing causes, a small one. And a big one, there's no place to put that big one on the verdict form, could you award all of Kathy's damages, whatever you decide those to be against 3M?

VENIREPERSON NO. 42: I could do that.

Q That's something you could do?

VENIREPERSON NO. 42: Yes.

Q Thank you, ma'am. Forty-three, yes. Is that something you could do?

VENIREPERSON NO. 43: No.

Q Okay. Even if that's the Court's instruction, that's not an instruction you could follow?

VENIREPERSON NO. 43: No.

Q Juror Number 45.

VENIREPERSON NO. 43: I've already stated.

Q I'm sorry, I talked to you already. Thank you. Fifty-one.

VENIREPERSON NO. 51: No, I couldn't.

Q Again, if the Court's instruction was that you had to apply 100 percent of the fault to 3M in that situation, that's not something you could do? That's correct?

VENIREPERSON NO. 51: Yes.

Q Fifty-seven, yes, sir.

VENIREPERSON NO. 57: Because it's a small contributing factor I could not in good conscious I could not put all the blame on 3M.

Q Even if the Court's instruction was you have to award 100 percent, that's just not something you could follow?

VENIREPERSON NO. 57: No.

Q And 59.

VENIREPERSON NO. 59: Pretty much the same thing. If 3M is partially at fault and you're making them

pay 100 percent, it just doesn't seem right.

Q And if the Court's instruction to you, if that's what the law is, if they're partially at fault they'd have to pay 100 percent, that's not an instruction that you can follow?

VENIREPERSON NO. 59: That would be tough, yes.

Q I get all of that. That's not an instruction you could follow, is that fair?

VENIREPERSON NO. 59: Yes.

Q No, you could not follow the instruction?

VENIREPERSON NO. 59: No.

Q I'm getting double negatives ...

THE COURT: Can you follow that instruction?

VENIREPERSON NO. 59: No.

Q Thank you, Your Honor. Again, did I miss anybody or was there anybody else that after hearing that discussion feels that same way? Twenty and 21. Did I miss anybody else? Twenty-three. Anybody else? Twenty, again, do you feel the same way? Could you follow the Court's instruction?

VENIREPERSON NO. 20: I would say no because if they didn't do 100 percent in the evidence that would come to me it would be hard for me.

Q And 21, you've heard and understood our questions and what instruction we're talking about?

VENIREPERSON NO. 21: Yes.

Q Is that an instruction that you could follow?

VENIREPERSON NO. 21: Can I ask a question?

Q Yes.

VENIREPERSON NO. 21: So we can't write in a third-party if there was someone else responsible in addition to 3M, correct?

Q Yes.

VENIREPERSON NO. 21: Okay. So I would think even if there was a partial 20 percent, whatever small and there's a larger party to influence, I would not feel comfortable giving 100 percent fault to 3M no matter what's the Court's instruction.

Q And, Juror 23.

VENIREPERSON NO. 23: Same. You say partially, A very small percent. If something else caused a large percent, a very small percent it would be very hard.

Q Could you follow the Court's instruction?

VENIREPERSON NO. 23: It would be hard but I could, yes.

Q And, again, looking at this kind of case versus some other kind of case, is there any chance at all that you wouldn't be able to follow the Court's instruction?

VENIREPERSON NO. 23: I would follow it but it would be hard.

Q Did I miss anybody else?

MR. EMISON: Your Honor, may I have 10 seconds?

THE COURT: Sure.

MR. EMISON: Thank you for your indulgence. May I continue, Your Honor?

THE COURT: Sure.

Q The law allows Missouri to decide if a corporation has acted with complete indifference or conscious disregard for the safety of others. And if so to punish the corporation by opposing punitive damages.

Some people have a problem just generally with punitive damages. Some people feel that corporations have a target on their back already and punitive damages just make that target bigger. There's just no way they could ever award punitive damages no matter what the evidence might be at trial. Show of hands, how many people feel that way? I don't see anybody in the jury box. Anybody back here? Thank you.

This is Kathy O'Haver. She's my client. She's going to be involved heavily in this litigation. Kathy lives in Columbia, Missouri now. She has lived in Oak Grove back in the 2015/2016 timeframe. She worked at the Oak Grove School District. And she's got a brother and sister-in-law there in Oak Grove. Show of hands, does anybody know Kathy or have heard anything about her? I don't see any hands.

There are a lot of people frankly from across the country

who are coming together for this case. You'll hear from expert witnesses for both sides from across the country and several of the lawyers involved in this are actually from across the country. And lawyers for both sides here have been involved in some really important and even nationally televised trials.

Mr. Blackwell is an attorney for 3M and he was one of the special prosecutors that tried and convicted Derek Chauvin for the murder of George Floyd in Minnesota last year.

Because of our space limitations we don't have Kyle Farrar here. But Kyle Farrar will be one of the lawyers involved for Ms. O'Haver. And he was one of the lawyers representing the parents of children killed at the Sandy Hook Elementary School in the defamation case against Alex Jones a month or two ago.

And both of these trials were polarizing for folks. Some people have strong feelings supporting law enforcement and some people have strong feelings about First Amendment rights and First Amendment protections.

And knowing that these lawyers work on these issues, it's possible that someone might feel that this is just not the right kind of case for them. Show of hands, how many people feel that way at all? And I think we understand them and I don't think we need to ask anything further. I appreciate that. Anybody else have feelings about that one way or the other? I don't see any hands. Thank you.

I'm terrible with names and I'll apologize in advance that

I I'm thankful that you all have numbered paddles that I can look at and refer to you by.

But, again, my name is Brett Emison. I'm not from across the country. I'm from here. I live about 15 minutes away in Lee's Summit. My law firm is called Langdon Emison. We have an office where my wife grew up in Lexington, Missouri. We have another office north of the river in North Kansas City.

Danielle Rogers is also with me from my office. She lives in Richmond, Missouri. And, again, show of hands, how many people either know me or Danielle or have heard anything about us or our law firm? If you'd raise your number paddle please. Number 50.

VENIREPERSON NO. 50: I know your grandpa and I'm friends with Jim and Pat.

Q Can you be fair to me?

VENIREPERSON NO. 50: I know your family. I don't know you but we are good friends with Jim and Pat.

Q Seriously, Jim is my grandpa. Pat was my grandma. Having that relationship with them, is that something that you can hear the evidence in this case fairly and honestly and judge the evidence - judge the case on the evidence that's presented to you and the instructions from the Court?

VENIREPERSON NO. 50: Yes, I can.

Q Thank you. Anybody else know me or my grandparents? Sometimes I get to asking questions up here and I get to talking

and I miss stuff. I had my list and you're there following your instructions. You're listening and you're raising your hands when you need to. And you're thinking in the back of your mind why in the world did that guy not ask me this. He really should know this about me because if he had asked me this he'd find out that this just really isn't the right case for me. Maybe there's some other kind of case in this courthouse that's going on that's more appropriate. Show of hands, how many people have thought that, that there's something that I need to know about you that I just haven't asked? Let me write down these numbers; Number 41, 53, 58. Anybody else over here? Twenty-eight. Anybody here in the jury box? Did i miss anyone? Number 41, what do I need to know about you?

VENIREPERSON NO. 41: I have a weak bladder.

Q This is not funny. It's nothing to joke about. If there are personal issues that anybody needs to raise with the Court, do not feel like you have to do that in front of everybody. And I don't want to speak for the Court but you can raise your hand and just let the Court know that there's something that you need to talk to the Court about. Juror Number 53.

VENIREPERSON NO. 53: I don't think it would be fair to Kathy if I didn't mention that I am a 3M shareholder.

Q That's a good point. So you may feel like you have

financial interest in how this case ends up, is that fair?

VENIREPERSON NO. 53: Potentially. I think I can still be impartial but I would hate for it go through and then find out later that there is a 3M shareholder on the jury.

Q And, I understand that 3M is a company and that folks may have 3M shares or mutual funds or something else. But show of hands, is there anybody else who knows that they hold shares, that they are an owner of 3M in this case? Number 41, 53. Anybody else know that they own 3M shares? Number 13. Anybody else? Thank you. Number 58.

VENIREPERSON NO. 58: I'm a nurse and I've used the Bair Hugger not in the OR setting. I'm familiar with the product. I also know - Mr. Torline is a classmate of my husband's in college and a teammate of my mother-in-law.

Q Do you have any stories about him? Again, with your knowledge and even using the Bair Hugger even though it's not in an operating room setting, is that something that would be weighing on the evidence in addition to what you hear during this case in deciding?

VENIREPERSON NO. 58: I believe I can be impartial.

Q And, again, knowing Mr. Torline and having that relationship with him and his family, would that make meetings

or gatherings awkward at all if you were to award 8 or $9 million dollars against these clients?

VENIREPERSON NO. 58: No.

Q Number 28.

VENIREPERSON NO. 58: I know about this case. I already know about it.

Q I'm not going to ask you anything further. It's just that you know about the case. Thank you. Number 13.

VENIREPERSON NO. 13: Yes.

Q You're a shareholder?

VENIREPERSON NO. 13: Yes.

Q And you agree you have a financial interest in how this case might turn out?

VENIREPERSON NO. 13: If it comes to fruition and is against 3M it might have a ripple effect and it certainly will factor in my position.

Q And the same thing with Number 53 and 41. You both have a financial interest in how this case comes out? I understand my time is probably done.

THE COURT: That's correct. So we're going to break for lunch. I will say that for some of you your lunch break is going to be a little bit shorter because I want to talk with those folks that raised their numbers in the beginning so I apologize about that. I am going to read the instruction.

What I will do is I will read the numbers. I'm going to read the instruction and then I'll read the numbers again just make sure that we're all on the same page. You can leave your numbers in your chairs and we'll return to the same seat after lunch. I'm going to ask that you be back in your seats at 1:45 so just a little over an hour. I would appreciate everyone being timely. I will tell you I've seen the last juror walking into the courtroom and 15 other jurors giving them the stink eye so try to be on time so you don't walk into a room full of angry jurors.

Okay, so the following individuals - and I'm going to read the numbers, read the instruction and then read the numbers again. Jurors Number four, five, 10, 13, 17, 18, 20, 21, 23, 28, 32, 35, 36, 39, 46, 51, 56, 57 and 59.

(INSTRUCTION WAS READ.)

Again, the list, four, five, 10, 13, 17, 18, 20, 21, 23, 28, 32, 35, 36, 39, 46, 51, 56, 57 to 59. If everyone can please leave the courtroom and Carly will bring you in individually and we'll speak with you individually. Court is in recess. We'll see you at 1:45.

THE COURT: Four please.

MR. EMISON: Your Honor, how long has it been since you got to do this in your courtroom.

THE COURT: Pre-COVID.

(JUROR NUMBER 5 ENTERED THE COURTROOM.)

THE COURT: And you're Juror Number 4, is that correct?

VENIRE PERSON NO. 4: Yes.

THE COURT: I indicated the length of our trial and you had suggested that you were going to have a hardship in terms of your service.

VENIREPERSON NO. 4: Yes.

THE COURT: So why don't you tell me what you have going on.

VENIREPERSON NO. 4: I have a previously scheduled trip. I have a flight to catch Saturday and I won't return until Wednesday.

THE COURT: And is that a trip for work or for pleasure?

VENIREPERSON NO. 4: It's for pleasure. It's all prepaid.

THE COURT: Prepaid. Are you tickets nonrefundable?

VENIREPERSON NO. 4: Uh-huh.

THE COURT: Is that a yes?

VENIREPERSON NO. 4: Yes.

THE COURT: And do you feel as though that if you were selected to serve as a juror despite that, that would be something that would be on your mind during the presentation of the evidence?

VENIREPERSON NO. 4: Yes.

THE COURT: Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: When is the flight?

VENIREPERSON NO. 4: Saturday to Wednesday.

MS. PRUITT: This coming Saturday?

VENIREPERSON NO. 4: Yes.

THE COURT: Thank you. If you can come back after lunch we'll take that into consideration. Thank you. Number 5, Carly.

(JUROR NUMBER 5 ENTERS THE COURTROOM.)

THE COURT: So you're Juror Number 5, correct?

VENIREPERSON NO. 5: Yes, ma'am.

THE COURT: When I talked about the length of the trial you indicated it might by a hardship for serve. What's going on?

VENIREPERSON NO. 5: I'm self-employed. I am the sole employee. I have subcontractors that work for me. I'm starting a job here next week. It's a month-long job. Equipment rental, material deliveries, my personal attendance. I wouldn't be able to make a house payment.

THE COURT: You would not be able to make your house payment? speed when you would be able to pick your house payment?

VENIREPERSON NO. 5: Yeah, not this one but the next one.

THE COURT: Okay. So do you feel as though that the concerns that you've just expressed would be on your mind if you were selected as a juror?

VENIREPERSON NO. 5: Absolutely.

THE COURT: And do you feel as though that would affect your ability to fairly evaluate the evidence or keep your attention?

VENIREPERSON NO. 5: No.

THE COURT: You could still do that?

VENIRE PERSON NO. 5: I would have to.

THE COURT: Right ...

VENIRE PERSON NO. 5: It would affect me, yes. It would bother me a lot.

THE COURT: Okay, very good. Thank you, sir. I appreciate your honesty. Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Come back after lunch and we'll take that into consideration. Let's go off the record.

(OFF THE RECORD.)

THE COURT: Number 10.

(JUROR NUMBER 10 ENTERED THE COURTROOM.)

THE COURT: You're Juror Number 10, is that right?

VENIREPERSON NO. 10: Yes.

THE COURT: So when I talked about the length of the case you indicated that it might be difficult for you to serve?

VENIREPERSON NO. 10: Yes.

THE COURT: Okay. What's going on?

VENIREPERSON NO. 10: I'm a primary school teacher and that's a lot of time to be out of the classroom as a teacher.

THE COURT: And so given that you're a teacher, it would require the school to find a substitute, is that right?

VENIREPERSON NO. 10: Yes.

THE COURT: Would you be responsible for lesson plans during that time as well?

VENIREPERSON NO. 10: Yes.

THE COURT: Is there any kind of limitation in terms of how many days that you can have a substitute in terms of jury service or no?

VENIREPERSON NO. 10: I think so, yes.

THE COURT: I don't know.

VENIREPERSON NO. 10: I don't know the answer to that.

THE COURT: And do you feel as though that having that going on would provide any challenge to you if you were selected as a juror in this case?

VENIREPERSON NO. 10: Yes, because that would disrupt the routines and procedures that I've set up for my six-year-olds and yeah.

THE COURT: Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: I was going to ask you what age you teach but you answered my question.

THE COURT: All right, thank you. We'll take that into consideration and we'll see you after lunch. Thirteen.

LAW CLERK: Twenty said that she talked to her boss and it's no longer a hardship.

THE COURT: Is there any request to get any further information from Juror Number 20, Mr. Emison?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Thank you, Carly. Number 13 please.

(JUROR NUMBER 13 ENTERED THE COURTROOM.)

THE COURT: All right, come on up, sir. And you're Juror Number 13, is that right?

VENIREPERSON NO. 13: Excuse me.

THE COURT: You're Juror Number 13?

VENIREPERSON NO. 13: Yes, ma'am.

THE COURT: And when I talked about the length of the trial you indicated it might be difficult. When I asked about physical or health issues I thank you raised your hand.

VENIREPERSON NO. 13: Health issues primarily.

THE COURT: Okay. What's going on?

VENIREPERSON NO. 13: I'm coming off of prostate cancer treatment as we speak. And there's been some adverse reactions to it. I have incontinence and some dizzy spells from time to time. I'm being treated with hormonal injections, Lupron they call it and there's a side effect to that. And I've got some other issues too but.

THE COURT: And so do you think that the issues they you're experiencing whether it be side effects or otherwise would make it difficult for you to serve as a juror?

VENIREPERSON NO. 13: In the long run, yeah. I live a pretty normal life but, I mean, I get these flashes - it's a really bad affect and I have to go the bathroom quite frequently.

THE COURT: And my guess would be but correct me if I'm wrong, but it's difficult for you to know or

anticipate when that's going to occur?

VENIREPERSON NO. 13: That's a fair assumption.

THE COURT: And do you feel as though that it would be difficult for you to respond appropriately to those and also be in the courtroom and evaluate the evidence?

VENIREPERSON NO. 13: No. I'm not trying to dodge anything here at all, believe me. It's just that physically it's just been kind of a roller coaster ride. So that's just a fair assessment with my condition right now.

THE COURT: And I appreciate your honesty and your willingness to share with us. Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Thank you sir. We'll see you after lunch. We'll take it into consideration. Thank you. Carly, just a sec. Juror Number 17 is next on the list. I will tell you that based upon her responses that I have her doubt as a strike for cause. So I don't believe that I need any additional information. Is there a request for an additional record, Mr. Emison?

MR. EMISON: No.

THE COURT: Ms. Pruitt?

MS. PRUITT: No.

THE COURT: Carly, can you grab Juror Number 21 and let Juror Number 17 that we have sufficient information regarding her service as a juror. Actually, you know what, Carly. Sorry, I jumped one. It's 18. Eighteen was physical. I do not need 17. I do need 18.

(JUROR NUMBER 18 ENTERED THE COURTROOM.)

THE COURT: So you're Juror Number 18, is that right?

VENIREPERSON NO. 18: Uh-huh.

THE COURT: Is that a yes?

VENIREPERSON NO. 18: Yes, I'm sorry.

THE COURT: That's all right. I tell my 10-year-old that all the time. When I talked about physical or health issues regarding their service as a juror I think you held up your number, is that right?

VENIREPERSON NO. 18: Uh-huh.

THE COURT: Is that a yes?

VENIREPERSON NO. 18: Yes, I'm sorry.

THE COURT: So what do you have going on?

VENIREPERSON NO. 18: Are you talking about my knee surgery or ...

THE COURT: Oh, go ahead.

VENIREPERSON NO. 18: Dislocated disc in my back and two knee surgeries. And I have a hernia right now that's killing me but that's about it.

THE COURT: Okay. And so do you feel as though - so you have had two knee surgeries?

VENIREPERSON NO. 18: I've had a total of three.

THE COURT: You've had a total of three. And you currently have a dislocated disc, right?

VENIREPERSON NO. 18: Uh-huh.

THE COURT: Is that a yes?

VENIREPERSON NO. 18: Yes, I'm sorry.

THE COURT: That's okay. And did you also say that you had a hernia, is that right?

VENIREPERSON NO. 18: Yes.

THE COURT: And so are you taking any medication as a result of that?

VENIREPERSON NO. 18: Yes.

THE COURT: Does the medication affect anything in terms of like your ability to focus or concentrate?

VENIREPERSON NO. 18: Just sleepy a little bit.

THE COURT: Okay. Do you feel as though that the disc, the past knee surgeries and the hernia affect

your comfort level in terms of being able to sit?

VENIREPERSON NO. 18: Yes.

THE COURT: So typically, we go about an hour and a half before we take a break. Your eyes got big whenever I said that. Will that be difficult for you to do?

VENIREPERSON NO. 18: Yes.

THE COURT: Will it cause you to be in any pain?

VENIREPERSON NO. 18: Yes.

THE COURT: And do you think that when you experience the type of pain associated with sitting like that that it might affect your ability to listen and evaluate the evidence?

VENIREPERSON NO. 18: Yes.

THE COURT: Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Thank you, ma'am. We'll take that into consideration. Here's what I'll tell you. For the afternoon if you need to stand or stretch you just raise your number because you're kind of on the end here, right?

VENIREPERSON NO. 18: That's why she sat me over there so I can stretch.

THE COURT: So if you need to stand or stretch, as long as you remain in the courtroom, I'm good with it, okay?

VENIREPERSON NO. 18: Okay.

THE COURT: Okay. Thank you, ma'am. We'll see you after lunch. Twenty-one, Carly.

(JUROR NUMBER 21 ENTERED THE COURTROOM.)

THE COURT: Come on up, ma'am. So you are Juror Number 21, is that right?

VENIREPERSON NO. 21: Yes.

THE COURT: And so it's my understanding when I talked about the length of the case that you indicated it might be difficult for you to serve?

VENIREPERSON NO. 21: Correct.

THE COURT: What do you have going on?

VENIREPERSON NO. 21: I'm a contractor for my work so I don't believe I get compensation for my work for this and that means I wouldn't get paid at all except for the six dollars a day from the court.

THE COURT: And this might seem like a dumb question but I've got to ask it. And not getting paid for that period of time, how would that affect you personally?

VENIREPERSON NO. 21: I wouldn't get a paycheck.

THE COURT: Sure. Would you have difficulty

paying your bills and doing things like that without that?

VENIREPERSON NO. 21: No.

THE COURT: Okay. Do you feel as though that going that amount of time with any type of paycheck would affect your attention or would be something that would be weighing on your mind and would affect your ability to service as a juror?

VENIREPERSON NO. 21: Could you say that again.

THE COURT: Sure. So what I just need to make sure is that the jurors that are selected are focused on what's going on in the courtroom; that they're paying attention to the witnesses and that they have other worries or distractions, that those aren't overriding their ability to evaluate evidence.

VENIREPERSON NO. 21: I think I'd be okay.

THE COURT: You'd be okay. Very good. Mr. Emison, any questions?

MR. EMISON: No, Your Honor. Thank you.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: All right. Thank you, ma'am. We'll take it into consideration. Twenty-three.

(JUROR NUMBER 23 ENTERED THE COURTROOM.)

THE COURT: So you're Juror Number 23, is that

right?

VENIRE PERSON NO. 23: Yes.

THE COURT: When I talked about the length of the trial you indicated that you might have difficulty serving.

VENIREPERSON NO. 23: Yeah.

THE COURT: Okay. What's going on?

VENIREPERSON NO. 23: I have an eight-month-old son at home who I nurse. And I read that too late. So when I responded I got denied because I didn't have a doctor's note. I do nurse my son and I don't have - I'm a stay-at-home mom so I have someone to watch him today but I don't have adequate care for him. I'm his care.

THE COURT: Sure. So do you think that you would have difficulty getting care or finding care for your son for the duration of this trial?

VENIREPERSON NO. 23: Yes. And I need to nurse him also.

THE COURT: Are you able to pump or do you do that or no?

VENIREPERSON NO. 23: I don't pump. He has a bottle of formula a day but then I nurse him.

THE COURT: And do you think that if you were required to serve, that being away from your son and having to find the care as well as the breast-feeding portion of

that, that that would make it difficult for you to serve in terms of your attention and being really present as a juror in the courtroom?

VENIREPERSON NO. 23: I do. I think my - I've never been away from him so this is the longest. And it's kind of freaking me out.

THE COURT: Sure. I'm a mom so I get it.

VENIREPERSON NO. 23: He was a preemie so he was in the NICU for a month and a half. Sorry.

THE COURT: It's okay. I get it. So yeah, okay. And just for purposes of the record you're getting emotional, right?

VENIREPERSON NO. 23: I know. I'm sorry.

THE COURT: You do not need to apologize at all. Although he was a preemie, he's doing okay now?

VENIREPERSON NO. 23: Yeah.

THE COURT: Good. Good to hear. Okay, do you have any questions, Mr. Emison?

MR. EMISON: I don't. Thank you.

THE COURT: Ms. Pruitt?

MS. PRUITT: I do not.

THE COURT: All right. We'll take that into consideration. If you need a place to pump or to do anything here, let us know and we'll find a private room, okay?

VENIREPERSON NO. 23: Okay.

THE COURT: Okay, great. Thank you. Twenty-eight.

(JUROR NUMBER 28 ENTERED THE COURTROOM.)

THE COURT: Come on up right between the tables please. So a couple of things. You're Juror Number 28, right?

VENIREPERSON NO. 28: Yes.

THE COURT: So when I indicated how long the case was going to be you thought it might be difficult for you to serve. Then I think that near the end of Mr. Emison's questioning you indicated that you knew about the case?

VENIREPERSON NO. 28: Yes.

THE COURT: So let's first talk about what you know about the case.

VENIREPERSON NO. 28: I did a four-hour research on it through a survey ...

MR. EMISON: If I can stop you. I believe Juror Number 28 was part of the focus group that we conducted.

VENIREPERSON NO. 28: Right.

THE COURT: I got it. I think that's enough questions. Mr. Emison, do you have any questions?

MR. EMISON: I don't.

THE COURT: Ms. Pruitt?

MS. PRUITT: No.

THE COURT: If you could just - can you - Carly, can you have her stay in the vestibule right outside in between the doors here and the doors. You're not in trouble. I just need to have a conversation with the attorneys without you being present.

VENIREPERSON NO. 28: Okay, sure.

THE COURT: So Carly, if you'd just have her stay in the vestibule please, that'd be great. Thank you.

(JUROR NUMBER 28 EXITED THE COURTROOM.)

THE COURT: My thought is given that we know she's going to be a strike for cause and I just would hesitate to have her remain to hear the defendant's questioning. Any objection to Number 28 being stricken for cause and being released?

MR. EMISON: No objection. And for the record, I did not recognize her for that. And if I did I would've said something. It didn't occur to me until she said that at the end.

THE COURT: Ms. Pruitt, any objection?

MS. PRUITT: Not because she's participating.

THE COURT: Okay. So we will - if you could just quietly release Juror Number 28 from her service and then grab 35 please. Thanks Carly. Well actually, 32, Carly.

LAW CLERK: Thirty-two?

THE COURT: Yeah, she was - just so you guys know. Thirty-two approached Carly at the break and said that she wanted to - he or she hear she wanted to speak regarding a hardship.

(JUROR NUMBER 32 ENTERED THE COURTROOM.)

THE COURT: Come on up, ma'am.

VENIREPERSON NO. 32: I feel like I'm in trouble.

THE COURT: You're not, I promise. Okay so you're Juror Number 32, is that right?

VENIREPERSON NO. 32: Yes.

THE COURT: And so you approached Carly I think at the break and suggested that you may have difficulty serving?

VENIREPERSON NO. 32: Yes.

THE COURT: What do you have going on?

VENIREPERSON NO. 32: Well, actually a couple of different things. One, I'm getting overtime at work next week and I can't miss that because like a lot of people I need the money. And number two, my memory isn't the best because I had surgery, you know, a little far back and it's just - it's kind of gotten worse. So without writing down things I might not be able to remember, you know, everything from last week or yesterday even. I've worked around people for three months and I don't remember

their names.

THE COURT: So let's first talk about your overtime. So do you need the overtime in order to pay your bills and kind of get through the month?

VENIREPERSON NO. 32: Yes.

THE COURT: Do you feel as though forgoing that overtime would affect your ability to really be present and to pay attention and focus as a juror?

VENIREPERSON NO. 32: Yes cause I stress too much.

THE COURT: And do you feel as though that if you were given the opportunity to take notes which the jurors are going to be taking notes in this case, do you think that that would remedy the memory issues that you think you have or do you have additional concerns?

VENIREPERSON NO. 32: That might remedy it but I'm still just concerned you know for everybody.

THE COURT: Sure, okay. Any questions, Mr. Emison?

MR. EMISON: Just briefly. With your memory issues, when you write things down or take notes, does that help you actually remember the things or do you go back to your notes and ...

VENIREPERSON NO. 32: I still sometimes have to go back to my notes. Unfortunately, my memory has

gotten worse with my age but I had brain surgery awhile back and that's just.

MR. EMISON: And so if this case lasts 2 to 3 weeks, the evidence that you might've heard at the beginning you would really be relying on what you wrote down versus what you remember?

VENIREPERSON NO. 32: Yes.

THE COURT: Ms. Pruitt, any questions?

MS. PRUITT: No.

THE COURT: All right. Thank you, ma'am. We'll take that into consideration. We'll see you back after lunch, okay?

VENIREPERSON NO. 32: Okay.

THE COURT: Thirty-five.

(JUROR NUMBER 35 ENTERED THE COURTROOM.)

THE COURT: Come on up, ma'am. You're Juror Number 35, is that right?

VENIREPERSON NO. 35: I am.

THE COURT: So when I talked about the length of the trial I think you raised your number that you might have difficulty serving?

VENIREPERSON NO. 35: Did you say three weeks?

THE COURT: Two and a half to three weeks, yes, ma'am. What's going on?

VENIREPERSON NO. 35: I'm fine until October

the 1st and then I was supposed to start babysitting a great-niece and a nephew until the 8th of October. Their parents are going to be out of town.

THE COURT: And is that here in town?

VENIREPERSON NO. 35: It's in Olathe.

THE COURT: It's in Olathe. And so do you - I know that you might be kind of speculating here. Do you think that there's any chance that somebody else would be able to fill in your role from the 1st to the 8th?

VENIREPERSON NO. 35: I'd have to call her and find out.

THE COURT: Is that a family member or is this some type of employment that you have?

VENIREPERSON NO. 35: No, it's a family member. It's my niece.

THE COURT: Your niece, that's right. You said that. I apologize. So do you think that that's something that you could check on over the lunch hour and let us know. And then we could talk to you at the conclusion of all of it and see. Would that be okay?

VENIREPERSON NO. 35: Sure.

THE COURT: If you don't have an answer for us, that's okay. But if you could make a phone call and see if they have a Plan B. If not, then we'll take that into consideration. But if you could make that call I'd

appreciate it.

VENIREPERSON NO. 35: I will do that.

THE COURT: Mr. Emison, any questions?

MR. EMISON: No.

MS. PRUITT: No.

THE COURT: Thank you, ma'am. Thirty-six.

(JUROR NUMBER 36 ENTERED THE COURTROOM.)

THE COURT: Juror Number 36, come on up, ma'am. Okay, good morning. So when I indicated about the length of the trial I think you raised your number that you might have difficulty.

VENIREPERSON NO. 36: I do.

THE COURT: Okay. What's going on?

VENIREPERSON NO. 36: I'm the head of my household. I pay more than 50 percent of my monthly bills. I work six days a week with the elderly in their homes. So not that I would be missed on their part but they all prefer me being there than other people that they could send.

THE COURT: And so when you say that you're the head of the household, say that again for me. Do you pay 50 percent?

VENIREPERSON NO. 36: More than 50 percent, yes.

THE COURT: And is your employment one that if

you're not working, you're not getting paid or do you get paid regardless?

VENIREPERSON NO. 36: No, I only get paid if I'm there working.

THE COURT: And practically speaking and this may seem like silly question but going two and a half to three weeks without those paychecks ...

VENIREPERSON NO. 36: Yeah, that would sink me. And I'm also court-ordered to pay a monthly payment because I was in a car accident like two years ago. So I have to pay that too.

THE COURT: And so if you had that going on and you were called to serve as a juror, how would that affect you in terms of you being here? Would you be able to be present, pay attention?

VENIREPERSON NO. 36: And then homeless after court.

THE COURT: Okay.

VENIREPERSON NO. 36: To be honest.

THE COURT: Sure.

VENIREPERSON NO. 36: I'm being completely honest.

THE COURT: Okay and that's always what we want so I appreciate it. Mr. Emison, do you have any questions?

MR. EMISON: I don't. Thank you.

THE COURT: Ms. Pruitt?

MS. PRUITT: I do not.

THE COURT: Thank you, ma'am. We'll take that into consideration. Thirty-nine.

(JUROR NUMBER 39 ENTERED THE COURTROOM.)

THE COURT: Juror Number 39, come on up. So you're Juror Number 39, right?

VENIREPERSON NO. 39: I sure was, yeah.

THE COURT: So when I talked about the length of the trial you indicated that you may have difficulty serving?

VENIREPERSON NO. 39: Yes. I'm getting married next weekend. I'll be in Venezuela for 14 days following that immediately.

THE COURT: Congratulations.

VENIREPERSON NO. 39: I would love the opportunity, thank you. But timing is pretty rough right now for that from that aspect.

THE COURT: Fair enough.

VENIREPERSON NO. 39: Unless you could convince her otherwise.

THE COURT: I'm not running into that. Any questions, Mr. Emison?

MR. EMISON: Are you having cold feet?

VENIREPERSON NO. 39: No, no. I'm ready to rock 'n' roll.

THE COURT: We're on the record too.

VENIREPERSON NO. 39: No cold feet.

THE COURT: Ms. Pruitt, any questions?

MS. PRUITT: No questions. Congratulations.

THE COURT: So I am going to have you come back but needless to say we're not going to have you miss your wedding.

VENIREPERSON NO. 39: I appreciate that.

THE COURT: Thank you, sir.

MR. EMISON: Thank you. Congratulations.

THE COURT: Forty-six.

(JUROR NUMBER 46 ENTERS THE COURTROOM.)

THE COURT: Come on up, ma'am. So you're Juror Number 46?

VENIREPERSON NO. 46: Yes.

THE COURT: And when I talked about the length of the trial you indicated you may have difficulty serving?

VENIREPERSON NO. 46: Yes.

THE COURT: What's going on?

VENIREPERSON NO. 46: Myself and one other nurse job share one nurse position. And so we do discharges from the hospital. So it would be difficult to have just one of us working full time. I also go into

homes and do home infusions on medications that patients need to function. One lady has Crohn's. One lady has myasthenia gravis. One lady has Alpha-1. So they need these weekly or monthly infusions that I have to administer in their home.

THE COURT: And is there anyone else that can administer those in your absence?

VENIREPERSON NO. 46: No.

THE COURT: Do you feel as though that if you were called to service as a juror in this matter for that length of time that you would have difficulty being present or paying attention given those other things?

VENIREPERSON NO. 46: Yes.

THE COURT: Any questions, Mr. Emison?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Okay. We will take that into consideration. We'll see you after lunch, okay? Thank you, ma'am. Fifty-one.

(JUROR NUMBER 51 ENTERED THE COURTROOM.)

THE COURT: Good morning. So you're Juror Number 51, is that right?

VENIREPERSON NO. 51: Yes.

THE COURT: When I talked about the length of

the trial you raised your number and said you might have difficulty serving? What's going on?

VENIREPERSON NO. 51: Financially I will have difficulty serving. I'm a single mom, only support.

THE COURT: Okay. And so what type of employment do you have?

VENIREPERSON NO. 51: I work at the school district in Grandview. I also have a part-time job in a daycare, part of the school also.

THE COURT: And if you aren't working, do you get paid?

VENIREPERSON NO. 51: No.

THE COURT: Any questions, Mr. Emison?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No.

THE COURT: Thank you, ma'am. We'll take that into consideration. Fifty-six.

(JUROR NUMBER 56 ENTERED THE COURTROOM.)

THE COURT: Come on up. So you're Juror Number 56?

VENIREPERSON NO. 56: Yes.

THE COURT: When I talked about the length of the trial I think you raised your number that you may have difficulty serving?

VENIREPERSON NO. 56: Yes.

THE COURT: What's going on?

VENIREPERSON NO. 56: At my current job I am the only person who is able to do what I do. So there's no one that's able to back me up for what I have to do. I am a training coordinator so I do training for new researchers at the KU Med Center. And we do a training every other week and next week is one. It's consistent and otherwise researchers can't do the research.

THE COURT: Sure. And I think that you indicated that you have personal knowledge of the device or the Bair Hugger device?

VENIREPERSON NO. 56: Yes, we have used it over the years.

THE COURT: And so you understand - I mentioned this during Mr. Emison's questions to another juror, that it's important that the decision in this case be based only on the evidence that's presented to you.

VENIREPERSON NO. 56: Uh-huh.

THE COURT: Is that a yes?

VENIREPERSON NO. 56: Yes.

THE COURT: And so do you feel as though that you would be able to set aside any experiences, good, bad or otherwise that you've had with the Bair Hugger device and only make a decision based upon the evidence that's

presented here?

VENIREPERSON NO. 56: Potentially.

THE COURT: So those equivocal answers are difficult for us that we need to make a decision on. And so if you were in the jury deliberation room and you were making a decision in this case, would you be able to keep out of your mind any of your experiences with the Bair Hugger device?

VENIREPERSON NO. 56: I could, knowing all the evidence that I was presented on the defendant's side or on this side.

THE COURT: Either one?

VENIREPERSON NO. 56: Yeah, yeah, yeah. Either one, yes.

THE COURT: And do you have any concerns about being able to do that?

VENIREPERSON NO. 56: I don't think so, no.

THE COURT: All right. Mr. Emison, any questions?

MR. EMISON: Just one follow-up. If you were serving in the jury and heard the evidence and were back in the deliberation room and heard that the Bair Hugger does X or the evidence showed the Bair Hugger does X, is there any possibility in your mind that you would be thinking well, my experience with Bair Hugger is different?

VENIREPERSON NO. 56: I also know the Bair Hugger on the veterinary side of things. I don't know if there are two different separate items or if it's all the same mechanical systems. So I know how I used it there so I don't know if everything would work exactly the same way on the human side of things.

MR. EMISON: It's for hard to forget the future. And really what we're getting at is is there any chance at all that in weighing the evidence that you're going to - if it's close or if there's question you're going to say well, my experience was X so I'm going to go with that?

VENIREPERSON NO. 56: There is potential for that, yes.

THE COURT: Ms. Pruitt, any questions?

MS. PRUITT: If the Court instructs you to listen to the witnesses and the evidence in the case and follow the instructions that she gives you in the case, would you be able to consciously set aside your personal experience and listen to the evidence, base your decision only on the evidence and then follow the Court's instructions about what that means at the end?

VENIREPERSON NO. 56: I believe I could. Again, it could be a moral issue with questions that were raised previously about if there are possible other

circumstances with it that could've attributed to the issue wasn't 100 percent on that, I would probably morally have an issue with that.

MS. PRUITT: And sometimes we disagree with the law. But if you disagree with it personally, could you still listen to the evidence?

VENIREPERSON NO. 56: Yes.

MS. PRUITT: And follow the Judge's instructions even though in your heart if you were the only decision-maker you might make a different decision? Could you do that?

VENIREPERSON NO. 56: Probably.

THE COURT: Okay. We appreciate it. Thank you, ma'am. We'll see you after lunch. Sorry you're getting a short lunch. Fifty-seven.

(JUROR NUMBER 57 ENTERED THE COURTROOM.)

THE COURT: You're Juror Number 57, is that right?

VENIREPERSON NO. 57: Yes.

THE COURT: When I talked about the length of the trial you indicated you may have difficulty serving?

VENIREPERSON NO. 57: Yes.

THE COURT: What's going on?

VENIREPERSON NO. 57: Well I'm the sole source of income for my family. I have a disabled wife and a teen

son at home and with a lot of medical bills that would be hardship for several weeks.

THE COURT: What kind of employment do you have?

VENIREPERSON NO. 57: I'm a property manager at a large church complex over in northeast. And it would create some job problems too but I'm not sure if that's considered a hardship.

THE COURT: If you – do you have the type of job where you have to work to get paid or do you get paid regardless?

VENIREPERSON NO. 57: No, I have to work to get paid.

THE COURT: Do you feel as though that having that being the sole source of income, having to work to get paid would affect your ability to be present mentally as a juror in this in terms of giving the evidence your full attention?

VENIREPERSON NO. 57: I certainly would try to. I don't think it would affect it.

THE COURT: Okay. Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Okay, thank you, sir. We'll see

you back after lunch. We'll take that into consideration. Fifty-nine.

(JUROR NUMBER 59 ENTERED THE COURTROOM.)

THE COURT: Come on up, sir. All right so you are Juror Number 59, is that right?

VENIREPERSON NO. 59: Yes.

THE COURT: So when I talked with the length of the trial, you said you may have some difficulty serving?

VENIREPERSON NO. 59: Yes.

THE COURT: What's going on?

VENIREPERSON NO. 59: Well I make 75 percent of the money in my household and three weeks that's a big chunk of our monthly income.

THE COURT: What type of employment do you have?

VENIREPERSON NO. 59: I work construction. I'm a piping superintendent.

THE COURT: And do you have the type of job that in order to get paid you have to work?

VENIREPERSON NO. 59: Yes.

THE COURT: All right. And do you feel as though that having that period of time without getting a paycheck that it would affect your ability to really be mentally present in terms of your attention and things like

that?

VENIREPERSON NO. 59: Yes, it's a big financial hardship on me.

THE COURT: Sure. Mr. Emison, any questions?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: Okay. We'll take that into consideration and we'll see you back after lunch, okay?

VENIREPERSON NO. 59: Okay.

THE COURT: Thank you, sir. Let's go off the record.

(OFF THE RECORD.)

(RETURN AT 1:30.)

MS. ROGERS: Your Honor, I've been watching Juror Number 6 and just based on my previous experience as a prosecutor, I do feel that Juror Number 6 may be under the influence. Based on her eyes and focus, Your Honor, it looks that way. I just feel like I am obligated to bring it up as an officer of the court.

THE COURT: The Court will keep an eye on that juror and we'll make a record at the conclusion any additional observation. I would appreciate it.

MS. ROGERS: Thank you, Your Honor.

(JURY RETURNS AT 1:40 PM.)

THE COURT: Welcome back. Ladies and gentlemen, thanks for being timely. We will now begin with the defendant's jury selection.

MS. PRUITT: May it please the Court?

THE COURT: Counsel.

VOIR DIRE EXAMINATION BY MS. PRUITT

MS. PRUITT: Counsel. Good afternoon, everyone. That's for staying over your lunch break. And I'm going to take some of your time on behalf of 3M.

First of all, my voice is normally deep but not this deep. It is allergies so nobody get worried. The pollen count is very high right now and so I apologize for my voice. I'll try not to struggle too much. If I cough or blow my nose, it's allergies.

I heard counsel talk about us being from all over the country. I mean I thought Arkansas was just in the middle of nowhere, your neighbors to the south.

My name is Lyn Pruitt. We're here representing 3M. Jerry Blackwell is back here. Steve Torline is back here. Steve is from Jackson County. So those are the lawyers and we represent 3M. 3M is a big old company.

So I want to talk to you little bit about those issues and I would ask you to be as honest and forthright as you can be in answering my questions. There are no right or

wrong answers, no judgments. If you have feelings about certain things with regard to corporations, I'd like to hear them.

And this is a place where we're looking for those who can be impartial jurors. We're just trying to find if you have any biases or anything. Everybody has different experiences that may affect this case so that's were looking for.

The first thing I want to talk to about is the plaintiff Ms. O'Haver has sued 3M claiming that the Bair Hugger is a defective product. So I want to ask all of you have you or anyone close to you ever been injured by a product that you or they believed was defective? If the answer is yes, please raise your number. Nobody's ever been injured by a product that they believed defective? Number 4.

VENIREPERSON NO. 4: My left knee replacement is a Johnson and Johnson DePuy and there's a lawsuit on it and I'm going to have it redone so I do understand defective products.

Q Anyone else that's been injured by a product that they believe to be defective? How about a close family member or someone, one of your children, somebody in your family, anybody? Number 19.

VENIREPERSON NO. 19: My mother, same deal.

It's a knee replacement.

Q And do you know what kind of knee it was?

VENIREPERSON NO. 19: I think it's the same but I'm not 100 percent sure.

Q Do you know whether your mother is a member of the class action with regard to that product or not?

VENIREPERSON NO. 19: I'm not totally sure.

Q Anything about that, sir, that went affect your ability to listen to the evidence in this case and decide based on instructions the Court gives you?

VENIREPERSON NO. 19: No.

Q Anyone else? 3M manufactures a variety of products you may have used or worked with. Has anyone ever had experience with a product manufactured by 3M? Number 53.

VENIREPERSON NO. 53: I used the 3M software to completely revamp the system and I felt like it was defective.

Q Okay. Was there something - and I'm just asking your opinion. Was it in your opinion the software that was defective or was it the employees that were trying to put it together or how would you describe it?

VENIREPERSON NO. 53: I would say a little of both. I mean, we were trying to get used to. And then the training that we were provided wasn't that great. We were trying to get used to it.

Q And you know this case is against 3M. Have you been sitting here today thinking, you know, I think they're kind of - a company too much ...

VENIREPERSON NO. 53: No.

Q Has anyone else had a negative experience with a product that was made by 3M? How about any other products? Have you had a negative experience with a corporation of any kind that makes products, that you use in your business, that you use in your everyday life at your house? Anybody had that experience with a corporation?

Does anybody on this panel have a negative opinion of 3M for any reason as we sit here right now? Anybody have a negative opinion about 3M? Has anybody heard anything negative about 3M either on the news or on the Internet or on the television?

Number 19, I'm not going to ask you what you've seen but here's what I want to know. Did what you saw or read cause you, as we sit here today, to have some negative feelings about or toward 3M?

VENIREPERSON NO. 19: No.

Q Somebody raised their card back here, 47. Did what you see or read or hear about cause you, sir, to form a negative opinion or have a negative view of 3M?

VENIREPERSON NO. 19: No.

Q Anyone else heard anything or read anything about 3M

that as you sit here today makes you think in your mind now, I can't search your heart, in your heart of hearts, that I have a negative impression of that company? Anybody?

Anybody or someone you're close to that you've had conversations with or that you know that has had a bad experience with 3M or has a negative view of 3M?

Now I want to talk to you generally about big corporations. When we come into a court and you've heard references today how the scales of justice are equal, that means and the Court will instruct that you're supposed to give 3M the same consideration that you would an individual who is claiming that she was harmed by our product, you're supposed to give the two of them equal consideration.

Now that's pretty hard to do when you're sitting over here looking at a bit corporation and you've got an individual on the other side. And I know there's nothing wrong with that being hard to do. But what you're going t be instructed is they should be treated exactly equally under the law. So I'm going to ask you if it would be hard for you to do that, to give 3M the same consideration as you would an individual who has claimed to be injured by our product. Does anybody think they would have a little bit of a problem doing that, just even slight? Sir, Number 14, tell me what you think about that?

VENIREPERSON NO. 14: Sure. I grew up lower-class as a punk rocker. All I'd hear is big corporations

are being treated like an individual. Of course, I would try to be as impartial as possible but I would be remiss if I didn't say treating big corporation like an individual is outrageous to me.

Q It's hard to do, right? Let me ask it this way, sir. If the Court tells you that your job in this case is going to be to listen to all the evidence from that witness stand and then she's gonna reach you the instructions about what law applies to the evidence that you've heard, do you think that you're able to do that in light of your view about corporations versus individuals?

VENIREPERSON NO. 14: I think so. I want to weigh what I hear and do what the Judge tells me to do. But just hearing that, I couldn't not raise my hand.

Q No and that's what we're asking you to do to and I really appreciate you doing that. There are probably are others that of sort of on the edge about whether they want to raise their hands so I appreciate it.

Is there something about the way you feel about corporations that goes a little beyond just not being able to view it exactly that same that would cause you to favor the individual over the corporation and a person entering litigation like this?

VENIREPERSON NO. 14: I couldn't say, nothing that sticks out in my mind. Just a general idea of judging

a corporation in the same way as an individual sounds a lot.

Q Have you yourself personally had any negative experience with corporations?

VENIREPERSON NO. 14: Not that I can think of. But as someone who has never really had health insurance, the idea of a big corporation doing stuff and then having to judge whether or not they've been injured, the whole thing is hard to swallow. But of course ...

Q Is there anyone else that has the same feeling about an individual versus a corporation and whether it would be difficult for you to view them equally when you're listening to the evidence? Anyone else?

This gentleman was nice enough to give us his thoughts. Does any other member of the panel have negative views about corporations in general? There's a lot out there.

VENIREPERSON NO. 41: There is a lot out there.

Q Thank you thank you. Number 41, do you have some negative thoughts in general about corporations?

VENIREPERSON NO. 41: Not negative but there's like - as he stated, you can't really compare them to people because we always hear corporations, they have the funding, they have the money. And yes.

Q Let me ask it a different way. You'll hear from the

Court an instruction that the plaintiff which would be Ms. O'Haver has the burden of proof in this matter. You heard about this this morning. The burden of proof is not beyond a reasonable doubt. The burden of proof is more likely true than not true. Would anybody have a hard time requiring the plaintiff to meet their burden of proof because they're suing a corporation? Would anybody have a hard time saying to them you have to meet your burden of proof?

In other words, it be easier for you to decide in favor of the plaintiff because of the way you feel about corporations? Does anybody have that feeling? In your heart of hearts, let me know cause I can't know unless you tell me.

We're talking in this case about a medical device and we've already - thank you, Juror Number 4 and this gentleman over here talked to me about medical devices. Other than Juror Number 4 and this gentleman, have any of you had a negative experience with the medical device company or someone that makes medical devices at any time? Number 9.

VENIREPERSON NO. 9: I work for pharmacy information systems. We use several pumps and automated dispense cabinets that I have to support. And yeah, there are significant issues with some of those that are manufactured by corporations.

Q And, I apologize for my ignorance but is this actually a medical device or is this something that is used with a

medical device?

VENIREPERSON NO. 9: It is a medical device that is used to compound drugs.

Q Have you had a problem with that particular type of device?

VENIREPERSON NO. 9: Yes.

Q Which company makes that kind of device?

VENIREPERSON NO. 9: I'd rather not say.

Q You don't have to say. Is there something about your experience in dealing with this situation that would cause you to have views right now as you sit here about medical devices and your behavior and how they deal with any medical devices on the market?

VENIREPERSON NO. 9: No.

Q Is there something about your experience that causes you as you hear this to have thoughts and feelings that would cause you to look more favorably on the plaintiff's case because 3M has manufactured this device?

VENIREPERSON NO. 9: I suppose it's possible, yes.

Q Do you have that feeling right now?

VENIREPERSON NO. 9: No.

Q Do you believe that at the end of this when the Court asks you to listen to the evidence and follow the law as she reads it, do you believe you could do that?

VENIREPERSON NO. 9: Yes.

Q Is there anybody here if the Judge tells you that you're going to be listening to the evidence and hearing the evidence and that you're to base your decision only on the evidence and as she instructs you and then you go deliberate and decide on those issues. Does anybody here feel like they cannot do that and follow her instructions that she gives them to you?

We've had a lot of questions about that this morning but you haven't heard any of the evidence yet. She will tell you that the evidence is what comes from this witness stand up here. Does someone have a problem if the law is different than their personal viewpoints? I believe we talked about this.

Does somebody have an opinion if the law is different than maybe what they personally think it could be or should be, that they can't follow it? Because we all have views and ideas about what the law should be and what should happen. If it's not within your personal view and the Judge gives you an instruction on the law that you don't particularly necessarily agree with, would somebody here have problem with those instructions? Number 57?

VENIREPERSON NO. 57: Yes. I have some strong personal views. I deserve that right to do that.

Q If the burden of proof on the plaintiff is a preponderance of the evidence or more likely than not and they do have the burden of proof. 3M doesn't. In the Judge tells you to listen to the evidence and follow her instructions, do

you believe that you could do that in a case like this?

VENIREPERSON NO. 57: I believe so.

Q And it might be different for a criminal case if you thought something about the death penalty and you were against it or you were for it or something like that. But this is a civil case and you've heard a little bit about the facts. If she tells you there's a burden of proof, this is what they have to do and apply my instructions, can you do that?

VENIREPERSON NO. 57: I believe so.

Q Is there anyone other than Juror Number 9 that has had a bad experience with medical device, family members or someone close to you?

How many of you strongly agree that any piece of medical equipment should be proven to be 100 percent safe, 100 percent of the time before it's used in a hospital? Raise you card.

VENIREPERSON NO. 18: Could you repeat that please?

THE COURT: And who was it that asked that? What juror asked to repeat it?

Q Juror Number 18.

THE COURT: Thank you.

Q Yes, I'll repeat it and I'll ask you to raise your card again. The question is how many of you strongly agree that any piece of medical equipment should be proven to be 100 percent safe 100 percent of the time before it is used in a

hospital? Five, 12, 11, 34, 32, 31, 18, 17, 41, 20, 51, 50, 54. Anybody else? Thirty-eight. So Juror Number 5, tell me why you say that?

VENIREPERSON NO. 5: You're talking about things like surgery, invasive, whatever, if it's not been proven to be safe then I don't want them using it on me.

Q I understand. The question I asked was do you have a belief that a medical device should be proven to be 100 percent safe 100 percent of the time before it's used in a hospital?

VENIREPERSON NO. 5: In a hospital I do, yes.

Q I appreciate it. Number 12, can you tell me your experience and what you think?

VENIREPERSON NO. 5: I mean it goes through all the research. They should be 100 percent.

Q A hundred percent?

VENIREPERSON NO. 5: Yes.

Q Thank you. Number 11.

VENIREPERSON NO. 11: Yeah, I mean it should be safe but I mean 100 percent effective. It won't work all the time.

Q So to you it's between safe and effective is I think I'm what I'm hearing. So with regard to medical equipment, if there's - your view is it should always be 100 percent safe in the operating room?

VENIREPERSON NO. 11: Correct, yes.

Q Who else has that - let's see, 18.

VENIREPERSON NO. 18: That's me.

Q Tell me why you answered that question that you strongly agree?

VENIREPERSON NO. 18: I strongly agree because it's going to be used - you know before they put it in someone's body like mine. I believe it should be safe at all times.

Q A hundred percent?

VENIREPERSON NO. 18: A hundred percent.

Q Let's look to 20.

VENIREPERSON NO. 20: I feel the same thing. It must be 100 percent if they're going to put it in my body. It depends on the equipment and the tools that are used for a person's health so I agree.

Q Thirty-two, tell me why you believe that.

VENIREPERSON NO. 32: Because that's something that is very important. And you know if I - it's not something that I'm going to - I need to know 100 percent that it's gonna work.

Q Number 31.

VENIREPERSON NO. 31: I think that's what trials are for before they release a product. If there's any doubt on anything then I don't think it should be out there.

Q Okay. Let's go to Number 41.

VENIREPERSON NO. 41: So I kind of rethought about that and 100 percent effective and 100 percent safe, what was the second part?

Q A hundred percent safe and 100 percent effective?

VENIREPERSON NO. 41: A hundred percent of the time. I know that there is room for error so I kind of rethought about that.

Q So you don't strongly agree that it should always be 100 percent of the time and be 100 percent safe?

VENIREPERSON NO. 41: I know there is - I know there's a 98 percent chance.

Q Number 50.

VENIREPERSON NO. 50: I mean there's margin for error but it should be safe.

Q Fifty-four.

VENIREPERSON NO. 54: I'm kind of with everybody else. If it's not 100 percent, what's the point? You're paying thousands of dollars especially if you don't have health insurance, what's the point? It should be 100 percent or you don't get it.

Q Number 38.

VENIREPERSON NO. 38: I agree. It should be 100 percent. But I also know that things happen that are out of our hands at times.

Q How many of you have the belief and hold it strongly that it's possible for a hospital to make an operating room 100 percent sterile? How many of you have that belief? Nobody here as we sit here has the belief that a hospital can make an operating room 100 percent sterile?

VENIREPERSON NO. 47: Could you repeat the question?

THE COURT: Who is it?

VENIREPERSON NO. 47: I'm sorry, 47.

Q The question is how many of you strongly believe hospitals can make an operating room 100 percent sterile?

VENIREPERSON NO. 47: I think they can m ake the environment sterile for semiconductors and things of that nature. It's possible to do those things usually at a cost.

Q And do you have a belief, sir, that the hospital would be achieving that not simply based on the cost?

VENIREPERSON NO. 47: I think their - I think they may not emphasize - I think they are continuing to evolve in making those as safe as they can.

Q Do you have personal feelings, sir, that the hospital should make their operating rooms 100 percent sterile based on your belief that that can be done?

VENIREPERSON NO. 47: Sure.

Q You do believe that?

VENIREPERSON NO. 47: Yes.

Q Anyone else that I left off on that question?

VENIREPERSON NO. 12: I believe that they could make it 100 percent.

Q And do you believe – do you have a personal belief that it's possible?

VENIREPERSON NO. 12: Yes.

Q Do you have a belief – do you have a personal belief that it's possible?

VENIREPERSON NO. 12: Yes.

Q Do you have a belief that hospitals should make the operating room 100 percent sterile?

VENIREPERSON NO. 12: Yes.

Q Anyone else? So this may be a little sensitive question so I apologize in advance. How many of you are concerned – but let me give you a multiple choice. Here's the question. How concerned would you say that you are about germs and bacteria in your daily environment? Here's the choice. One, very concerned, two, a little concerned, or three, not concerned at all. And I want to know who would say extremely concerned about that question. Number 49.

VENIREPERSON NO. 41: (Inaudible.)

THE COURT: That was 41 who just made that comment?

Q Yes. Raise you cards again if you feel that way and I

can repeat the question.

VENIREPERSON NO. 41: Repeat the question please.

Q If I asked this question. How concerned would you say that you are about germs and bacteria in your daily environment? Extremely concerned, a little concerned, not concerned at all. How many of you are extremely concerned? Seventeen, 40, 41, 46, 48, 49, 53, 58. Raise your cards one more time. Let's start with Number 40.

VENIREPERSON NO. 40: I work for the plumber's union so I see all the cross-contamination that can happen. We have bacteria that gets in the water. We protect the health of the nation. And our drinking water is supposedly contaminated.

Q And so it's your job that causes you to pick the choice that you're extremely concerned because of what you know?

VENIREPERSON NO. 40: Yes.

Q Do you think, ma'am, that what you know would potentially affect the way you would view this case where everyone knows a knee surgery done in an operating room where a warming blanket was used and that she got a knee infection as a result of something?

VENIREPERSON NO. 40: It could just because we deal with the infectious control and I have to help with the classes and such so I have a little bit of knowledge on

that side of things. So it could have happened because of that one particle of bacteria.

Q Have you had experience in doing that in hospitals?

VENIREPERSON NO. 40: Yes. It's a big portion of our membership.

Q And that was here in town too?

VENIREPERSON NO. 40: We have a plumber that works in the building.

Q And how long have you done this?

VENIREPERSON NO. 40: I've been with the plumber’s union a total of eight years.

Q So as a part of you knowing about this, do you recall any guidelines that you have become familiar with that have anything to do with sterile warming or warming a patient in the operating room?

VENIREPERSON NO. 40: No.

Q You've never had any experience that particular topic?

VENIREPERSON NO. 40: No.

Q Who was the next one after 41?

VENIREPERSON NO. 46: I'm extremely concerned and aware of germs especially after COVID in my personal life.

Q Who was next?

THE COURT: What's your number, sir?

VENIREPERSON NO. 48: Forty-eight. I won't

even go to the restroom. I'm sorry to everybody here but I wouldn't even touch - I use a napkin the touch the door handle.

Q If I try to get too personal just tell me to butt out if you don't want to answer it. But have you started doing that more since COVID obviously?

VENIREPERSON NO. 48: I've been doing this for the past 10 years. I won't touch a door handle. I use a paper towel or something like that. I've seen other people that don't wash their hands and touch door handles.

Q I get it. I don't even like to go to any buffets. So I'm looking around, don't look, don't look. But because I'm with him and he points that out, I kind of got prepared so I get that.

Is there something about your work or something that's caused you - I'm just tried to figure ...

VENIREPERSON NO. 48: My job. We have to go through classes every year. But also, they put a big emphasis on hygiene and cleaning and things like that.

Q The gentleman next to you, please hold up your number. Forty-nine. Tell me about how you feel about being extremely concerned about germs and bacteria?

VENIREPERSON NO. 49: Personally, I see a lot of touching and a lot of interaction. I have to deal with the public.

Q Do you think that you can always safeguard yourself?

VENIREPERSON NO. 49: No, we cannot.

Q Anyone else have their card up on that? Number 58.

VENIREPERSON NO. 58: The nature of my job as a nurse and understanding the process of cleaning and also being on the frontline with COVID was impactful.

Q Yes. I asked the question earlier about operating rooms being 100 percent sterile and I think you raised your card. Do you have any belief that the hospitals can make their operating rooms 100 percent sterile or should?

VENIREPERSON NO. 58: I think an effort is always made to ensure that that area is a sterile as possible. But there are so many human factors and products that come into any procedural area, that that would be a challenge.

Q Fifty-three.

VENIREPERSON NO. 53: I am immune-compromised because of the medications that I'm on. I also last year just finished cancer treatment so the cleanliness and the germs are very important.

Q Yes, I certainly understand that. So in the COVID situation we've been around those people who would be immune-compromised.

VENIREPERSON NO. 53: Toward the end I wasn't actually on medication but I also my hands operated on so.

Q And so your experience comes from the fact that your doctors and your research told you?

VENIREPERSON NO. 53: I've worked for 15 years in a pharmacy too I come in contact with a lot of sick people also so I'm a germaphobe.

Q I understand. There's nothing wrong with being called a germaphobe. I call my daughter that. She takes a sleep sack with her when she travels. And I'm not making fun of anybody else cause that's my own daughter. No shame, no judgment if you're a germaphobe.

I'm just going to talk to you a minute about whether you or somebody close to you has had surgical procedure before. And I don't mean an outpatient procedure. I mean a surgical procedure in the OR in a hospital.

So let me start over here. Let's narrow it down, whether you have had a surgical procedure in an operating room. One, four, five, six, seven, eight, 10, 11, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 29, 30, 32, 34, 36, 41, 43, 44, 45, 46, 48, 49, 52, 58, 59 and 42.

So before I ask you about that, I want to add one more question to it. This may limit the number of people that have put their cards up. As a result of your surgical procedure, in your mind, has anybody ever experienced negative consequences as a result of that surgery? If you experienced negative consequences as a result of that surgery, I want to talk to you.

Four, 14, 17, 18, 19, 34, 44.

Now anything in addition to what you've already told us, Juror Number 4?

VENIREPERSON NO. 4: Two additional surgeries other than the infection of the knee.

Q Right.

VENIREPERSON NO. 4: I've had like 14 surgeries. And the knee has been the worst.

Q And that was this device that we talked about earlier?

VENIREPERSON NO. 4: Actually, I've also had issue with the mesh replacement for a ruptured uterus.

Q And you mentioned a class action on the J&J. Have you been a partner to a lawsuit on the mesh?

VENIREPERSON NO. 4: No, I did not.

Q Is there anybody else that raised their card on a surgical procedure where they had a negative consequence from it? Let's start back over here. And 17, what type of surgery if you can say.

VENIREPERSON NO. 17: It was a hip replacement. It was not mine. Are we talking about a personal one?

Q Personal one right now.

VENIREPERSON, 17: So far, so good.

Q Eighteen.

VENIREPERSON NO. 18: I had a knee and it got

infected.

Q Your knee got infected?

VENIREPERSON NO. 18: Yes.

Q Did you know - did anybody tell you what the cause of your infection was?

VENIREPERSON NO. 18: The glue.

Q What?

VENIREPERSON NO. 18: The glue.

Q The glue?

VENIREPERSON NO. 18: Yes.

Q And who was it that told you that?

VENIREPERSON NO. 18: My doctor.

Q Your doctor did?

VENIREPERSON NO. 18: I started breaking out real bad and they had to take the knee out and try to treat the infection for about six months.

Q Nineteen, what kind of surgery did you have?

VENIREPERSON NO. 19: Multiple back surgeries and more to come.

Q Eighteen, I want to ask you, did that - the knee replacement, did that make you have a tendency and be a little unfavorable because she had a new surgery and she has - plaintiff claimed to have problems with it?

VENIREPERSON NO. 18: No because I had three knee surgeries.

Q Anything about your experience you think would even influence a little bit the way you view the evidence when somebody has an infection that results from a knee surgery?

VENIREPERSON NO. 18: No because it was the glue. I knew it was the glue so they glued it first in my knee and that's when they tried it again, crazy me.

Q Sir, you said you had back surgeries. And I asked if there was complications of your surgery. If you feel comfortable, what was the negative experience?

VENIREPERSON NUMBER 19: It's just went from one symptom to different symptoms and having revisions to go back in and do it again. It wasn't necessarily done correctly the first time.

Q Were you involved in any kind of lawsuit as a result of any of that?

VENIREPERSON NO. 19: Yes, but it was like Worker's Comp.

THE COURT: And that's Juror 19?

VENIREPERSON NO. 19: Yes. It's a Worker's Comp. lawsuit.

Q And how long were you off work?

VENIREPERSON NO. 19: Total each time probably six months.

Q And during the course of that procedure, that surgery, did you think that those risks or the things that happened to

you, were they explained to you by physicians or anyone?

VENIREPERSON NO. 19: Yes. There's always risks that - there's always risks but some of it is - can be avoided too.

Q Did you believe as a result of all the pain and everything you've been through that someone or the physician placing it had not - it was not done correctly?

VENIREPERSON NO. 19: Yes.

Q Did you form an opinion, sir, that the device itself was defective?

VENIREPERSON NO. 19: No, not necessarily the device, more of the surgeon.

Q And how many surgeries have you had as a result of that?

VENIREPERSON NO. 19: I've had four so far and potentially getting ready have another one.

Q Anything about your personal experience or personal experiences that would cause you to be more sympathetic to the individual?

VENIREPERSON NO. 19: Probably. Having gone through something like that it's not very fun.

Q Right. You heard me say if the Court tells you that you should consider the evidence and listen to her instructions and follow the law, would you follow the Court's instructions and listen to the evidence and then follow her instructions?

VENIREPERSON NO. 19: Yes.

Q Next person that had surgery with negative complications?

VENIREPERSON NO. 34: Thirty-four. I had a dermatologist try a procedure twice in the same spot before he found a competent surgeon.

Q Anything about - so you thought the surgeon was negligent or didn't do his job right?

VENIREPERSON NO. 34: It was her, incompetent.

Q Did that result in any sort of a lawsuit against them?

VENIREPERSON NO. 34: No.

Q Did you eventually get to a person who did that right?

VENIREPERSON NO. 34: Yes.

Q Is there anything about you - and I can't know what your personal experiences are. Is there anything about your personal experience that would make you feel sympathetic or more sympathetic towards surgery?

VENIREPERSON NO. 34: No.

Q Who's the next one that had their card up?

VENIREPERSON NO. 44: Forty-four.

Q Forty-four.

VENIREPERSON NO. 44: I had complications but I had reconstructive knee surgery. I have arthritis and years ago I had prostate cancer. You walk in there feeling fine and you walk out incontinent with erectile

dysfunction. I can't tell you otherwise.

Q I appreciate you sharing that.

VENIREPERSON NO. 44: I think I can be fair and impartial.

Q About the situation?

VENIREPERSON NO. 44: About the situation.

Q It's a terrible experience but nothing about that the surgeon was at fault?

VENIREPERSON NO. 44: No.

Q Device wasn't defective or anything like that?

VENIREPERSON NO. 44: No, they explained the risks associated with it. There's no guarantees. Same with the prostate cancer. It's a judgment call as some days are better than others for the surgeon. And he did a pretty good job all things considered. I'm still alive.

Q So the whole panel has heard what you said about your surgery and the negative consequences. I only went those to raise their card who have had family members that have had negative consequences with a surgical procedure. Four, five, 10, 17, 23, 26, 34, 36, 48.

Q So 4, which family member?

VENIREPERSON NO. 4: My brother.

Q Was the negative consequence something that someone did wrong or was it just something that happened after the surgery?

VENIREPERSON NO. 4: Both.

Q Can you share with us?

VENIREPERSON NO. 4: My brother had the same that I have and at the age of 15 he had to have pins put into his knee to hold the joint together. And his deteriorated so far and they left them in too long. There was an infection that formed around the plates and they had to develop a special tool to go in and bore those pins out and he had to have the replacement.

Q Number 5.

VENIREPERSON NO. 5: Father.

Q What type of surgery?

VENIREPERSON NO. 5: He had cancer and he died.

Q The negative consequence was that he had cancer and he died?

VENIREPERSON NO. 5: They removed it. Three days later he died.

Q But nothing about that was at fault in the care and treatment?

VENIREPERSON NO. 5: It's questioned.

Q Did I say 10?

VENIREPERSON NO. 10: My father had back surgery and he had complications with that. And then I have a relative who had cancer surgery and died in the process of that.

Q Did you contribute your father's complication to something somebody did or the device that was used in the surgery at all?

VENIREPERSON NO. 10: No, I think it was just the nature of the surgery and the just the risk of ...

Q Complications?

VENIREPERSON NO. 10: The risk of having it. He's never recovered fully from it.

Q I think you raised your card about a family member, 17?

VENIREPERSON NO. 17: My sister. She had the first replacement was when she was 30. And the glue was at that time not a good glue. Then as she continued she had to have another hip replacement. And in one of them when they tried to put on in, her bones were so thin by then that it had nicked like a vein and she almost bled to death. So they had to stop that, pin her back together and she had - they had to stop surgery and wait I don't know how many months.

Q Thank you for sharing that. I know these things are difficult. Twenty-three.

VENIREPERSON NO. 23: I had a friend that had surgery. She had a fever after they did the surgery. And the doctor put her back in the hospital. She finally got back in and had to wait for hours. Then they said she had

lack of fluids. Two more weeks and they finally figured it out.

Q Thank you for sharing that.

VENIREPERSON NO. 34: A long time ago my grandfather had a knee surgery. He was never the same. He was never right after that. He never sued. He didn't believe in that. Something went wrong.

Q That was a bad experience with your grandfather that had a knee surgery?

VENIREPERSON NO. 34: Yes.

Q Is there anything about your relationship with your grandfather and knowing about that experience that would cause you think that you might be in favor of Ms. O'Haver in this situation?

VENIREPERSON NO. 34: I don't think so.

Q Thirty-six.

VENIREPERSON NO. 36: My grandmother died. She went to have a colostomy put into her stomach so it made her septic so she didn't make it 24 hours after the surgery.

Q Was that here?

VENIREPERSON NO. 36: No.

Q Where was it?

VENIREPERSON NO. 36: Illinois.

Q Has anyone here ever experienced with the exception of

Juror 4 I believe ever experienced an infection from an open wound?

VENIREPERSON NO. 4: From a surgery?

Q No, just any infection from an open wound. Five, 34, 41, 44.

Q Five, what kind of wound did you have?

VENIREPERSON NO. 4: Staph infection. Self-surgery.

Q I gotcha.

VENIREPERSON NO. 4: And it got infected.

Q Thirty-four.

VENIREPERSON NO. 34: Military.

Q Anything that required you to be hospitalized?

VENIRE PERSON NO. 34: No.

Q Forty-one.

VENIREPERSON NO. 41: Staph infection.

Q I'm sorry?

VENIREPERSON NO. 41: A spider bite.

Q Spider bite. Forty-four.

VENIREPERSON NO. 44: Dog bite.

Q Did it require you to be hospitalized from the infection?

VENIREPERSON NO. 44: Two emergency room visits.

Q Forty-nine.

VENIREPERSON NO. 49: Staph infection.

Q I didn't understand the last part. Did you get an injury from work?

VENIREPERSON NO. 49: No, it was really bad athlete's foot and they didn't know what it was. It spread into my fingers. I went to get it checked out they said, no, you have a staph infection, go to the emergency room now. They gave me antibiotics. I ended up going to a podiatrist. And he was like, you're going to the hospital now. I had my foot packed with gauze.

COURT REPORTER: I'm having trouble hearing him.

THE COURT: Sir, can you speak up.

Q Got it. Other than the people that have already spoken up about surgeries, you don't need to speak up again. But has anyone that has not raised their hand have either they or someone close to them have had joint replacement surgery, either hip or knee? One, two, nine, 12, 36, 33, 35, 41, 52, 54, 58 and 20.

THE COURT: Counsel, could you please approach.

(BENCH CONFERENCE.)

THE COURT: I just want to make record that Juror Number 55 has been sleeping and snoring. You have about an hour and four minutes.

(RETURN TO OPEN COURT.)

THE COURT: Counselor, you may proceed.

MS. PRUITT: Thank you, Your Honor.

Q Number 1, who in the family or has had a knee or hip

VENIREPERSON NO. 1: My mother had both a knee and a hip replaced.

Q Did your mother have any negative experiences other than just the healing process?

VENIREPERSON NO. 1: No.

Q Did she have an infection develop as a result of either?

VENIREPERSON NO. 1: No.

Q Is there anything about her experience that causes you to have a negative view about hip and knee surgeries or devices or anything like that?

VENIREPERSON NO. 1: No.

Q Number 2.

VENIREPERSON NO. 2: Knees, hips. One had both hips. My goddaughter's is getting ready to do both hips.

Q Lots of hips?

VENIREPERSON NO. 2: Yes.

Q Anybody, ma'am, have an infection after they the hip replacement?

VENIREPERSON NO. 2: Yes.

Q You don't have to tell me their name obviously.

VENIREPERSON NO. 2: A friend.

Q Did anybody ever tell her - did she tell you what caused her hip infection?

A No because I wasn't there for the first one.

Q Has she ever spoken to you about what caused that?

VENIREPERSON NO. 2: She probably has but it was when she was 18.

Q It's been a long time ago?

VENIREPERSON NO. 2: Yes.

Q Nine.

VENIREPERSON NO. 9: My father had both hips replaced. No infection, standard recovery.

Q Anything about the hip replacement that causes you to have a negative view of doctors, hospitals, devices or anything like that?

VENIREPERSON NO. 9: No.

Q I think 16.

VENIREPERSON NO. 16: Yeah, I've had two brothers, both knees replaced. And I've heard of other family members that have had hips and knees but I don't remember anything about them.

Q Were there any infections involved with the relatives that you know of?

VENIREPERSON NO. 16: And think the older brother had a little bit of infection. My younger brother it's still relatively new so haven't heard anything about

that one.

Q Did he ever tell you or did anyone ever discuss what they thought was the cause of the infection was?

VENIREPERSON NO. 16: Not that I remember. They might have but I don't remember. They don't talk directly to me. It goes through somebody else.

Q I understand how that works. Twenty-six.

VENIREPERSON NO. 26: Oh.

Q There you are.

VENIREPERSON NO. 26: My mother had both her knees done at the same time. She didn't have any issues. I have a brother-in-law that had a knee replaced that they ended up having - that did get infected, unknown origin. They weren't sure how it got an infection. He actually had to get the hardware and everything removed and was on IV antibiotics for a long time and eventually had to have it replaced.

Q As a result of that experience have you formed an opinion or do you have any opinions about knee replacement surgery of any kind that are negative?

VENIREPERSON NO. 26: No, I don't. I used to take care of people that had knee replacement surgery and I did see some people that did get infected. There's no rhyme or reason for it.

Q Thirty-three.

VENIREPERSON NO. 33: My mom had a knee surgery. Old age, had to get her knee replaced.

Q No negative?

VENIREPERSON NO. 33: No, it was just in time for my wedding.

Q Glad she planned it out right. Thirty-five.

VENIREPERSON NO. 35: I've had hip replacement. It was fine.

Q Forty-one.

VENIREPERSON NO. 41: Reconstruction on my knee.

Q Fifty-two.

VENIREPERSON NO. 52: I had a knee replacement and my mother-in-law.

Q I didn't understand.

A Knees and mother-in-law, both knees. They did great.

Q No infections?

VENIREPERSON NO. 52: No.

Q Fifty-eight.

VENIREPERSON NO. 58: My mother has had both her knees replaced, no issues.

Q Number 20.

VENIREPERSON NO. 20: My mother and my grandmother had hip replacements.

Q Either one of them had any issues?

VENIREPERSON NO. 20: No.

Q No problems at all?

VENIREPERSON NO. 20: No.

Q I have another question that may be a little difficult to understand some of. Some people believe that it is right that the there is a regulation of medical device manufacturers by the FDA and some believe it is not right. How many of you have the belief and agree that the FDA should regulate medical manufacturers? Does anybody have an opinion or believe that FDA regulations of medical devices is too lenient? Anybody? Does everybody understand the question? Nobody has an opinion?

Does anybody have an opinion that there should be more government regulations of medical device manufacturers, more government regulations of medical devices? Number 10. Tell me why.

VENIREPERSON NO. 10: I think generally manufacturers and companies - I think there's little over study compared to other countries. America has little oversight about that compared to other countries.

Q And which other countries are you relying on in your statement?

VENIREPERSON NO. 10: European.

Q European countries. So in your mind from your experience you have the belief that the regulations of the device manufacturers is more stringent in Europe than it is in

the United States?

VENIREPERSON NO. 10: Yes. This is just general for me so like manufacturing, drugs, that whole realm.

Q There's going to be an issue in this case, Juror Number 10, about an FDA clearance for a medical device and an FDA decision about a medical device and whether under certain procedures they're required to do certain things like certain testing and those kinds of things. Does your opinion that - as you sit here today, is it your opinion that the FDA doesn't have rigorous enough regulations and are you thinking that would affect the way you viewed the evidence in this case?

VENIREPERSON NO. 10: No, just because I know - well I'm under the impression of where I stand with that so my judgment is this case is what is under our law.

Q And so if the evidence is going to show that the FDA did certain things including this process for this product and you think it should have been more, that they should've done more, isn't there a possibility that might affect you when deciding the issues in this case and when hearing the evidence about the FDA and what it did with this device?

VENIREPERSON NO. 10: No.

Q Even a little bit?

VENIREPERSON NO. 10: No.

Q And so you and are talking here and you can set aside

your own beliefs that European countries have more rigorous regulations and decide this case by the American regulations and what is required?

VENIREPERSON NO. 10: Yes.

Q Thank you. Anyone else have an opinion now that we've been talking about it with regard to whether they think there should be more government regulation with regard to medical devices? Anybody else?

Anyone here who has had, you or someone close to you that's had a stroke? Two, three, four, six, 11, 13, 14, 15, 17, 21, 22, 23, 25, 26, 30, 32, 34, 35, 36, 39, 40, 24, 48, 38, 33, 51, 52. So let's back it up. Let me ask it this way. Has anybody on this panel suffered from a stroke? Numbers 32 and 36. So tell me to butt out if you're not comfortable sharing it but when did you have a stroke, ma'am?

VENIREPERSON NO. 32: October of last year.

THE COURT: That's Juror Number 32?

Q Yes, ma'am. Do you know what caused it?

VENIREPERSON NO. 32: Just stress and you know that's what they tell me when I went in. It was frustrating.

Q Do you know what a TIA is?

VENIREPERSON NO. 32: That's what I had, yes.

Q Have you had any consequences as a result of the TIA?

VENIREPERSON NO. 32: Yes.

Q Could you describe what those are?

VENIREPERSON NO. 32: My short-term memory has gotten a little worse. Whenever I talk sometimes I say words backwards, just things that frustrate me really bad.

Q And are you going to therapy?

VENIREPERSON NO. 32: Speech therapy, yes.

Q And has that improved?

VENIREPERSON NO. 32: Not really. I mean my mom and everybody that knows me that's been around me can tell the difference. It's frustrating especially when I'm working, I don't even recognize the people that work with me sometimes.

Q Other than your memory and speech, is there anything that's been affected by the TIA?

VENIREPERSON NO. 32: No.

Q Number 36.

VENIREPERSON NO. 36: I was actually under anesthesiology whenever I had it. And they said that was a side effect and with some people that happens.

Q You actually had a stroke?

VENIREPERSON NO. 36: Cardiac arrest.

Q Cardiac arrest. And was that here?

VENIREPERSON NO. 36: No, it was in Illinois.

Q Did you have any deficits or problems as a result of it?

VENIREPERSON NO. 36: I mean I have palpitations now and again but ...

Q Palpitations?

VENIREPERSON NO. 36: Yes.

Q No paralysis or speech problems?

VENIREPERSON NO. 36: Whenever I get tired I get cold so I know my circulation is slowing down but that's it.

Q You're going to hear some evidence in this case that Ms. O'Haver has had a stroke. It's unrelated to the knee surgery. She had it after the knee surgery. Because of your experience with having had one yourself, don't you think as you sit here you might be a little more sympathetic to her?

VENIREPERSON NO. 36: No, ma'am.

Q In your heart of hearts you don't think you'd be more sympathetic?

VENIREPERSON NO. 36: No. Cardiac problems run all throughout my family so no.

Q Now we talked about a stroke. Has anyone here just you had COPD. Thirty-six, 45. Anyone else? When were you diagnosed with COPD, Juror 36?

VENIREPERSON NO. 36: 1999. I was a smoker.

Q When did you start smoking?

VENIREPERSON NO. 36: I started smoking whenever I was 14. So they said it was partially that but

I was also in a car accident where a fire extinguisher blew up so partially from that too caused it.

Q Do you have problems with it?

VENIREPERSON NO. 36: Yes.

Q What sorts of problems do you have with it?

VENIREPERSON NO. 36: Any type of allergies I need to go get a breathing treatment. If it's really hot out, above 102 I have problems with it.

Q Has anyone ever told you that your life expectancy might be affected from COPD?

VENIREPERSON NO. 36: Yes.

Q Your doctor told you that?

VENIREPERSON NO. 36: Yes.

Q Forty-five.

VENIREPERSON NO. 45: Yes, I got it in 2007.

Q Do you know why?

VENIREPERSON NO. 45: Probably because of smoking and I've got two stents in my heart so I've got a little cardiac history in my family.

Q Here who here has been diagnosed with osteoarthritis? I'm not going to ask you any questions. Thirty-four, 43, 58, 34. Is it in all your joints?

VENIREPERSON NO. 34: Just the right hand.

Q Has anybody told you why?

VENIREPERSON NO. 34: My right hand got

crushed in the military.

Q Forty-three.

VENIREPERSON NO. 43: In my back, just old age.

Q Fifty-eight.

VENIREPERSON NO. 58: Family history and in my feet.

Q We're going to hear some evidence in this case about these issues stroke, COPD, osteoarthritis and how those can affect your life expectancy. Anything about those for you that have those conditions that you think would cause you to be more sympathetic to someone else who has it?

Q Number 9.

VENIREPERSON NO. 9: My father has COPD so I've seen him degrade. The drugs he takes make him shake really bad. So yeah, maybe I'd be sympathetic to somebody who had that.

Q Do you know why he got it?

VENIREPERSON NO. 9: Smoking.

Q Smoking.

VENIREPERSON NO. 9: Yes.

Q And do you know if he's been told that it will affect his lifespan?

VENIREPERSON NO. 9: Absolutely.

Q So we talked about people who have relatives who

worked in the medical field. And I think try not to go back. But I would like to ask you a question about this. Is there anybody here who has the belief that homeopathic holistic or alternative medicine is a way that you would prefer to be treated or your family members to be treated? Raise your cards. Four, five, six, two, 23, 10. So first I would like to talk to Juror Number 6. Tell me what you know about homeopathic holistic alternative medicine.

VENIREPERSON NO. 6: I'm just familiar with essential oils and herbal supplements and whatnot.

Q And do you use that sort of stuff to treat conditions, medical conditions?

VENIREPERSON NO. 6: Sure.

Q And do you have a belief that you would prefer to do that rather than go to the doctor?

VENIREPERSON NO. 6: If it's like allergies or a rash or something I'd rather treat it with some tea tree oil then go to the doctor and pay a co-pay and have somebody tell me what I already know and send me home.

Q And because of you having that preference for homeopathic or holistic treatment, do you have a negative opinion about actually organized medicine and doctors and hospitals and so forth?

VENIREPERSON NO. 6: Yes.

Q So you wouldn't be critical with someone that chose to

do that type of treatment?

VENIREPERSON NO. 6: No. I mean I went to the hospital to get an appendectomy. I'm not going to have somebody - I'm not going to treat that with herbs.

Q Right. One never knows these days. So if it's not an emergency like an appendectomy your preference would be to try to treat it in some other fashion?

VENIREPERSON NO. 6: Correct.

Q Number 2.

VENIREPERSON NO. 2: If it's like a cold or allergies, I'm gonna treat it. If I broke my arm, I'm going to the hospital.

Q Okay. So I understand that. Number 4.

VENIREPERSON NO. 4: Same thing.

Q Does anybody have - is anybody here involved in the business of homeopathic-type business or holistic alternative medicine? Anybody?

We talked about you individuals that have had relatives that are medical professionals or you are a medical professional. I would to ask a little bit different question. Have any of you worked on jobs where you're just in contact with medical professionals? And I know this young lady back here who was talking about the water and the bacteria is an example of that.

Anyone else come in contact regularly as a result of your

job with medical professionals? Two, four, nine, 10, 15, eight, 26, 25, 50, 31, 34, 41, 43, 39, 52, 56, 49. I didn't see your card. I would like to talk with Juror Number 8 for just a moment about that, sir. What is your job?

VENIREPERSON NO. 8: I'm a graphic designer.

Q Tell me how being a graphic designer would cause you to come into contact with medical professionals?

VENIREPERSON NO. 8: So I'm employed with a laboratory. They are medical testing facility. This was a previous job but I was one of their two designers. But when I was laid off from there, two people that were on the marketing team went to work for other fields, similar companies in the medical field and both of them contracted me for freelance work.

Q You mentioned that you got laid off from COVID. Did that affect you financially?

VENIREPERSON NO. 8: Yes.

Q And have you been able to go back to work?

VENIREPERSON NO. 8: Yes. So my husband is a nurse so he supported me as well when I was unemployed. And I freelanced for a year and a half after I was laid off.

Q What kind of nurse is your husband?

VENIREPERSON NO. 8: So he works for KU Med for two years from 2019 to 2021 on a unit at KU Med. And now

he currently is an Ambulatory Nurse Clinic Coordinator for a clinic with KU Med.

Q Does he talk to you about his work and which unit he's on and what his work involves?

VENIREPERSON NO. 8: Yes.

Q Has he been on a floor where orthopedic patients are being treated for surgeries and so forth?

VENIREPERSON NO. 8: He was on a - genital stuff.

Q Gynocology?

VENIREPERSON NO. 8: So he saw patients who had just come out of surgeries and patients who were prepping for surgery. And then during COVID, genital patients.

Q Since you are married to somebody who is in the medical profession, has your husband formed opinions either positive or negative about the medical care and the way the medical care is delivered and tell me what they are.

VENIREPERSON NO. 8: So he saw firsthand the short staffage that happened during COVID. Each nursing unit was required to take more patients than they previously did - that had previously been the standard. Not to the point where it was illegal or anything, three or four patients regularly to for four or five patients regularly, five patients back to back, multiple in a row where prior to COVID had not been the standard practice.

Q So if I'm hearing what you're saying and correct me if

I'm wrong, he felt like he was being asked, as many did, to take care of too many patients during COVID and it was the staffing issue that caused him to form that negative opinion?

VENIREPERSON NO. 8: Yes.

Q Any other negative views that he's expressed to you?

VENIREPERSON NO. 8: Nothing that I would apply to a general like opinion. It's just things about certain things, etc.

Q Have you formed yourself a certain negative opinion about medical devices because of your husband's profession?

VENIREPERSON NO. 8: Not specifically medical devices, no.

Q When you say not specifically, is there something you're specifically thinking about?

VENIREPERSON NO. 8: All the little reasons to the company that laid me off, but it was not - it was due to other things. I never quite fully bought into the parts that they sold nor did I fully buy into the fact that they didn't contact me for a while. They said intravenous therapies. So I leaned away from the homeopathic treatments.

Q And you say you didn't fully buy into their products what kind of products are you talking about?

VENIREPERSON NO. 8: So they specifically would do like hair follicle testing for heavy metal poisoning. They

had certain mold kits and do a lot of food allergy testing, allergies. I was offered all that as an employee for free. I don't quite recall if I believed that.

Q Did you form an opinion at your job with regard to product companies or medical device companies about their marketing or their sales?

VENIREPERSON NO. 8: No. Correction, the freelance client that I had that did intravenous treatments, I did not like the way that they chose to market their products.

Q Have you heard anything in this case about the evidence that you think as you're sitting there that you have experienced or your husband has experienced with those types of issues that would ever so slightly cause you view the evidence with that thought?

VENIREPERSON NO. 8: No, my experience would be - I'm familiar with the surgery but I haven't formed an opinion about it.

Q And how are you familiar with it?

VENIREPERSON NO. 8: I had surgery and the Bair Hugger was used on me. And since my husband's a nurse he's aware of the Bair Hugger, it's function, what it's used for. So I've heard it mentioned just in that context. I don't hold any opinion about it.

Q And your personal views, it was used on you during a

surgical procedure?

VENIREPERSON NO. 8: Yes, I believe it was put on as they were prepping me for surgery.

Q So if you don't mind saying, what type of procedure was it?

VENIREPERSON NO. 8: I'd prefer not to say but it affects the lower half of my body.

Q So the Bair Hugger was on your upper body?

VENIREPERSON NO. 8: I believe it was placed on my lower body. I remember it being on my legs all the way up. It was put on my legs. It may have been moved up.

Q Did you have any complications as a result of that surgery?

VENIREPERSON NO. 8: No.

Q With regard to your husband and his familiarity with the Bair Hugger and so forth, what does he discuss with you about that device?

VENIREPERSON NO. 8: He has just mentioned it in the context of explaining to me what it was. Or I think he was talking to me prior to my surgery about the preop process and he mentioned this is one of the things that do as they're prepping you for surgery. He explained what it does and the Bair Hugger and that's how I know.

Q Anything that he said to you or has said to you since all of that that would be negative about a Bair Hugger device?

VENIREPERSON NO. 8: No.

Q Did you have any complications as a result of your surgical procedure?

VENIREPERSON NO. 8: No.

Q Some people sometimes say that where there is smoke, there is a fire. If I said that, how many of you believe that if the plaintiff's lawsuit, Ms. O'Haver's lawsuit has made it this far there must be something behind her claim? How many of you have that feeling? Now I'll read it again.

Some people say where there's smoke, there's fire. How many of you believe that if the plaintiff's lawsuit, Ms. O'Haver's lawsuit has made it this far there must be something behind her claim? Raise your card. Eleven, 23, 24, 21, 20, 17, 40. Number 20.

VENIREPERSON NO. 20: So she's asking for some money and the length of time and bringing people not only from within but people from a lot of places to come to court and knowing about the case or talking about the case, something is wrong.

Q So as we sit here today, you've formed already a belief that her case must really be strong because of the time that has passed?

VENIREPERSON NO. 20: And questions that have been asked not only by you but her representative is well. So the questions asked in a different way, what kind of -

not that I'm leaning toward either way. There's a lot of information and the questions being asked that kind of tells me that she has a strong claim.

Q If I were to use this analogy. Right now, basically, you think she has a strong case. So if I were standing on the starting line, would she be ever so slightly out in front right now?

VENIREPERSON NO. 20: Again, because of all the information and the balancing and everything where you guys are - maybe that's why I say I won't say yes or no till I get like to like ...

Q But you describe her case right now as you said she has a strong case?

VENIREPERSON NO. 20: Not that she is a strong case. She's been this far. She might have something that supports her. I'm not saying that I agree to what she's saying 100 percent but I would say she's here. There's a case.

Q That's what you're feeling is as of this time today is she has a strong case?

VENIREPERSON NO. 20: I don't know. Maybe I'm not saying it right or my wording is not correctly. But she's made it this far since 2016 in her case. I'm saying that she might have some evidence or proof. I'm not sure. I haven't seen it, but she's here waiting for her to be -

but she's made it this far. I'm not saying - she's here making it this far. I'm not sure if I'm explaining myself.

Q So I don't want to put words in your mouth or in anyone else's mouth. I'm just trying to find out what your feelings are. I think what you said was that after everything you've heard and the questions on both sides you think she may have a strong case, is that right?

VENIREPERSON NO. 20: You both have a strong case.

Q Thank you, 20.

THE COURT: Counsel, we're been going for about an hour and a half. We're going to go ahead and take our afternoon recess. We're only going to take about a 10-minute recess so I apologize that it's short but I'm really trying to use the time that you guys are here as effectively as I can.

I will tell you there's a chance you're going to be here a little bit past five. By the conclusion of today you guys will know whether or not you've been selected as a juror. But after the questioning concludes then the attorneys and I have to meet and frankly talk about your answers and who would be best to be seated as jurors. So I don't want to mislead you. There's a chance that we're going to be here past five.

But the attorneys and I are going to do as much work

as we can to get you out of here as quickly as possible. But just for those of you that have obligations after five, I just wanted to give you that heads up.

(INSTRUCTION READ.)

We're going to get started at 3:35.

(BREAK AT 3:25 PM.)

(RETURN AT 3:39 PM.)

THE COURT: We will continue with the questioning. Ms. Pruitt, you may proceed.

Q As far as the question regarding where there's smoke, there's fire, I'd like to talk with you, Juror Number 24. Tell me how you feel about that.

VENIREPERSON NO. 24: So the idea where there's smoke, there's fire is defined as we can see Kathy's been injured. She's had her knee replaced. She's had an infection. That's stated that to us as fact. So I think that's the smoke. Whether there's any more to it than that is why we're here to figure it out.

Q And so as we're sitting here today, when I say where there's smoke, there's fire, would the fact that you think there's smoke over there cause you to form an opinion even if there was a fire that she has a case?

VENIREPERSON NO. 24: No. I wouldn't see her ahead at the starting line yet. We've been tantalized with all these not quite facts that we'll later so we'll just

wait and hear later.

Q Thank you. Twenty-one, you raised your number to the question. Tell me what you feel.

VENIREPERSON NO. 21: They claim there's something there. It's not nothing, otherwise, we wouldn't be here. I don't have any more than that.

Q So maybe my analogy is poor but you saw some smoke too. But have you formed opinions in your mind that she probably has a case?

VENIREPERSON NO. 21: She has a case.

Q She has a case. Have you formed an opinion whether she has a good case or any other words that you might use to characterize the case?

VENIREPERSON NO. 21: No, we haven't seen the evidence so I don't know.

Q Number 40.

VENIREPERSON NO. 40: Given my previous history working in a law office, she would have to have a case in order for an attorney to take it. There has to be something there for a good attorney to take it, I'll say that. Also, for it to go this many years without a settlement and they want to bring it in front of a jury, I mean that says they believe they can get something out of this.

Q And you, first let me ask you about your work with an

attorney. Who did you work for?

VENIREPERSON NO. 40: I've work with _____ and Eric Morrison.

Q And what kind of work do they do?

VENIREPERSON NO. 40: Personal injury, traffic, divorce.

Q And so what was your job there?

VENIREPERSON NO. 40: I was a legal assistant.

Q And as a legal assistant did you work on cases that involved personal injury where plaintiffs were suing other people for injuries they had received?

VENIREPERSON NO. 40: Yes.

Q And you also said that you think that because this case has come to court and lawyer has taken the case, that there must be something to it, is that right?

VENIREPERSON NO. 40: I believe that they believe there's something to it, yes.

Q And since you've had this experience, ma'am, with being on that side and I'm not judging or criticizing or anything else. But you've been on the side of injured people in suing others, does your experience in carrying out that job, you can't prove it, nobody can. So would your experience in doing that potentially cause you to view the evidence just a little more favorably for the plaintiff?

VENIREPERSON NO. 40: Yes.

Q Thank you. I want to talk to you a moment about science. Everybody says they're interested science because of COVID. So I want to know how many of you think with regard to medical injury that science is important when you're determining the cause of something. How many of you agree that science is important, raise your number? How many of you believe that science is important when you're making a determination as to what caused a disease?

Now, I want to ask this question. I want to ask the reverse question. The reverse question is how many of you are little bit distrustful of science? Can you tell me if you are? Twenty-one, 10, five, your card is backwards, six, 19, 21, 25, 54, 39. Did you change your mind, 44?

VENIREPERSON NO. 44: No, ma'am.

Q You didn't think I saw you. Six, I want you to talk to me about why you would say that you might distrust science.

VENIREPERSON NO. 6: Obviously, because we've been dealing with this absurdity for the past two and half years. That's basically it.

Q And tell me what you describe as the absurdity.

VENIREPERSON NO. 6: People talking out of both sides of their mouth; going forward with protocols that are unproven basically; pulling things out of the air.

Q If you were making a determination as to whether something caused an injury or not, do you feel like science is

something that should be looked at?

VENIREPERSON NO. 6: Science in my opinion would have to be evidence, tested and things like that.

Q Right. And your distrust of science is because of you getting mixed signals about the science?

VENIREPERSON NO. 6: Right, it's not like people can't make decisions for themselves.

Q So because you have that a little bit of this mistrust of science, if you are picked to be on the jury, you're going to be hearing a lot about science in this case and a lot about studies. If you are shown studies and science are you automatically going to have just a little bit of skepticism about listening to science?

VENIREPERSON NO. 6: I'd have to read it first.

Q So in considering that, you don't thank you would be skeptical unless you had some reason to be of what you're evaluating?

VENIREPERSON NO. 6: If it's a study that I haven't looked at it all, no.

Q Anything generally that you feel could affect your opinion about looking at studies that you've told me because you said you were distrustful would you be more skeptical?

VENIREPERSON NO. 6: For no reason, no.

Q What reasons would cause you to be skeptical?

VENIREPERSON NO. 6: It would depend on the

situation.

Q So who else? Five, tell me why you say you distrust science.

VENIREPERSON NO. 5: I do not fully distrust it. It's evolving, evolving abilities. So not everything's proven on the planet now. We get better technology and we learn more. So I don't just take it as fact.

Q In this case we're going to be talking about a lot of studies and a lot of science. Would you automatically have some type of feeling that that couldn't be trusted or that that was not reliable?

VENIREPERSON NO. 5: I wouldn't give it 100 percent but I wouldn't discount it just because.

Q Somebody else in the box right here. Number 10, tell me how you feel about science.

VENIREPERSON NO. 10: I trust the scientific process. I also reflect on the question, you know, that science is very fluid just because people's bodies respond - there's a lot of variables. And what constitutes a normal reaction isn't always normal.

Q So you would certainly accept those who are conducting the scientific studies to be doing them honestly and with integrity?

VENIREPERSON NO. 10: Right.

Q And hypothetically in a situation where some say it

was not conducted with honestly and integrity, you would question it?

VENIREPERSON NO. 10: Yes, but my general thought is that it is done honestly.

Q And what I said for five and six, if you find out the study was not done with integrity and honesty, you would question it?

VENIREPERSON NO. 10: I think probably everybody in here would feel the same way.

Q I want to ask your question about - after all the scientific discussion with regard to COVID and both sides of it and all and just the complete confusion of surrounding some of those issues that jurors have a right to be distrustful. Anything else is not distrustful based on that experience with COVID, a science. Forty-four, can you tell me why?

VENIREPERSON NO. 44: Well the science is the science. The fact of the matter is tens of thousands of people died because one party the other has found one medication or the other one was wrong. So we had an ozone layer. We don't have an ozone hole global clue that it was warming. Now global climate change. Scientists never settle. It's dynamic. It's changing all the time. With scientific principles as this lady in the front sad that it's absolutely worthy of listening to. It depends on who's interpreting and who's promulgating it as to whether it

could be trusted.

Q Right. Thank you. Do any of you believe as we sit here today, how many of you believe that many people are not taking the threat of COVID seriously? Raise your card. Two, 13, 14, eight, 17, 22, 36, 20, 41, 40, 46, 49. Twenty-two.

VENIREPERSON NO. 22: So when you hear that a third of the population hasn't been vaccinated, that causes me to say those people aren't taking it seriously enough. Not to say that the vaccine is the cure-all but that's the best that science has offered us. And it seems to be that unless you just discount science and distrust it altogether you should get the vaccine. And you took the polio shot. You take a smallpox shot. You take an MMR shot. Why suddenly would you not get the vaccine? That's why I say I fear that those people are not taking it seriously.

Q So your belief that people aren't taking COVID seriously is surrounded by the lack of getting the vaccination for the disease?

VENIREPERSON NO. 22: Yes.

Q Anything else other than that decision on your part?

VENIREPERSON NO. 22: No.

Q Twenty-two, anything about your thoughts or feelings as we sit here today that you feel like you're starting to think things about this case?

VENIREPERSON NO. 22: No. I mean the question is

do you distrust science? No, I think you respect science. And scientists differ so you can't trust every scientist that you hear. I just didn't speak up with every question. So in general I don't distrust science but I do understand that scientists differ on different things.

Q Number 40, can you tell me why said that you don't think people are taking COVID seriously?

VENIREPERSON NO. 40: Mine is more of just the germaphobe side of things. People are going without a mask. You know, we didn't wear masks when they told us to or that sort of thing. I'm just one of the germaphobes.

Q Right. And that comes from what you explained to us earlier that had to do with your job and your personal experience?

VENIREPERSON NO. 40: Yes.

Q Okay. These questions are – you might think they're kinda crazy but there's a reason why I ask them. Have any of you – do any of you know any other member of the panel? And I don't mean know from today. I mean know from another correlation. Know anybody else. I think I saw – I think I saw – raise your cards. Twenty-four and 46. I'll come back to you guys.

Nineteen and 20, I think I saw that somebody works for a bank. that might have been you, Juror 20. And then I thought I saw that Juror Number 19's wife might work at the same bank. If

the two of you get selected we're gonna figure that out about each other. You've got a lot of down time.

VENIREPERSON NO. 19: My wife is currently unemployed so.

Q Did she ever work at a bank?

VENIREPERSON NO. 19: Yes.

Q Which bank was it?

VENIREPERSON NO. 19: US Bank and also BMO.

Q And is that where you work?

VENIREPERSON NO. 20: I used to work for US Bank and now I work for BMO.

Q Would you mind, sir, telling me your last name?

VENIREPERSON NO. 19: Reichard. She just stopped working there.

Q That's reason I asked. Did you know his wife when she worked at the bank? Did you all eat lunch together?

VENIREPERSON NO. 20: Not necessarily. I worked in her location when she started and then we were gonna do a trip together.

VENIREPERSON NO. 19: Oh yeah.

Q So you and Juror 19's wife were planning a potential trip together?

VENIREPERSON NO. 20: Yes. It's because we were - I'm Hispanic and we were trying to spread the word. And I had invited her to come with me to talk about

finances.

Q And is your wife Hispanic?

VENIREPERSON NO. 19: Yes.

Q Got it. I told you there was a reason. You never know. And then I saw 24 and 46 raise their paddles. Do you guys know one another?

VENIREPERSON NO. 46: We go to the same church.

Q How big is that church?

VENIREPERSON NO. 24: 600 families.

Q Are you guys in the same Sunday school class or community group or whatever you call it?

VENIREPERSON NO. 24: No.

Q Serve on any church committees together?

VENIREPERSON NO. 24: No.

Q Tell me if any of you have ever previously served as a juror in a civil case as a juror. Anybody? Raise you card. So 25, 38 and 42.

Twenty-five, can you tell me when your service was, sir?

VENIREPERSON NO. 25: It was in about 2013 and it was downtown Kansas City. Kansas City versus a fellow property owner. He had his house torn down.

Q By the city?

VENIREPERSON NO. 25: By the city and they were sued for damages.

Q How did that come out?

VENIREPERSON NO. 25: He lost it.

Q The property owner lost?

VENIREPERSON NO. 25: The property owner lost.

Q Okay. And you were on that jury, is that right?

VENIREPERSON NO. 25: Yes, ma'am.

Q Were you the foreperson?

VENIREPERSON NO. 25: Yes, I was.

Q Do you remember was it at the state court in Kansas City or Federal court?

VENIREPERSON NO. 25: It was state court.

Q How long did that case last approximately?

VENIREPERSON NO. 25: It was about a day.

Q Short case?

VENIREPERSON NO. 25: Short case.

Q Any other service that you've given?

VENIREPERSON NO. 25: I've gotten called up probably about three or four times but I've not gone this long in a very long time.

Q Thirty-eight, yes, ma'am.

VENIREPERSON NO. 38: It was downtown about 10 years ago. It was a company to another company and the Judge dismissed it a day and a half after we were there. He didn't understand what they were talking about.

Q So it's correct to say you didn't actually deliberate?

VENIREPERSON NO. 38: No, we did not.

Q And then 42.

VENIREPERSON NO. 42: I can't remember the year. Judge Clark was the sitting judge. It was I think a personal injury case. And we decided against the defendant in that case.

Q So there was a verdict in that case?

VENIREPERSON NO. 42: It was against the defendant. She was asking for money.

Q She was asking for money. That particular jury awarded her money?

VENIREPERSON NO. 42: No, we didn't.

Q Do you know if it was state court or Federal court?

VENIREPERSON NO. 42: It was in state court downtown at the main courthouse.

Q When you say downtown, Kansas City?

VENIREPERSON NO. 42: Yes.

Q Were you the foreperson, ma'am?

VENIREPERSON NO. 42: No.

Q Real quickly I want to talk to you a minute about witnesses. What I want to say is that Ms. O'Haver lives in Columbia but her mother may testify this case, Carolyn Kemp. Carolyn Kemp lives here and I'm wondering if any of you know Carolyn Kemp or heard anything about her.

There's also listed on the list Kyle O'Haver who also lives

in Columbia. Does anybody know Kyle O'Haver?

Marlene Johnson, Darrell Barnes, Marie Bruner. Does anybody know any of these people to your knowledge?

We are also going to be calling a lot of doctors in this case. The local doctors that are going to be called in this case are Dr. Gregory Ballard and Dr. Jason Bible. Dr. Ballard is an orthopedic surgeon and Dr. Bible is an anesthesiologist here in town. So what I want to know is do any of the know or have an experience to your knowledge with Dr. Gregory Ballard? Anybody here? Twenty-four.

VENIREPERSON NO. 24: Could you tell us where he works?

Q He works at CenterPoint. Dr. Bible is an anesthesiologist. Are those names familiar to anybody? We're going to be calling doctors. Some of them are from out of town, Dr. Dev Anderson, Dr. Michael Mont. We're going to be calling potentially Al Van Duren, Dr. John Abraham, Dr. Michael Keen, Dr. Jonathan Borak, Dr. Samsun Lampotany, Mark Albrecht. Do any of those names ring a bell with anybody?

Now I want to talk to Juror Number 7.

VENIREPERSON NO. 7: Yes, ma'am.

Q You didn't say a word either. So I want you to tell me whether - you've heard all the discussions and all the questions?

VENIREPERSON NO. 7: Yes.

Q As you've been sitting here listening to all of it, is there anything in your heart of hearts that you have heard that might make you think you need to speak up and reveal?

VENIREPERSON NO. 7: No. I can be impartial. That's not going to be a problem.

Q Thank you, sir. Number 27. I'm just about to lose my voice and you're going to be glad. You haven't spoken up. You did speak up this morning?

VENIREPERSON NO. 27: I did.

Q Anything else about what you've heard?

VENIREPERSON NO. 27: I'm impartial to both sides. I mean I would like to see the evidence before I said anything.

Q I understand.

THE COURT: Counsel, you have five minutes remaining.

MS. PRUITT: Thank you, Judge. Number 29, you have spoken up today?

VENIREPERSON NO. 29: No.

Q You've been listening to this all day. Is there anything about anything you've heard that caused you to believe that one side or the other probably has a stronger or better case than the other?

VENIREPERSON NO. 29: No. The timing for it is not right.

Q It's not right, believe me, for anybody.

VENIREPERSON NO. 29: But no.

Q Thirty, I know you haven't talked. Have you heard anything today that would make you - cause you to think, you know, I did think about that and probably should raise it but I'm not going to?

VENIREPERSON NO. 30: No.

Q As you sit here today the slate's clean and you can start out listening to the evidence?

VENIREPERSON NO. 30: Yes, ma'am.

Q Number 37, I haven't heard from you. Sir, you've been here all day and you've heard everything. Is there anything that you've heard that you've formed an opinion or you agree with somebody on their opinions and just chose not to say anything?

VENIREPERSON NO. 37: Yes.

Q What are your opinions?

VENIREPERSON NO. 37: I don't know.

Q You don't know? Is there anything as you sit here today, I can't search your heart but the big corporation, if there's something in your heart that you think if I was listening as she is right now I would want me to tell her that fact so she would know? Anything like that, sir?

VENIREPERSON NO. 37: No.

Q Anybody else that has a thought are some conclusions

or some opinions and you think to yourself, I probably ought to speak up. There might be a fact that she would need to know. Anybody? Thirty-four.

VENIREPERSON NO. 34: I had to bring this up. Along the lines of that, I have extensive experience with insurance. I was an investigator for many years, primarily a plaintiff's attorney investigator. I don't want that to be an appeal issue for either of you. I've done business with big corporations. I've done business with plaintiff's attorneys and defense attorneys

Q Have you ever done any work for Mr. Emison or their law firm?

VENIREPERSON NO. 34: No.

Q And you're an investigator. You've investigated for both sides of cases, both defendants and the plaintiff?

VENIREPERSON NO. 34: Hugely the plaintiffs cause they're generally who starts things.

Q Let me just ask you, sir. I mean this young lady back here, so much for that. Your experience in working with plaintiff's attorneys and people who bring lawsuits, you said your work with them - does that cause you, sir, to start out here to think she must have a case because we've come this far and we're doing this, there must be something to it?

VENIREPERSON NO. 34: I have a very intimate knowledge of like how the legal system works so I'm not

gonna say that she has a case just because she's here.

Q Is there anything about your work as a private investigator that you've done that you feel like I should know standing here representing the corporation 3M?

VENIREPERSON NO. 34: No. I just wanted you to know what I did.

Q Well I appreciate that. I didn't mean to overlook you.

VENIREPERSON NO. 34: No, that's fine.

MS. PRUITT: Judge, I think my time is up.

THE COURT: It is. Okay, folks, so as I said, now is the time where the attorneys and I meet and discuss your answers. And this always takes longer that I think that it's gonna take so I apologize. I'm going to ask that you guys be back out in the hallway. And I need everyone to leave with the exception of Juror 35. If Juror 35 could remain in the courtroom. So I'm going to ask that you be back out in the hallway at 10 till five and we will get you guys back in.

When you come back in we're going to shove everyone to the back of the courtroom because we're going to seat the jurors. And so those of you that are in the jury box, take all of your things with you. Those of you that are out there, take your things. You don't need your numbers anymore so you can leave those in your seats and we're

going to collect those. But if you could be back out in the hallway at 4:50, I would appreciate it. Because before you guys rush out, I've got to give you an instruction.

(INSTRUCTION WAS READ.)

We'll see you guys together in the hallway at 4:50. I appreciate it. Thank you.

(JURY EXITS AT 4:10 PM.)

THE COURT: Ma'am, come on up. So you're Juror Number 35, right? Is that a yes?

VENIREPERSON NO. 35: Yes.

THE COURT: So were you able to get any further information regarding the flexibility of folks that you're watching the kiddos for?

VENIREPERSON NO. 35: I did call and ask her and she said, well she wasn't sure because they're leaving in three days for overseas. They're going on a cruise. She said she'd put her thinking cap on and see but I got no definite answer.

THE COURT: Okay. I appreciate your efforts and we're going to take this into consideration. Mr. Emison, do you have any other questions?

MR. EMISON: I don't. Thank you.

THE COURT: Ms. Pruitt?

MS. PRUITT: No.

THE COURT: Thank you, ma'am. I appreciate it.

Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: Okay, so Carly, you had a conversation with Juror Number 25, is that correct?

LAW CLERK: Yes.

THE COURT: And what did Jury Number 25 have?

LAW CLERK: He said that he didn't know if the Court needed to know this but that next week he is supposed to close on a house and he thought that might be an extenuating circumstance for why he couldn't be here next week.

THE COURT: Very good. Thank you. All right. Before we go on with our strikes for cause the Court will note that although you had concerns, I observed Juror Number 6. I will say based upon her interactions with the attorneys, I don't have any - I guess she was not slurring her words. She was not giving any other indications of being under the influence, not to minimize what you observed, Counsel. The Court just did not observe that in her interactions with the attorneys in answering questions.

Additionally, the Court will note that Juror Number 56, when we took our afternoon break, she approached Carly, my law clerk and indicated that she had an emergency at her child's school. And I had the attorneys come back to

chambers and there was no objection at that time to releasing Number 56 so 56 was released. Any further record as a relates to that, Mr. Emison?

MR. EMISON: No, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No, Your Honor.

THE COURT: The Court will also note that I continue - I know you I had you guys come up and I continued to observe Juror Number 55. He continued to appear to sleep off and on. So - and I don't believe that he answered a question. If he did, I didn't get it noted. Even there was one instance where a question was asked and darn near everyone on the panel raised their number and he did not. And it appeared as though he didn't know what the question was based upon the look on his face. So those are my observations. We'll take those up with the strikes for cause but is the plaintiff prepared to proceed with the strikes for cause?

MR. EMISON: Yes.

THE COURT: Okay. And who will be speaking for plaintiff regarding the strikes for cause?

MR. EMISON: I think I will. Is it okay if my team passes me notes.

THE COURT: Passes you notes, yes, but I can only have one person speaking on behalf of plaintiff.

MR. EMISON: Understood.

THE COURT: Who will be speaking for defendant?

MR. BLACKWELL: Ms. Pruitt, Your Honor.

THE COURT: So I need everyone to listen right now or the people that are going to speak. Mr. Emison. So here's how I want it to go. So you move to strike a juror without establishing a basis. You give me whether or not the defendant is going to object. If there's an objection I'll hear argument at that time from plaintiff and then from defendant. Got it?

MR. EMISON: I got it.

THE COURT: Mr. Emison, the plaintiff's first strike for cause.

MR. EMISON: Juror Number 2, Your Honor.

THE COURT: Any objection?

MS. PRUITT: No.

THE COURT: Two is struck for cause. Next one?

MR. EMISON: Three, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes, Your Honor.

THE COURT: Okay. The basis of the plaintiff's motion?

MR. EMISON: They testified that they would have to see more proof. I cannot go - if 3M is not the only cause; could not follow the Court's instructions on

multiple causes; questions about others in the operating room. I think they indicated they clearly that they could not follow the Court's instructions - the contribute to cause instruction.

THE COURT: Ms. Pruitt, the defendant's response?

MS. PRUITT: Your Honor, this is the juror that he couldn't - as the Court probably remembers there was confusion over the questioning. And he didn't understand exactly what the question was. And he didn't say what the standard is and that he couldn't be fair and follow the Court's instructions. So he - he wanted to see what the instruction was. He asked about that. It's clear if you listen to the exchange that he wouldn't understand the question. So I don't think he's a challenge for sure.

THE COURT: The Court's notes indicate that Juror Number 3 wanted to know about the installation of the machine; how many surgeries had occurred before; indicated that it would be more proof needed than contributed to cause and indicated that that he would have - that there would have to be proof that 3M was the only cause even with the instruction given by the Court. The motion will be granted. Three will be struck for cause. Plaintiff's next motion.

MR. EMISON: Four, Your Honor.

THE COURT: Any objection?

MS. PRUITT: No.

THE COURT: Four will be struck for cause. Next one.

MR. EMISON: Five, Your Honor.

MS. PRUITT: No objection, Your Honor.

THE COURT: Five will be struck for cause.

MR. EMISON: Nine, Your Honor.

THE COURT: Any objection?

MS. PRUITT: No.

THE COURT: Nine will be struck for cause. Next one.

MR. EMISON: Eleven.

THE COURT: Any objection?

MS. PRUITT: We'd like to keep him, Judge, but we need to hear --

THE COURT: The basis of that plaintiff's motion?

MR. EMISON: Number 11 said they could not award full damages against 3M if the Bair Hugger was only a contributing cause. They could not follow the Court's instructions and needed more proof if millions were involved. That would increase the burden. And even after the Judge's instruction he could not follow the Court's instruction.

THE COURT: The defendant's response.

MS. PRUITT: He came back, Your Honor, at various times and said he would follow the Court's instructions. And you know I continue to want to make a record that those questions were very, very confusing the way they were phrased. And he came back later at a later time and said that he could listen to the evidence and follow the Court's instructions.

THE COURT: The Court's notes indicate that Juror Number 11 when asked about the eight to $9 million reward would the scales have to be tipped more and he said yes for that amount of money. He indicated he was an eight on a scale of 1 to 10.

He had a strong feeling that the scales would have to be tipped. He doesn't know if he can be talked out of it. If more contributors or to put it all on 3M, could he follow the Court's instruction? He said, in my mind more weighing of it on than 3M. Can you give plaintiff a verdict? Possibly. And then he indicated no chance he will follow the instruction that will have 3M with 100 percent of the damages.

He also indicated - answered a question regarding safe but not effective, 100 percent effective but that's not relevant to the Court's decision. Based upon the totality of the answers of Juror Number 11 the motion will be granted and 11 will be struck for cause. The next one.

MR. EMISON: Thirteen, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes.

THE COURT: The basis of the motion?

MR. EMISON: He's a 3M shareholder and acknowledged a financial interest in the outcome of the case. I also he's on a hardship strike with his prostate cancer side effects affecting his ability to pay attention to the evidence.

THE COURT: Ms. Pruitt, your response?

MS. PRUITT: Your Honor, just because somebody says they're a stockholder of 3M should not automatically disqualify them. I mean if that was the case then the person that knows Brett's grandma should be disqualified. He clearly said that he could follow the instructions. No one ever got him to say anything other than that. He was completely neutral and said he would listen to the evidence and follow the Court's instructions. So I don't think he goes for cause.

THE COURT: I'm not going to strike him based upon his 3M share ownership necessarily. But he did indicate though that there would be a ripple effect depending upon the verdict in this case. He also indicated that he's recovering from and going through prostate cancer treatment; that he has dizzy spells. He described it as

being a roller coaster.

Based upon the length of this trial the Court has concerns about Juror Number 13's ability to serve. And for that reason, 13 will be struck for cause. Next one.

MR. EMISON: Sixteen, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes.

THE COURT: The basis of the plaintiff's motion?

MR. EMISON: That potential juror said that they didn't believe it's fair to award the full amount of damages if 3M was only partially responsible for the infection. He said, I don't think that is fair. And, again, I think he testified that he could not follow the Court's instructions. And, again, Missouri law says that if the venire person has formed or expressed an opinion concerning any matter on controversy that they must be stricken for cause.

THE COURT: Ms. Pruitt, your response?

MS. PRUITT: Your Honor, this is the gentleman who I objected because the question I thought was confusing and it got clarified. And he actually said twice is my recollection that I might have a hard time but I would follow the Court's instructions. He said that on two different occasions. And he didn't say that he couldn't or

wouldn't.

THE COURT: So the Court's notes indicate that he said if it's someone – Juror Number 16 said if it's someone else's fault it's not fair to hold 3M 100 percent responsible. He can follow the instructions if that's the way it's put.

But my concern is he said that somewhat begrudgingly. And then after Mr. Emison moved on, he then said, but I still don't think it's fair which I heard and caused me to bring attention back to Juror Number 16.

Again, I believe based upon the totality of the circumstances – if he had just stopped with I can follow the instruction, I would agree with you, Ms. Pruitt. But based upon his continued indication that he didn't think it was fair, I have concerns about his ability to be fair and impartial. The motion will be granted and 16 will be struck for cause. The next one.

MR. EMISON: Seventeen, Your Honor.

THE COURT: Ms. Pruitt?

MS. PRUITT: No objection.

THE COURT: Seventeen will be struck for cause.

MR. EMISON: Twenty.

MS. PRUITT: No objection.

THE COURT: Twenty will be struck for cause. Next one.

MR. EMISON: Twenty-one.

THE COURT: Any objection?

MS. PRUITT: Yes, objection.

THE COURT: Basis of the plaintiff's motion?

MR. EMISON: That juror had concern about being able to write in a third-party and had concerns and said that even if the Court instructed that they could not - that they could only award a partial sum if 3M was not 100 percent at fault.

THE COURT: Ms. Pruitt?

MS. PRUITT: Your Honor, if I remember, she never said anything that suggested that she couldn't follow the instructions and be fair. As a matter of fact, her answers all about it were I'd have to hear the evidence and I would follow the instructions. I don't think she said anything that would get her stricken for cause.

THE COURT: So the Court's notes indicate that Juror Number 21 asked if she could write in a third-party on the verdict form. She was told that she could not even if if they had a small amount of responsibility. She did say that she would not be able to award 100 percent of damages to the 3M contractor. I don't have any notes indicating that she indicated that she could not follow the instruction of the Court. So given that, the motion will be denied. The Court will also note that just for

purposes of clarity, 21 indicated that she had a hardship. She indicated that she's a contractor so she's not paid if she's not working. But I asked if she - if it would be - she said it would be difficult paying her bills but it would not affect her attention.

The Court's going to reserve ruling on 21. I might consider her a hardship strike. I want to get through our numbers first before we do that. So the Court will revisit 21. The next strike for cause by plaintiff.

MR. EMISON: Can we raise issues with potential hardships?

THE COURT: You can or I will on my own. It's up to you.

MR. EMISON: Okay. Twenty-four.

THE COURT: Any objection?

MS. PRUITT: Yes, objection.

THE COURT: The basis of the motion.

MR. EMISON: This potential juror is an electrical engineer I think and Burns and McDonnell. And he would put his own personal experience on the scale and weighing it and considering the evidence and that it would be unavoidable for him to use his specialized knowledge to weigh and consider the evidence.

THE COURT: Ms. Pruitt, your response?

MS. PRUITT: This is the juror who said and I

quote, "I can listen and follow the Court's instruction." He also said, "I haven't heard the evidence yet that I can wait until I hear the evidence and follow the Court's instructions." He continued to say that during the course of the day. I don't think what he said indicates to me that he's going to be biased for or against either party.

And both sides talked with him extensively and twice he said, I can listen to the evidence and follow the instructions.

THE COURT: The Court will note that Juror Number 24 indicated that - although he indicated that he would add personal experience and unavoidable, he did indicate that he would follow the instructions of the Court. Based upon the totality of the juror's answers the Court does not believe it raises to the level of a strike for cause and the motion will be denied. Next one, Mr. Emison.

MR. EMISON: Twenty-five.

THE COURT: Any objection?

MS. PRUITT: Yes.

THE COURT: The basis of the plaintiff's motion?

MR. EMISON: Again, this potential juror works in HVAC and, again, said that he cannot get away from his specialized knowledge of everything that he's seen and he would not be able to separate that from the evidence in weighing it and making his decision.

He also notified the Court of a hardship issue in closing on a house during the trial.

Just briefly, Your Honor. With regard to a juror testifying whether or not they can follow the Court's instructions, the case law makes it pretty clear that the prospective jurors are not the judges of their own qualifications. And we heard from several of them that facing edicts from the Court sitting on the bench saying will you follow my instructions, everybody tends to say yes.

And so especially with this kind of a juror, even if they're attempting to say that they can follow the Court's instructions he made clear that he cannot get away from his specialized knowledge in weighing the evidence.

THE COURT: Ms. Pruitt?

MS. PRUITT: Mr. Guillory, Number 25 said that he could probably follow the Court's instruction. He said that he could listen to the evidence and follow the instructions when I was questioning him. I don't think his comments rose to the level of a strike for cause because he said, I think I can do it, probably so.

THE COURT: The Court will note that Juror Number 25 indicated that he works at KU Med with the HVAC system; knows quite a bit about it; can't get away from the knowledge; would probably be a part of it; inequivocated as

to whether or not he could follow the instructions of the Court. For that reason the motion will be granted and 25 will be struck for cause. Next one?

MR. EMISON: Twenty-six, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes, Your Honor, we definitely have an objection.

THE COURT: Basis of your motion?

MR. EMISON: This juror I believe his mother had a bacterial infection and that that would be an issue for him in the case. He said he would hope to listen to everything. Or she said she hoped to listen to everything but has been on the other side with her mother having chronic C Diff for 20 years. And it would be an issue for that juror in this case.

And, again, where the juror is expressing any potential bias equivocating as to whether the juror can follow the Court's instruction, Missouri law is clear that that juror should be excused for cause.

THE COURT: Ms. Pruitt?

MS. PRUITT: Yes. Your Honor, it's a she and you recall cause she talked quite a bit today. She said that I hope so and I think I can follow the Court's instructions. And as the day wore on and she understood the standards, she said she could and that she would. I don't think her

comments rise to the level of assuming that she's not going to be able to follow the Court's instruction and that's the standard that she can listen to the evidence and follow the instruction. I think she's demonstrated she's willing to and she can.

THE COURT: The Court's notes indicate that Juror Number 26 indicated that her mother has a double knee replacement. She didn't know fi the Bair Hugger was used. It wouldn't be - would it be on her mind? Ad she said, I hope not. Then she also indicated that it might weigh on the scales being the fact that she'd been on the other side of it; hope not but it would not tip the scales.

The Court found equivocation in if not all, the majority of her questions. And based upon the equivocation the motion will be granted and 26 will be struck for cause. Plaintiff's next one.

MR. EMISON: Thirty-three, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes.

THE COURT: Mr. Emison, your response?

MR. EMISON: Yes. This juror was involved in air filtration design. Again, that's gonna be one of the major issues I think in this case. And she said that it would be hard to discount that background. When asked if it was possible that you would use your own personal experience in

addition to weighing the evidence, it was equivocated and said that was hard to say.

Again, under Missouri law where a potential juror has expressed any potential bias or equivocated, they are to be stricken.

THE COURT: Your response?

MS. PRUITT: She said "I can remain unbiased." She said, "I can remain impartial."

THE COURT: So the Court's note indicates that she did say she was an air filtration design engineer. When she said that she could remain unbiased indicated that she - it's hard to discount her background knowledge. When asked if she can be impartial she said, hard to say. So based upon the totality of her responses the motion will be granted and 33 will be struck for cause. Next one.

MR. EMISON: Your Honor, I'd move for Juror Number 36.

THE COURT: Any objection?

MS. PRUITT: No.

THE COURT: Thirty-six will be struck for cause. Next one.

MR. EMISON: Thirty-nine, Your Honor.

THE COURT: Any objection?

MS. PRUITT: No, he's going to his wedding.

THE COURT: Thirty-nine will be struck for cause.

Next one.

MR. EMISON: Forty-one.

THE COURT: Any objection?

MS. PRUITT: No objection, Your Honor.

THE COURT: Forty-one will be struck for cause.

Next one.

MR. EMISON: Forty-three, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Your Honor, we object.

THE COURT: The basis of your motion, Mr. Emison?

MR. EMISON: Yes. That potential juror said that they would not follow - 43. That juror said that would not follow the Court's instruction to award all damages.

THE COURT: Ms. Pruitt?

MS. PRUITT: What number?

THE COURT: Forty-three.

MR. EMISON: Number 43.

MS. PRUITT: The only thing she said, Your Honor, that we have noted is on this issue that I continue to make a record and object about where the questions were confusing about the apportionment of liability. And if there were lines on the form, it's 20 percent here. That line of questioning is what got her to say something. Other than that, she did not say anything about not being able to follow the evidence or follow the law or follow the

instructions. There was one comment and I came to the bench and objected because of the nature in which it was being presented.

THE COURT: So the Court's note indicate that she said that she could not follow the instruction regarding damages if 3M was not the only one at fault. Based upon her answer the motion will be granted and 43 will be struck for cause. Next one.

MR. EMISON: Forty-four, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes, we want to keep him please.

THE COURT: The basis of plaintiff's motion?

MR. EMISON: When talking about awarding more money, he some something to the effect that I would have a hard time shoving that pea down my throat and needing extra convincing in order to make that award.

THE COURT: Defendant's response?

MS. PRUITT: He also said if the Judge instructed me in a certainly way I could follow the instructions of the court. If the basis is convincing then I can follow the instructions. So he - actually this is on the damages question. He said he could consider the evidence and follow the Court's instructions on it.

THE COURT: The Court's notes indicate that he did say that $8 million is a bit steep but he indicated he

can follow the Judge's instruction. He indicated it seems high but he's needs to understand the basis for the compensation and reiterated again that he can follow the Court's instruction. The motion is denied. Next one.

MR. EMISON: Forty-five, Your Honor.

THE COURT: Objection?

MS. PRUITT: Objection.

THE COURT: Go ahead.

MR. EMISON: This juror needed more proof in order to award a higher amount of damages. He that probably true is not enough. It needs to be a higher probability and that they could not follow the Court's instructions and find the full amount against 3M if 3M only contributed to cause. He said he was a 10 out of 10.

THE COURT: Ms. Pruitt?

MS. PRUITT: Your Honor, again, I want to make a record that this was same confusing questions in what I consider to be mixing Mr. Emison's interpretation of the law with the actual instructions and suggesting that there is going to be some apportionate liability for people that were at fault. And I think that's confused a number of jurors and I think this particular juror was one of them.

THE COURT: The Court will note that Juror Number 45 indicated that the requested amount of damages was a lot of money, really, really a lot of money and that it would

have to be - on the scale he was a 10 out of 10. It would really, really have to be proven that probably true is not enough. There's a high probability. That he would have to consider other sources and people. He could not find for 3M even with the Court's instruction. Based upon the totality the motion is granted and 45 is struck. Next one.

MR. EMISON: Forty-six, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes, Your Honor.

THE COURT: The basis of the plaintiff's motion?

MR. EMISON: She was a hardship. She is a nurse and job shares with somebody else that was going to have difficulty covering that full-time. I think more importantly, I believe home health that had to go provide IV medication to her patients who didn't have other options to provide that care.

THE COURT: Ms. Pruitt?

MS. PRUITT: She said nothing about in response to any questions of anyone that would indicate that she couldn't do exactly what the Court's asked the jurors to do, nothing. The only thing is coming to the bench about that. But there's no record that there's anything that she answered questions about that would cause her to be a strike for cause.

THE COURT: The Court will note that when she

talked about working with one individual that she did home those home health infusions and no one else could do it, she indicated that with that she would have a difficult time keeping her attention as a juror. Based on that piece of her hardship the motion will be granted and 46 will be struck.

MS. PRUITT: So just for clarification, she's being stricken for hardship?

THE COURT: The portion of her hardship that indicates that her hardship will make it difficult for her to keep her attention and be present as a juror.

Next one, Mr. Emison.

MR. EMISON: Fifty-one, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes, we object.

THE COURT: The basis of your motion?

MR. EMISON: Juror 51 said that they could not follow the Court's instruction if 3M was not the sole cause. They also indicated the hardship as a single mom without pay in a school district that would cause her an inability to properly pay attention and hear the evidence at trial.

THE COURT: Ms. Pruitt?

MS. PRUITT: On the merits of it or on the substance of it, Your Honor, I don't think she said

anything that would suggest that she couldn't follow the instructions. Once again, the only thing she said when being asked this 100 percent question which we object to and we believe that specifically as to this juror and the others that were put on the record that suggesting that there's going to be some kind of percentage was improper.

THE COURT: Okay. The Court will note that Juror Number 51 said that she could not follow the Court's instruction regarding 3M being 100 percent at fault for damages. She also indicated that she's a single mom and works at the Grandview School District. She indicated if she's not working, she's not getting paid. Based upon both of her answers a well as her hardship, the motion will be granted and 51 will be struck for cause. Next one.

MR. EMISON: Fifty-three, Your Honor.

THE COURT: Any objection?

MS. PRUITT: Yes, Your Honor.

THE COURT: The basis of your motion?

MR. EMISON: Again, this potential juror is a shareholder in 3M and this is the one that if I remember right was an enthusiastic shareholder of 3M who acknowledged a financial interest in the case. And when a juror actually acknowledges a financial interest in the case even if it's based on shareholder status, I think they have to be stricken for cause.

THE COURT: Ms. Pruitt?

MS. PRUITT: She's a mixed bag. Just being a 3M shareholder should not disqualify her because she said that she could be impartial. She also - she also had a bone to pick with 3M because of its software. So I don't think she rises to the level of causes because she's a shareholder.

THE COURT: The Court has a concern just based upon the fact that she recognized that she has a financial interest in 3M. She indicated that she can still be impartial, but based upon her recognition of a financial interest, the Court is going to grant the motion and 53 will be struck for cause. The next one.

MR. EMISON: Has 56 been removed, Your Honor?

THE COURT: Yes.

MR. EMISON: Thank you. Fifty-seven.

THE COURT: Any objection?

MS. PRUITT: Yes, Your Honor.

THE COURT: The basis of your motion?

MR. EMISON: Fifty-seven said that if 3M was only a small contributor then they could not award the full amount and could not follow the Court's instructions. Also expressed a hardship concern is a single mom with no pay. I'm sorry, single dad with no pay - oh, not single. Sole source of income, I apologize.

THE COURT: Ms. Pruitt.

MS. PRUITT: Your Honor, this gentleman like Juror Number 26 I think expressed that he could follow the instructions and follow the evidence and follow the Court's instruction. He said a few things that were questionable but nothing that I think rises to the level of cause. He said, I can do that. I think I can do that a couple of times. I don't think it rises to the level of cause. He said he could follow the instructions.

THE COURT: The Court will note that 57 indicated that - asked whether he could follow the instructions regarding the damages. He said he would like to think I could follow the instructions. Again, when asked if he could follow the instructions, he said he would try. And if other small contributing factors, he could not award 100 percent of the damages. He also indicated that he's the sole source of income and the property manager would have to work. So based upon both his answers as well as the hardship the motion will be granted and 57 will be struck for cause. Next one.

MR. EMISON: Fifty-nine, Your Honor.

THE COURT: Any objection?

MS. PRUITT: No objection.

THE COURT: Fifty-nine will be struck. Any further strikes for cause from the plaintiff?

MR. EMISON: Sixty.

THE COURT: Any objection?

MS. PRUITT: I need to hear what the reason is, Your Honor, please.

THE COURT: The basis?

MR. EMISON: Yeah. When in talking about the burden of proof this potential juror said that they would need more than just probably true than not true based upon the amount of money - depending upon the the amount of money that we sought.

THE COURT: The defendant's response?

MS. PRUITT: Our notes reflect that she said she would follow the Court's instruction on the issue.

THE COURT: The Court will note that Juror Number 60 indicated that there was a question regarding tipping the scales. And she was asked can you follow the instructions and she said, yes she can follow the instructions of the Court. The Court did not receive any of her interest as being equivocal. The motion will be denied and 60 will not be struck. Any further motions from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: Strikes for cause from the defendant?

MS. PRUITT: Yes, Number 5.

THE COURT: Juror Number 5 has already been

struck.

MS. PRUITT: Six, Your Honor.

THE COURT: Any objection?

MR. EMISON: No objection.

THE COURT: Six will be struck for cause. Next one.

MS. PRUITT: Nine.

THE COURT: Nine has been struck.

MS. PRUITT: Forty.

THE COURT: Any objection?

MR. EMISON: We object.

THE COURT: The basis of the plaintiff's motion?

MS. PRUITT: I asked her outright because of her work experience in personal injury litigation if she would be favoring the plaintiff and she said yes.

THE COURT: Mr. Emison, your response?

MR. EMISON: There was no follow-up as to whether or not that particular juror could follow the Court's instructions are not. So there's no indication that that juror could not follow the Court's instruction.

THE COURT: The Courts notes indicate that she was - worked at a law office. She questioned whether and why the case had not settled. She thought that perhaps it was because the plaintiff thought that she could get the

jury to give them something and the fact that a good attorney took the case. She indicated that she was favorable to the plaintiff and said that specifically. The motion will be granted and 40 will be struck. Next one from the defendant?

MS. PRUITT: That's all we have, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

MS. PRUITT: Your Honor, we have one more strike. Number 12.

THE COURT: Hold on. Is there an objection?

MR. EMISON: Yes.

THE COURT: The basis for your motion?

MS. PRUITT: He said when I asked him - twice he said that he believes that the medical device has to be 100 percent safe 100 percent of the time. And if it's going to be used in an operating room it has to be 100 percent of the time safe 100 percent when it's used.

That is a strong indication of a bias cause that's not what the proof is going to be. That's his belief and it could affect and will affect his view on the evidence about the safety of the Bair Hugger.

THE COURT: Mr. Emison?

MR. EMISON: There's no indication that he could

not follow the Court's instructions when asked of him. He never said he couldn't follow the Court's instructions if the instructions were different than his belief.

THE COURT: So the Court will note that he did make those statements but there was no indication or no questions asked regarding how that would affect his evaluation of the evidence or ability be fair and impartial or follow the Court's instructions. The motion will be denied. Any others?

MS. PRUITT: No, Your Honor.

THE COURT: So the Court on its motion is going to strike the following individuals for cause. Juror Number 18 based upon the fact that she said that she had dislocated discs, has had two knee surgeries, hernia and pain associated with it which would cause difficulty concentrating. So 18 will be struck for cause. Does the plaintiff wish to make any record objecting to that?

MR. EMISON: No, Your Honor.

THE COURT: Does defendant?

MS. PRUITT: No, Your Honor.

THE COURT: Eighteen will be struck for cause. Twenty-one, the Court will note - had indicated that she was a contractor so she's not getting paid if she was not working and it would be difficult for her to pay her bills. Given the length of this case, if it was a shorter case I

might view it differently. But given the length of this case, 21 will be struck for cause. Any further record or objection from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From the defendant?

MS. PRUITT: Just know it's over our objection.

THE COURT: Noted. Twenty-one will be struck for cause. And 32 indicated that she has overtime at work she cannot miss. But the problem that I have is with her memory. She indicated she had surgery. She needs to write everything down. The notes might remedy it but the problem that I have is the length of this case. And Mr. Emison inquired regarding that. So I just have concerns about her ability to appropriately remember the evidence without too much of a reliance on her notes. So 32 is going to be struck. Any objection for the record from the plaintiff?

MR. EMISON: No objection.

THE COURT: From the defendant?

MS. PRUITT: No objection.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

THE COURT: The Court has the following individuals have been stricken for cause. Two, three, four, five, six, nine, 11, 13, 16, 17, 18, 20, 21, 25, 26, 28, 32, 33, 36, 39, 40, 41, 43, 45, 46, 51, 53, 56, 57 and

59. Is the plaintiff in agreement?

MR. EMISON: Yes.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: Twenty-three, she indicated that she has an eight-month-old son who is nursing. She began crying at the bench. So I'm going to strike 23 for cause. Any objection or additional record from the plaintiff?

MR. EMISON: No objection.

THE COURT: From the defendant?

MS. PRUITT: No objection, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

THE COURT: Let's go back on.

(BACK ON THE RECORD.)

THE COURT: Okay. We're going to add one more to the list of strikes for cause, Juror Number 55. He was the juror that was snoring twice and I observed sleeping off and on throughout the entire day. Juror Number 55 will be struck for cause. Any objection or additional record from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From the defendant?

MS. PRUITT: No, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

THE COURT: According to the Court's notes, the jury will be selected from Juror Number 1 through and including Juror Number 38. That would be the 12 that will be seated. The alternates will be selected from Juror 42 through and including 60. That is 10 jurors.

So in order for us to have four the plaintiff will be the strike three of those and the defendant will be able to strike three of those and the remaining four will be the alternates. Any objection from plaintiff?

MR. EMISON: No objection.

THE COURT: From defendant?

MS. PRUITT: No objection.

THE COURT: All right guys, tick-tock. I know that you guys are going to want more time than I'm going to give you but we've got a lot of people here and it's after five. Do you want to let somebody in the jury deliberation room.

LAW CLERK: Yes. I don't care which side, whoever wants to go.

THE COURT: Oh, I don't think that we need to take up juror nondisclosure issues based upon that there were no questions that were asked as it relates to litigation, right?

MR. EMISON: Sure.

MS. PRUITT: I asked questions about whether they were involved in lawsuits.

THE COURT: Are you gonna be able to take those up tonight or do you want to take them up tomorrow?

MR. TORLINE: If we do it first thing in the morning.

THE COURT: Just that if that is inherent or if something comes up we may lose a couple. But okay, we'll take up juror nondisclosure in the morning.

MR. EMISON: Your Honor, my understanding is the rule requires the parties to submit the juror nondisclosure questions before voir dire begins. If they don't do that, it's not going to happen.

THE COURT: Well why don't we just take that up tomorrow if we have any juror nondisclosure issues.

MR. EMISON: Okay.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: The Court has the following individuals as having been struck by a peremptory by the plaintiff. So that is seven, 19, 24, 44, 47 and 58. Is that correct, Mr. Emison?

MR. EMISON: Yes.

THE COURT: Okay. And the Court has the

defendant's strikes as being 12, 14, 34, 49, 50 and 54. Is that correct, Ms. Pruitt?

MS. PRUITT: It is.

THE COURT: Are there any challenges to the defendant's strikes by the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: Are there any challenges to the plaintiff's strikes by the defendant?

MS. PRUITT: No, Your Honor.

THE COURT: All right. So the Court, according to my notes the jury will be made up of the following individuals. Juror one, eight, 10, 15, 22, 27, 29, 30, 31, 35, 37 and 38. Is plaintiff in agreement?

MR. EMISON: Yes.

THE COURT: Is defendant in agreement?

MS. PRUITT: Yes.

THE COURT: And the Court has the alternates as being Jurors 42, 48, 52 and 60. Is plaintiff in agreement?

MR. EMISON: Yes.

THE COURT: Is defendant in agreement?

MS. PRUITT: Yes.

THE COURT: And so does the plaintiff stipulate that the jury conforms to the strikes both for cause and peremptory?

MR. EMISON: Yes.

THE COURT: And does the defendant?

MS. PRUITT: Yes, Your Honor.

THE COURT: Let's go off the record. Let's bring them in.

(PANEL IS RESEATED.)

THE COURT: So thank you for your patience. I apologize but this is my effort to not have all 60 of you come back tomorrow for an hour so I appreciate your patience. I truly do. The Court will announce the jurors now that have been selected. So if I call your name if you could come forward. Follow the instructions of Ms. Ross and be sure to watch your step. There's an incline as you walk up and then there's - as you step into the jury box, there's a step up. So just watch your step please.

The following jurors have been selected to serve in this matter. Juror Number 1, Bryan Montez, Samuel Nichols, Jessica Makona. And I'm sorry if I mispronounced your last name. Is it Makona?

A Makona.

THE COURT: Kelly Amber. I'm sorry, Amber Kelly, I apologize. Gayle Evans, Ashleigh Platt, Jo Weller, Jeffrey Sesker, Shana Phasuk, if I'm pronouncing that correctly, Marilyn Babcock, Bradley Lading, Angela Sullivan, Teresa Williams, Marques House, Connie Redman-Perahoritis. Sorry, I know I just butchered that, Samantha

Perkins.

Okay ladies and gentlemen, for those that are in the gallery that concludes your service as jurors. I want to thank you for your patience, for your time, for your attention today and you are excused. Carly, do we have work letters?

LAW CLERK: I do.

THE COURT: So Carly will be at the door of the courtroom. If you need a letter from work you could grab one on her way out. But, again, thank you so much and your service is completed. If you guys could remain seated please.

Okay so that will – we're not going to do anything else tonight. I'm just here to kind of give you guys some pointers for the next several days as well as Carly will take you back to the jury deliberation room so that know where you go in the morning.

So I'm going to ask that you be here tomorrow at 8:30. As soon as we're ready to go – we get started as soon as everyone is here. There will be some pastries here for you. I think coffee, soda, water. We try to get you guys hyped up on sugar and caffeine before we have you come out. So that will be in the jury deliberation room.

Then what I try to do is I really try to use the time that I have you guys here as efficiently as I can. So most

days we're gonna go until 12:30. We'll have a break in the morning and then we'll probably go until about 12:30.

I usually set other takes about 12:30 or one. So your lunch break will probably be between 12:30 and 1:30 while I'm doing some other things. Then we'll have an afternoon break. And then I try to recess every day at 5 o'clock. I'm trying to be respectful of your time after hours.

I will tell you that the temperature fluctuates greatly between the jury deliberation room and this room. So I would suggest that you bring a sweater, layers. It can be hot in the morning, cold in the afternoon, vice versa. Although, it gives the appearance of control I actually have very little control over the temperature here. So if you could be mindful of that.

Your juror badges. It's really important that you have those visible from the time that you exit your car to when you get in your car. Because attorneys, witnesses, even attorneys not this case or courthouse personnel not involved in this case, they know if they see a juror or an individual with a juror badge to not talk about certain things. So just make sure if you have a jacket on that it's visible from the time that you get out of the car to when you get back in.

It is a ways off given the length of this case, but just as a heads up. I will be collecting your cell phones,

smart watches, laptops or iPads during your deliberation. So I'll be able to narrow that down. Once we get going with the evidence we'll be able to narrow it down for you somewhat. I just wanted to give you guys that heads up so that you can tell those people that it matters whether it be work or family or otherwise that you're not going to have access to your cell phones or anything like that during that window of time but we'll narrow it down.

So this might be the time - you know a little bit about the case. Obviously, every day you're going to know more and more. This might be the time that you're inclined or asked what kind of case that you're hearing. And it's incredibly important that only those people that serve as jurors in this matter are the ones that make the decision in this case without any outside influence.

So please be mindful of that. There will come a time when you can talk about it. Now is just not that time.

(INSTRUCTION WAS READ.)

One more thing. We have a water jug back there so if you guys want to bring in your own water bottle you can refill it. If you want to bring in a coffee or a drink or anything like that from home, I don't care. I would just ask that it have a lid on it. This courtroom is relatively new and I'm trying to keep it as nice as I can for as long as I can and I find that lids help in that regard. So if

you could keep that in mind. Otherwise, court will be in recess. We'll see you guys at 8:30. Thanks so much.

(JURY RELEASED FOR THE DAY.)

MR. BLACKWELL: So just so the Court's aware, I thought maybe we could clean up a couple of things with respect to the opening. We did an exchange. We narrowed it but there still remained a few things with respect to opening statements.

I did hear from Mr. Emison last night about what he intended to use and I will - if I may hand up to Your Honor, one example of the clip reports that they'd like to use in opening statement. I'll give Your Honor a chance just to peruse it.

MR. EMISON: And those are separate clips, Your Honor.

THE COURT: Any further argument on these?

MR. BLACKWELL: Simply that we object to it; that it's akin to, in my view, what we discussed yesterday. The snipping of different parts of depositions and putting them together in a montage to present to the jury would not have been appropriate and it wasn't for the evidentiary case and it doesn't become more appropriate to use it an opening statement.

It, again, is improper for the opening statement. And to the extent he wants to play testimony and put together

that kind of evidence, then do it in the evidence portion of the case. I think it's unfair in the opening statement to us. And we discussed this yesterday I thought.

THE COURT: Mr. Emison, your response?

MR. EMISON: It's not a montage, Your Honor. That's separate clips of individual clips that I intend to play not in succession and not all at once, but in previewing the evidence for the jury. All of these are taken from the Court's rulings on deposition designations. It's all coming in. It's not subject to objection. 3M has had an opportunity to review those. There are no suggestions for completeness save one which I'm prepared to talk about as well.

Not that it matters but it's something that I've routinely done and routinely been allowed to do in Missouri courts in opening statement. The rule provides that we could use depositions for any purpose. This is a legitimate purpose to preview the evidence for the jury.

THE COURT: So I just have concerns regarding the rule of completeness. Right now, I am looking at, you know, this clip of 68 from Albert Van Duren from January 25th, 16:22 to 68:24.

There's a question with an answer and I have no way of knowing or I guess I don't have time to know right now whether or not there are questions that proceeded that.

Please don't interrupt me. Or that there were questions that followed it.

We're talking about one, two, three, four, five, six, seven, eight, nine, 10.

MR. EMISON: Twenty, Your Honor.

THE COURT: Twenty deposition clips that are going to be played in opening statement. I don't think it's appropriate. I understand you may have done it in other jurisdictions or in other divisions. But the Court doesn't think that it's appropriate. I think it's appropriate for the presentation of the evidence and the Court is not going to allow it. If you want to make any more brief record, Mr. Emison, you can do so at this time.

MR. EMISON: To the extent that it affects the Court's decision, I did provide that to 3M. We have discussed this. There is only one potential objection on a completeness issue. So that's a very small issue. We have it here. It's one paragraph.

MR. BLACKWELL: I would disagree with that. If it were going to be permitted then we would correct that. But the issue is completeness was in the framework of how questions were asked in a deposition, not what you're taking snippets out. And you can't even see what came before and afterwards. And then some of the questions and answers there are misleading in ways that wouldn't be if

they were played in the actual evidentiary portion of the trial, put in the trial context etc. and not in this sort of a montage. And, again, I thought we discussed this yesterday.

THE COURT: My ruling remains the same. So I'm not going to allow the clips to be played during opening statement. I'll return this to you, Mr. Emison. Any further record before we recess?

MR. BLACKWELL: Your Honor, there were a couple of the exhibits that were the subject matter of pre-admission exhibits yesterday and they were withdrawn as moot. In the evening they returned them as exhibits that Mr. Emison now wants to use in opening statements having mooted them and withdrawn them.

I went through the list and identified three of them, I think only two that we really need to talk about.

THE COURT: Hold on. Are they moving for more pre-admission of exhibits after the record yesterday?

MR. EMISON: No, Your Honor.

MR. BLACKWELL: He's attempted then to simply display and use them in opening statement without now pre-admitting them. So since the pre-admission process stopped after five or six, he then withdrew them and then brought them back to say I can use them anyway in opening statement.

THE COURT: Do you have exhibits that you intend to display for the jury in opening statements tomorrow?

MR. EMISON: I do, Your Honor, yes.

THE COURT: So let's go off the record.

(OFF THE RECORD.)

THE COURT: Let's go back on the record.

(BACK ON THE RECORD.)

THE COURT: So what is it, Mr. Emison, that you're wanting to use in your opening statement?

MR. EMISON: The two that Mr. Blackwell has - well the two sets that Mr. Blackwell has informed me that he has are these, Your Honor. And, again, with respect to the pre-admission I frankly that was a swing and a miss. I thought we might be able to save time potentially for the jury. That was about not having to play certain deposition clips and not pre-admitting.

THE COURT: What is it that you're wanting to show tomorrow?

MR. EMISON: It's this and I've attached the transcript to the back. This is a document that is discussed and talked about in deposition testimony that the Court has already ruled on. It's coming into evidence. I feel I have a good faith basis to show the jury because I have a good faith basis that this will be admitted into evidence.

MR. BLACKWELL: Can I see which one that is? Is it 1735?

MR. EMISON: Yes. Do you have both sets?

THE COURT: Yes.

MR. EMISON: And then these are a series of emails. These were discussed in both Dr. Ballard's and Dr. Bible's depositions that the Court has ruled on. They were shown and displayed to those witnesses. There were shown in the picture-in-picture video on the deposition screen. on. It appears that those exhibits will be admitted into evidence based on the Court's ruling on the deposition designations.

THE COURT: Mr. Blackwell.

MR. BLACKWELL: In response to that, Your Honor, what was not ruled on were the pre-admission on showing the actual documents to the jury. There were discussed in a deposition because Mr. Emison brought them up in a deposition. He didn't establish the foundation for them in admission in the deposition. he simply talked about them.

And in the case of 1735, he takes double and triple hearsay. We spent quite a bit of time discussing that the kinds of emails that we see here in 1531 yesterday. And after some half a dozen of them, that is when the pre-admission process simply stopped and they withdrew them.

And so I was surprised to get more emails last night attempting to essentially bootstrap them in by having simply brought that up in a deposition without establishing any foundation for them and it's evidence again.

THE COURT: So I guess if - talking about - I guess I'm struggling to - cause we're talking about opening statements. We're not talking about the evidence. So I think that I'm setting myself up for a big old error if I say you can talk about these in opening statements and then we're talking about emails and we're talking about hearsay. There was no admission of this during the deposition.

I mean it may have been talked about but it's not a foregone conclusion that I'm gonna let the document in its entirety. There could be objections whether it could be redactions or so on so forth. So what is your response to that?

MR. EMISON: 3M has not sought any redactions.

THE COURT: Cause it hasn't been moved to admit them.

MR. EMISON: I understand. My understanding of the rule is that we have a way to display exhibits to the jury if we have a good faith basis for their admission and admissibility. And I, frankly, have not have had this issue come up in other cases. So this is first time I've had to address this.

THE COURT: Because there's been an agreement or because the Judge has done something different?

MR. EMISON: Both. Usually there's an agreement and usually the Judge allows, especially when it's contained in the deposition testimony that's already been disclosed and ruled on it's very likely that's it's coming in.

THE COURT: So here's where I'm going to take issue. I may have ruled on these topics but I have not ruled on the admissibility of these documents. Those are two different things. Talking about something in a deposition versus receiving it into evidence are two very different things.

So here's the concern that I have for instance. Trial Exhibit 1735, it has an email that starts off saying, "Wow, crazy town." And then it is 1, 2, 3, 4, 5 paragraphs, it has five references, seven references. And then it has another email that's referenced for your comments and then another email it appears.

So that is not your typical, in my experience, where we clearly differ is that my experience is that an email such as this in its entirety does not get talked about in opening statement.

If there's a portion of it you want to highlight, we can talk about that as I did with these studies that you

talked about. But, you know, I mean and I guess the same would be concerning to me regarding Exhibit 25A which is an email, 25B which is another email and 25C which is another another email.

Frankly, I've reviewed a ton of depositions in the last week and I cannot say - I have no independent memory regarding how these were referred to in each one.

So here's what I would ask. I'm going to get here tomorrow between eight and 8:30. I'm going to ask that you narrow down exactly - if there is some portion of 1735 that you want to highlight. I'm not going to allow you just to talk about this in its entirety because that to me is setting up for error and I try very hard not to do that. It's not always a success but I try.

So if there's a portion of this that you want to highlight to the jury then I'll consider that. Same with these. Is it the highlighted areas that you're wanting to talk about with the jury?

MR. EMISON: Yes.

THE COURT: Okay. May I have these?

MR. EMISON: Absolutely.

THE COURT: May have this one as well?

MR. EMISON: Absolutely, Your Honor.

THE COURT: So here's what I will say. I will consider the highlighted areas in 25A, B and C and then I

will reserve this until you narrow down which portions of 1735 that you want to discuss.

MR. BLACKWELL: And, Judge, I just to make you sure the Court is aware. When I went through Mr. Emison's list there were maybe three times that on the list and I did agree and cooperate with respect to the rest of them.

If I may, Judge, we had a similar discussion about some of the science and medical articles. And if I may similarly point out to the Court just the sections I would want to show them and hand it up to Your Honor.

THE COURT: So is there not an agreement from you guys? Let's go off the record.

(COURT IS IN RECESS AT 5:30 PM.)

PROCEEDINGS

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THE COURT: We are back on the record outside the presence of the jury. The Court is going to take up a couple of things. First, there was a question whether or not there would be jury nondisclosure issues brought to the Court's attention on the part of the defendant. And it's my understanding, Ms. Pruitt, that there are none, is that correct?

MS. PRUITT: That is correct, Judge.

THE COURT: Additionally, when we recessed

yesterday there was discussion regarding two exhibits or more than that, but exhibits the plaintiff wanted to use in opening statement as well as one the defendant wanted to use an opening statement.

It's my understanding, Mr. Blackwell, that you are no longer going to display the exhibit that you referenced yesterday in opening statement.

MR. BLACKWELL: It will not be that exhibit, Your Honor, that's correct.

THE COURT: Additionally, the Court has 1735, 25A, 25B and 25C from plaintiff. It's my understanding, Mr. Emison, that you are no longer intending to display 1735 to the jury, is that correct?

MR. EMISON: That's correct.

THE COURT: As it relates to 25A, B and C, is any additional record?

MR. EMISON: No, Your Honor.

THE COURT: Any additional record the defendant would like to make regarding 25A, B and C being displayed for the jury?

MR. BLACKWELL: No.

THE COURT: The Court will overrule and allow 25A, B and C to be displayed to the jury in opening statement.

Additionally, it was brought to the Court's attention

that Juror Number 16 this morning indicated to Ms. Ross, my law clerk that she realized after leaving here yesterday that her husband has an appointment with Dr. Ballard sometime in October. She did not know him, doesn't know anything about him. She has no reason to believe that it will affect her decision in this case. She's also an alternate, Juror Number 16.

I don't think it's anything we need to take up today but I'm just putting you guys on notice in that regard and if we need to deal with that at a later time. I would say that we do nothing now just because we're on the first full day of evidence and opening statements. I would just table it until if and when it becomes an issue later. Any objection?

MR. EMISON: No, Your Honor.

MR. BLACKWELL: No, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: Mr. Emison, you have said you'd like to make a record on something.

MR. EMISON: Thank you, Your Honor. It's my understanding that the defendant is going to display a slide during his opening presentation that identifies other equipment in the operating room. And it's my understanding

that he may suggest that other equipment are potential sources of contamination that could have caused Ms. O'Haver's surgical infection.

As we briefed in our pretrial motion, Missouri law does not permit comparative fault for things other than cause. My understanding is 3M does not have any expert testimony identifying any of those other sources to a reasonable degree of professional or medical certainty as the sole cause of Ms. O'Haver's infection.

In fact, 3M doesn't have any expert testimony to a reasonable degree of professional or medical certainty that any of the other sources actually contributed to cause Ms. O'Haver's surgery. I don't think there's good faith basis to make that representation in opening statement.

THE COURT: Mr. Blackwell.

MR. BLACKWELL: Your Honor, our orthopedic surgeon expert will testify that there are many other sources of potential bacterial contamination in the operating room. It is central to the discussion of the environment of use. The environment of use is relative to the plaintiff's entire case. It is certainly helpful for the jury to consider the other sources of contamination in an operating room to assess if the plaintiffs met their burden; what else did they assess; how reasonable was it?

Dr. Mont is probably the best surgeon on the planet.

He treats 5,000 patients and surgeries a year. He knows. And what I intend to say in opening is that you'll hear from Dr. Mont and he will talk about these other sources of potential contamination.

It's really up to the jury to assess what they can even consider in determining whether plaintiff met their burden.

THE COURT: I will overrule that and it will be allowed to be use those statements in opening statement. Any further record before we bring out the jury from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From the defendant?

MR. BLACKWELL: No, Your Honor.

THE COURT: Okay. Okay, guys, we will make sure that the jury is ready to go and we'll get started.

(JURY WAS SEATED AT 8:57 AM.)

THE COURT: Good morning. Welcome back. The first thing I need to do this morning is swear you in as jurors in this matter. So if you could please stand and raise your right hand.

(THE COURT SWEARS THE JURY.)

THE COURT: The first thing I'm going to do this morning is read you an additional instruction. So I'm going to read an instruction to you first thing this

morning.

This instruction and the other instructions I will read to you near the end of the trial are in writing. All of the instructions will be handed to you for your guidance in your deliberations when you retire to your jury room. They will direct you concerning the rights and duties of the parties and how the law applies to the facts that you will be called upon to decide.

The trial may begin with opening statements by the lawyers as to the evidence that they expect to present during the trial. What is said in opening statements is not to be considered as proof of fact. However, if a lawyer admits some fact on behalf of a client the other party is relieved of the responsibility of proving that fact.

After the opening statements the plaintiff will introduce evidence. The defendant may then introduce evidence. There may be rebuttal evidence after that. The evidence may include the testimony of witnesses who may appear personally in court, the testimony of witnesses who may not appear personally but whose testimony may be read or shown to you in exhibit such as pictures, documents and other objects.

Testimony of witnesses shown to you by video may contain pauses or glitches due to editing or to conform to

rulings of the court. There may be some questions asked or evidence offered by the parties to which objections may be made. If I overrule an objection you may consider that evidence when you deliberate on the case. If I sustain an objection that matter and any matter I order to be stricken is excluded as evidence and must not be considered by you in your deliberations.

While the trial is in progress I may be called upon to determine questions of law and to decide whether certain matters may be considered by you under the law. No ruling or remark that I make at any time during the trial will be intended or should be considered by you to indicate my opinion as to the facts. There may be times when the lawyers come up to talk to me out of your hearing. This will be done in order to permit me to decide questions of law. These conversations will be out of your hearing to prevent issues of law which I must decide from becoming mixed with issues of fact which you must decide. We will not be trying to keep secrets from you.

Justice requires that you keep an open mind about the case until the parties have had the opportunity to present their cases to you. You must not make up your mind about the case until all the evidence and the closing arguments of the parties have been presented to you. You must not comment on or discuss with anyone not even among yourselves

what you hear or learn in trial until the case is concluded and then only when all of you are present in the jury room for deliberation of the case under the final instructions I give to you.

During the trial you should not remain in the presence of anyone who is discussing the case when court is not in session. Otherwise, some outside influence or comment might influence a juror to make up his or her mind prematurely and be the cause of a possible injustice. For this reason, the lawyers and their clients are not permitted to talk with you until the trial is completed.

Your deliberations and verdict must be based only on the evidence and the information presented to you in the proceedings in this courtroom. Rules of evidence and procedure have developed over many years to make sure that all the parties and the cases are treated fairly and in the same way and to make sure that all jurors make a decision in this case based only on the evidence allowed under those rules in which you see or hear this courtroom.

It would be unfair to the parties to have any juror influenced by information that has not been allowed into evidence in accordance with those rules of evidence and procedure or to have a juror influenced through the opinion of someone who has not been sworn as a juror in this case and heard evidence properly presented here.

Therefore, I instruct you that you may not conduct your own research or investigation into any issues in this case. You must not visit the scene of any of the incidents described in this case. You must not conduct any independent research or obtain any information of any type by talking to any person, referring to textbooks, dictionaries, magazines, blog, the Internet or any other means about any issues in this case or the witnesses, parties, lawyers, medical or scientific terms or evidence that is in any way involved in this trial. You're not permitted to communicate, use a cell phone, record, photograph, video, email, blog, tweet, text or post anything about this trial or your thoughts or opinions about any issue in this case to any other person or to the Internet, Facebook, MySpace, twitter, Snapchat, Instagram or any other personal or public website or any other social media platform during the course this trial or any time before my acceptance of your verdict at the end of the case.

If you break any of these rules this will be a serious breach of your oath as a juror. It could result in a miscarriage of justice and we may to start the trial all over.

After all the evidence has been presented you will receive my final instructions. They will guide your

deliberations on issues of fact you are to decide in arriving at your verdict.

After you have received my final instruction the lawyers may make closing arguments. In closing arguments, the lawyers have the opportunity to direct your attention to the significance of evidence. You will then return to the jury room for your deliberations. It will be your duty to select a foreperson to decide the facts and to arrive at a verdict.

When you enter into your deliberations you'll be considering the testimony of the witnesses as well as other evidence. You may take into consideration the appearance, attitude and behavior of the witness, the interest of the witness in the outcome of the case, the relation of the witness to any of the parties, the inclination of the witness to speak truthfully or untruthfully and the probability or improbability of the witness's statement. You may give any evidence of the testimony of any witness such weight and value as you believe that evidence or testimony is entitled to receive.

Each of you may take notes in this case but you are not required to do so. I've given you notebooks. Any notes you take must be in those notebooks only. You may not take any notes out of the courtroom before the case is submitted to you for your deliberations. No one will read

your notes while you are out of the courtroom. If you choose to take notes do not allow your notetaking to interfere with your ability to observe the evidence and witnesses as they are presented. Do not discuss or share your notes with anyone until you begin your deliberations. During the deliberations if you choose to do so you may use your notes and discuss them with other jurors. Notes taken during trial are not evidence. You should not assume that your notes or those of other jurors are more accurate than your recollection or the recollection of other jurors. After you reach a verdict your notes will be collected and destroyed. No will be allowed to read them.

So when we take breaks during the day just leave your notebooks in your chairs. At the end of the day leave your notebooks in your chairs and Carly will collect them and keep them in her office until the following morning.

Counsel for plaintiff, you may make your opening statement.

MR. EMISON: Thank you, Your Honor. Before I begin, may I inquire of the jury if they can see the screen?

A Most of it.

MR. EMISON: Most of it. Would it be helpful if I move this over here? Does that help?

A That helps.

MR. EMISON: May it please the Court.

THE COURT: Counsel.

OPENING STATEMENT BY MR. EMISON

MR. EMISON: If a medical device provides no benefit than any increased risk of harm is unreasonable. A medical device - hospitals rely on medical device manufacturer to provide accurate information on how to use that device safely and effectively. If a medical device company violates the rules and as a result someone gets hurt, that medical device company is responsible for the harms and losses.

To put it in different way, if a 3M's medical device contributes to cause an infection even if something else might contribute, then 3M is responsible for all of those harms and losses.

I introduced myself to you yesterday. My name is Brett Emison. I've got Danielle Rogers here with me. She was here yesterday. Because of some space constraints we didn't have our full team. We also have Genevieve Zimmerman and Kyle Farrar will be with us and lots of support staff to get us through this trial.

The chain of events that resulted in Kathy O'Haver's surgical infection started in the mid-1980s. Dr. Scott Augustine invented a device called the Bair Hugger. It's a

forced air warming system. This is an example of one right here. This is the Bear Hugger Model 750. This is not the original device that Scott Augustine invented but it's basically the same.

All of the various models have a warming and blower unit that has a fan and heating element that blows air through a hose that gets connected to a disposable plastic blanket that blows that warm air out through a bunch of tiny holes onto the patient.

And from the beginning all of the Bair Huggers like this one are designed like this. Going back to our timeline, Dr. Augustine invented this in his backyard garage in the mid-1980s. And in 1987 his company came out with the original Bair Hugger, the Model 200.

And during this trial you're going to hear the name of different companies. Dr. Augustine invented the original Bair Hugger. He started a company called Augustine Medical Group. Augustine Medical later changed its name to Arizant and Arizant was later purchased by 3M.

And so for this trial whether the conduct is from Dr. Augustine, Augustine Medical, Arizant or 3M, 3M is responsible for the conduct, the actions, the inactions of all those companies because it has acquired all of those when it acquired the rights to the Bair Hugger. So if you hear Augustine with respect to the Bair Hugger, Augustine

Medical, Arizant, 3M, all of that for this trial is 3M's responsibility.

When the original Bair Hugger was designed, Dr. Augustine designed that for one purpose. It was designed to warm up surgical patients after they got out of surgery. He had experienced in the Navy patients waking up after surgery cold because operating rooms are cold. And he invented this to warm them up after surgery.

I apologize for my handwriting. But when I said that the story started in 1987, that's not exactly right because to put this on the market Augustine Medical had to base it on a device that was already out there.

Chris, can we see Exhibit 1764 please. This is going to be the device that Augustine Medical based - can you focus in on that top part - based the Bair Hugger on. This is the Sweetland Bed Warmer test run. It was patented originally in 1934. As you can see here, it's basically a big giant hairdryer that blows air beneath the blankets on a bed. And that's what the Bair Hugger is based on. That was the substantially similar device that Augustine Medical based this Bair Hugger on in every iteration down to this one. So really this chain of events begins back in 1934 with the Sweetland Bed Warmer.

Now it turns out that blowing air around the hospital where there might be a risk of spreading germs and bacteria

isn't such a great idea. So on the original Bair Hugger, Augustine Medical included a warning. They warned doctors and hospitals about the risk of airborne contamination caused by the original Bair Hugger.

In 1990 they came out with another new model, actually two new models, the Bair Hugger 250 and the 500. Again, these models were only for use after surgery and these models included a warning to doctors and hospitals about the risk of airborne contamination.

Then we go forward a few more years to 1996. There's another new model. It's the Bair Hugger 505. Now this is where things change up. Instead of keeping the Bair Hugger in the clinical setting after surgery and that's a different clinical setting than during surgery because after surgery the patient is out of the operating room. Their surgical incision is either stitched up or stapled up. It's covered with bandages.

It's much more difficult for airborne bacteria to cause an infection in that clinical setting than is in an operating room where the patient is cut open on the table and their internal organs, internal body structures are exposed to the air.

And so they change this. So now it's for use in an operating room. And even though 3M had been warned about the risk of airborne contamination for the earlier Bair Huggers after surgery, it took away that warning when it came out with the 505 and moved it into the operating room.

Later on, in 2000 they came out with the Model 750. Again, that's the model that was used on Kathy O'Haver's surgery. That's this kind of model right here. And, again, it was designed and it was sold and marketed for use in an operating room and they kept the warning off. 3M did not warn doctors and hospitals about the risk of airborne contamination in an operating room for these models like it had been warning doctors and hospitals for its original models.

And there's nothing all that different between each of those successive models. They all have a warmer blower. They all have a hose that blows that warm air out that connects to a blanket, a disposable blanket that is placed on the patient that that air blows directly onto.

And the thing about it is when 3M invented these models they still had Model 200 series out there. And the hoses were backwards compatible. So 3M sold hoses that could be used on a model 505 or a 750 but they could also be used on a Model 200. And 3M says go ahead and use this in the operating room but it said that the Model 200 series couldn't.

So even after 3M took the warnings away - Chris, can we see Exhibit 1255. Even after it took those warnings off it was still warning doctors and hospital about the early units. This is a hose warning. This would have been attached to the hose when it was sold to the doctors and hospitals. And this hose warning is telling doctors and hospitals, don't use the 200

series warming units in the operating room. Why? Because thermal injuries and airborne contamination may result. Even after they took the warnings off these models they were still warning about the earlier models.

And you'll hear testimony in this case from several different 3M employees. One of those employees is a man named Al Van Duren. He started at 3M when it was still called Arizant back in 1994. He just retired from 3M a month or two ago. And when we took 3M's depositions earlier this year, 3M told us that Al Van Duren was the person who knew the most about the Bair Hugger and the entire company. That's all he'd really worked on from 1994 until this year. He was still involved in working on the Bair Hugger.

And when we asked Al Van Duren what 3M did to see if it was safe to take these warnings off the unit, he told us that the decision to remove those warnings was not based on any internal studies.

But even during that time there were some doctors and hospitals that were starting to figure it out. Even back between 1987 and 1994 when Al Van Duren started the company, the company was getting complaints from some doctors and hospitals that the Bair Hugger was causing contamination in the operating room that was resulting in surgical infections. Again, you'll hear testimony in this case from Al Van Duren talking about that.

This was not a new surprise to 3M when this happened to Kathy in 2016. And it's definitely not a surprise to 3M today.

And, again, we asked Al Van Duren what did the company do back in the 1990s about those concerns that were raised? And, again, he told us and you will hear his testimony that 3M did no activities to confirm that the Bair Hugger caused that risk or to refute the fact that the Bair Hugger caused that risk.

And so from the mid-1990s until today 3M has not told doctors and hospitals that the Bair Hugger models sold for use during surgery can cause airborne contamination that results in surgical infections. And, in fact, 3M has told them the opposite. 3M tells doctors and hospitals keep using the Bair Hugger during surgery. In fact, keep using it during all surgeries no matter what and no matter if this device is going to provide any benefit at all to the patient.

And so in November of 2016, Kathy goes in for her knee replacement surgery. That was done by Dr. Ballard. By all accounts, Dr. Ballard did everything right. I don't think anybody in this case is going to tell you anything differently. He made sure that his surgical team did everything expected of them to make sure that Kathy did not get a surgical infection. He followed all of the proper sterile techniques. He performed the surgery correctly. In fact, you'll hear from one of our experts, Dr. Bowling later this afternoon and even this morning about that.

Kathy shouldn't have gotten the surgical infection that she did. She had to go have a second surgery to remove part of her artificial knee to cut out the dry they call it, infected tissue that had become necrotic, dead. They had to cut that out, clean out her knee with antibiotics and then she had to go to a skilled nursing facility for six weeks for an IV antibiotic treatment to fight away this infection.

And since then she has had severe limitations on her ability to use her knee. It makes it very difficult for her to do so many of the activities that the rest of us take for granted and that she was able to do before this infection in her knee.

So were suing 3M because 3M chose to market and sell a product that it knew increased the risk of surgical infections in knee replacement surgeries. We're suing 3M because 3M knew about these risks but it chose to remove warnings about the risks of airborne contamination even when it changed the clinical setting from after surgery to in an active operating room. We're suing 3M because 3M failed to give doctors and hospitals the information that they needed to make an informed decision about whether or not to use the Bair Hugger with their patients. We're suing 3M because the Bair Hugger that was used during Kathy's surgery caused airborne contamination resulting in her surgical infection. And we're suing 3M because 3M knew that the Bair Hugger would not provide any benefit at all to a

patient like Kathy in her surgery.

And remember the rule. If a medical device provides no benefit than any increased risk of harm is unreasonable.

The evidence will be that 3M knows doctors and hospitals rely on the company to provide them accurate instructions on how to use the Bair Hugger safely. That includes when to use it and when not to use it.

You will hear Dr. Ballard's testimony. Dr. Ballard did everything that he knew to do but he didn't know what 3M didn't tell him. Dr. Ballard didn't know that the Bair Hugger could blow dirty air directly onto a patient. He didn't know that the Bair Hugger could bring dirty air because of the heat that billows out that brings up contaminants and bacteria from around the floor and carry those directly over the operating table into the sterile field to cause an infection.

You'll hear Dr. Ballard testify that he wanted to know that information, that he expected 3M to provide that information to him. And you'll learn why orthopedic surgeons like Dr. Ballard need to know this information.

Bacteria can't move around on its own. It's not like there's little tiny microscopic bugs with legs or wings that can fly around. Bacteria needs to hitch a ride. And most of the time they hitch a ride on other slightly bigger microscopic particles that get blown around the air as happens.

These kinds of particles are important to orthopedic

surgeons because particles can carry bacteria. That's how bacteria hitches a ride. And the more particles that make it into the sterile field, the more bacteria make it into the sterile field and the more likely and the higher the risk of surgical infections.

So, again, you've got particles and bacteria hitch a ride on particles. If bacteria get into our bodies, it increases the risk of infection. And what orthopedic surgeon knows, what 3M knows as we'll show in the evidence and depositions and other testimony is that when you increase particles, you increase the number of bacteria. And when you increase the number of bacteria you increase the risk of infection.

What does 3M know about what the Bair Hugger does with respect to particles? You'll hear testimony again from Al Van Duren that every study, every study that has looked at the issue shows that the Bair Hugger increases particles over the surgical site, over the patient during surgery, every study. The increased particles, the increased bacteria, the increase for risk of infection.

Not only does 3M know that the Bair Hugger increases particles by 2011, it was aware of a study that showed a 380 percent - a 380 percent increase in the risk of surgical infection when the Bair Hugger was used.

Now the evidence is going to show that the Bair Hugger increases particles and creates airborne contamination in two

different ways. The first way is what we call dirty machine. I'll talk about this more in a second but the inside of this machine is not sterile. It can grow - it can harbor bacteria. The other way is through airborne disruption caused by thermal plumes.

And we'll talk about the first way first. Everyone in the case agrees that bacteria can be found, it can be cultured from inside this warming unit, from inside the hose. There's not going to be any dispute about that. The inside of the unit can't be cleaned by hospital personnel. They use it over and over again and the inside does not get clean. The filter gets changed I think once every six months.

The filter on this is where it brings in air on the bottom down next to the floor. That filter is largely designed to protect the motor. There's no other filter in this device. There's no filter where the hose attaches to the warmer. There's no filter where the hose attaches to the blanket. So whatever is in here can move out of the blower unit, through the hose, into the blanket and potentially directly onto the patient during surgery.

You'll hear about how this Bair Hugger could pick up dirt and debris through this filter. You will hear testimony that when this is placed on the floor and it's turned on it sucks in the air that blows out the other side from the bottom. So think about what's on the floor even in an operating room. You set

this on the floor and it's hooked up to the patient. You'll hear 3M's testimony that can suck in dirt, debris, whatever else is on the floor right through the blower, right to the hose, into the blanket and out the other side.

And you'll hear testimony from 3M's medical director of its Infection Prevention Division. Her name is Michelle Hulse Stevens. She's not aware of any other device in an operating room that sucks in dirty air off the floor and blows it directly onto the patient.

The other way the Bair Hugger could cause surgical infections is because it creates thermal plumes in the operating room. So an operating room is kind of a big room. Sometimes there's a lot of things going on there. The middle the room usually is where the operating table is. It's about waist high for the surgeons who work on that. About the table is what's called the sterile field. That's where the surgeon is scrubbed in, the sterile tools are kept, the patient is kept.

And above that in the ceiling is an HVAC system that's specialized. It has HEPA filtered air that blows down sterile air from the ceiling with enough velocity that it pushes away any of the other potential contaminants. It pushes away particles that could be carrying bacteria because the operating room is designed to eliminate and reduce as much as possible any particles over the sterile field that could cause a surgical infection. And so that blows down and keeps that away. In

other corners of the room on the floor there's exhaust fans and so you have clean air coming in. You have exhaust vents sucking the dirty air out from the floor below the level of the sterile field. But that's exactly where this Bair Hugger is when it's placed on the floor for use.

Now the Bair Hugger its only job is to generate heat. And one of the things that most of us learn as kids in science class is hot air rises. And that heat coming out of the Bair Hugger coming off the blanket and the patient, it affects the room. And you'll hear testimony about how that heat actually billows out from down underneath and that hot air rises and it circulates and it's got turbulence. And as it does that it picks up that microscopic particles that could be carrying bacteria and it lifts it up. And it lifts it up throughout the room and it actually breaks through that force field, that protective air that comes down. And it moves those germs, that bacteria, the contaminants directly over the sterile field.

And it's not just the patient because next to the operating table is another table where the surgeon and surgical team keeps their tools. So the sterilized tools like the scalpel, like a knife for knee surgery where they actually had like a bone saw.

At some point they unwrap the sterile knee implant. They set that on the table next to the operating table while this billow of contaminated air is coming across that and they can't see it. 3M doesn't tell them about it. So they don't

know that they're moving a sterile piece of prosthetic artificial knee right into this area filled with contaminated air, filled with particles, filled with bacteria.

Again, you'll hear from 3M. This is Al Van Duren who was at the time speaking as 3M. 3M's a corporation. It doesn't have a brain. It doesn't have a body. It doesn't have a voice. It cannot speak on its own behalf. It has to do that through its employees. So you'll hear from a couple of different employees who 3M designated to be its voice. Al Van Duren and was one of those people.

And when he was speaking as 3M he admitted that during the design process 3M knew that this kind of heat would disrupt the airflow in the operating room. One of those who you'll hear from us is Dr. Said Elgobashi. He's going to be here tomorrow. Now I love Dr. Elghobashi. He is brilliant. He's a mechanical engineer and a distinguished professor of mechanical and aerospace engineering at the University of California in Irvine. And I think I could spend the rest of my time here this morning talking about all of his qualifications, but I'll just say that he's been used multiple times by the U.S. military, the U.S. Navy. And some of his work is flying right now on the International Space Station.

He's going to describe for you the science and the physics that show how and why the Bair Hugger disrupts operating airflow to transport those particles and bacteria into the surgical

field and cause infection. Chris, can we see that first slide please. Can everyone see the screen?

So Dr. Elghobashi is going to describe this in detail for you. But what you're seeing is a video that was created from a computer model that he did and he did two scenarios. The one on the left is with the Bair Hugger off, not warming air, not blowing air. The other is with the Bair Hugger on.

You'll hear a lot about squames. Squames are the dead skin cells that everybody sheds constantly every day of your life. We shed them by the millions every day. What Dr. Elghobashi did was he just started with 3 million squames placed on the floor around the operating field. The colors don't mean anything good or bad. It's just a way of identifying where the particles start and where they end up. So red was on the left. Green was at the top. Yellow was on the right.

And here with the Bair Hugger off. And I will say that this is running in slow motion. This is not a real-time video. This is less than a minute total in length after the Bair Hugger was turned on. But the left you could see where these are the vents where that protective airflow comes down. It's keeping the area around the patient in the sterile field protected. The system is doing its job. The squames, the contaminants are being kept away from the patient and going out to the air vents around the side.

But on the right-hand side with the Bair Hugger on within

seconds those contaminants, those particles start invading the sterile field. They start surrounding the medical staff, start surrounding the patient, start surrounding the side tables that hold the sterile equipment that are going to be used inside the patient for her surgery.

And so the evidence is going to show that Kathy's surgery lasted about an hour and half. So that's how long she was in there with the Bair Hugger turned on. This is 20 seconds. This is 20 seconds after the Bair Hugger would have been turned on. Again, with the Bair Hugger off, this protective flow is doing its job. Those contaminants are staying outside of the sterile field but, again, Chris, if we can focus in here. Within 20 seconds of the Bair Hugger turning off there's contaminants all over the room. Again, Dr. Elghobashi will talk about that.

Can we see the next slide group real briefly Chris. This is same still, just zoomed in a little bit more. Again, you can see with the Bair Hugger off that protective force field blowing down is doing its job.

If we could see the other side. With the Bair Hugger on, again, that creates the thermal plumes that come out that circulate and pull all of these contaminants right off the floor even way above the surgeon's head where they're then blown back down by that protective air.

You'll hear from other experts as well that will help us describe how and why the Bair Hugger causes surgical infections.

I mentioned Dr. Bowling will be here today. You'll hear from Dr. Jarvis. Dr. Jarvis has spent decades on infectious disease and infection prevention with the CDC. He'll talk to you about the science of preventing surgical infections like Kathy's and why the Bair Hugger is the most likely source of her infection.

And this is just some of the evidence that you'll hear. This is just a preview of what you're going to hear at trial. than any increased risk of harm is unreasonable.

It turns out, as the evidence is going to show, that 3M knew that the Bair Hugger provided no benefit to Kathy because she was obese at the time of her surgery. 3M knew that obese people were naturally protected against the onset of surgical hypothermia, getting cold during surgery because they just don't get cold. If your body is naturally insulated, you don't get cold. If you don't get cold, surgical warming is unnecessary. And if the warming is unnecessary the Bair Hugger provides no benefit.

So, again, we talked to Al Van Duren about this. We took his deposition that we're going to play for you in trial. He was produced as the corporate representative of 3M. He was 3M's voice speaking on its behalf in this deposition. And he was talking about how obese patients don't get cold. And asked him, "So if the patient isn't going to become cold because they're obese there's also no benefit to using the Bair Hugger, fair? Yes, I would agree with that." This is 3M's testimony, 3M's

admission that there is no benefit to using the Bair Hugger if the patient is obese at the time of surgery because it's simply not needed.

The Bair Hugger provided no benefit to Kathy but it increased her risk of surgical infection. And 3M knew that risk of infection was so great, so serious, that other than the prevention of death 3M is not aware of any surgical complications more significant than the kind of infection that Kathy received.

So before coming to trial we wanted to look at several things. And our evidence is going to show the Bair Hugger is defective, that it's unreasonably dangerous because it causes airborne contamination and because it causes surgical infections. And we think that evidence is going to be pretty clear. But we wanted to look at why doctors and hospitals continue to use the Bair Hugger.

Well it turns out that most of the science that 3M relies on to support the Bair Hugger is done by other people, scientists outside of 3M. 3M doesn't run those studies itself. And because it relies on other people, those other people don't have access to the internal confidential corporate documents and information that 3M has. Those outside researchers just don't have that evidence.

So, for example, you're going to hear testimony in this case that 3M knew about the risk of airborne contamination for

decades. That when Al Van Duren, again, when he started the company in 1994 the company was already getting letters, getting complaints from some doctors and hospitals that the Bair Hugger was causing surgical infections but people outside of 3M didn't know that. 3M didn't go around telling people it was getting complaints about the Bair Hugger causing surgical infections back in the early 90s including the people doing those studies. They just didn't have access to that information.

And one of the other pieces of evidence that you'll see and hear about is Exhibit 225. Chris, can we pull that up? This is again an internal confidential 3M document that was back when it was called Arizant talking about forced air warming. Again, and forced air warming is warming with the Bair Hugger and SSI prevention. SSI is surgical site infection. It's dated June, 2010 and it was the talking points for the sales department. And it lists 3M's position.

3M's position in this document is that there's no evidence that forced air warming increases the risk of surgical site infections. But 3M knew that that wasn't accurate because there's a comment from AVD Al Van Duren. And Al Van Duren says, you know what, actually, there is evidence that forced air warming increases risk. This is what 3M's internal document said in 1990. Actually, there is evidence that forced air warming increases risks. But, again, that was 3M's internal confidential document that it didn't share with the public.

Now 3M will tell you that the Bair Hugger provides all kinds of benefits to patients. 3M is going to tell you that the Bair Hugger doesn't increase infections but that it actually reduces infections. 3M is going to tell you that the Bair Hugger does all kinds of things. They're going to tell you that it reduces heart attacks. They're going to tell you it reduces bleeding. They're going to tell you it may reduce the need for mechanical ventilation. They're going to tell you it even reduces the length of a hospital stay after surgery.

So, again, we got to ask Al Van Duren about this during one of his depositions. And one of the things that he told us is that forced air warming whether it's the Bair Hugger or anything else is largely ineffective during the first hour of surgery because of the way our bodies are designed no warming works during the first hour of surgery. Kathy's surgery was only an hour and and a half. 3M knows this. During the first hour of surgery the Bair Hugger is simply largely ineffective at what it's meant to do. Its only job is to warm and it can't do that because of the physiology during the first hour surgery.

He also told us that 3M knew about many of the studies that it relies on to talk about these benefits are now outdated and unreliable. Chris, can we see Exhibit 1668. This is a document that - can you zoom in on the title. This is a document that Al Van Duren created. It's titled *Review of Optimized Management of Patient Normothermia Health Economics Tool.*

Normothermia is a fancy word for saying normal body temperature, normal temperature. And at the bottom this is a document drafted at 3M for 3M during his course and scope of employment as the Global Evidence Development Manager in 3M's Healthcare Business Group. And we'd like to ask Al Van Duren about this document, this internal confidential document.

Could we go to page 2, Chris. Look at page 2, line 2. In here he's talking about evidence to develop these tools that talk about the benefit of forced air warming. And one of the tools was now 11 years old at that time. And that much of the evidence used is relatively weak, over 20 years old and not relevant to the clinical practices of today. It's on page 2. Thank you. So morbid cardiac events are talking about myocardial infarction. That means heart attack. So this combines two of the topics in one paragraph here. It's talking about infection and heart attack.

And so if you look up here it's talking about "Underlying data is quite old collected during a time when very large differences existed between normal temperature and cold patients. That large difference has the effect of accentuating the effect size associated with the intervention." In fact, the study authors that "They rely on of the two most important randomized controlled trials

have concluded that their estimates of benefit are likely too great now that surgical patients are not permitted to become as cold as they were way back then. But more importantly, now 3M knows of at least 10 studies that have detected no significant differences in surgical infection rates between normal temperature patients and cold patients."

Ten studies that 3M knows about that says there is no benefit whatsoever for warming up a patient during surgery. And the same thing about heart attack. They're talking about morbid cardiac events, heart attacks, this author found that he detects that there rate they detected was way too low. Many investigators no longer cite that study for that reason. In fact, there was a recent, a newer very large retrospective study that showed "No significant change in wound infection to myocardial infarction heart attack." No change in infection rates or heart attack, no benefit. Again, no change in myocardial infarction and heart attack.

Can we go down to the next paragraph, Chris, mechanical ventilation. Another theme I hear from 3M is that the Bair Hugger reduces the need for mechanical ventilation for patients during surgery. But the two studies used to provide had a large main core temperature differences and neither study was a need for mechanical

ventilation significantly different between the groups, between warm patients and cold patients; no difference, no benefit for mechanical ventilation.

The next section talks about bleeding and blood transfusions. You might hear from 3M that the Bair Hugger reduces bleeding, reduces the need for blood transfusion. But in its internal document it's talking about studies conducted way back in 1994 when Al Van Duren who just retired started working at the company. And that the transfusion thresholds back then were substantially different than now and two subsequent, two newer analyses showed that there was no significant difference between warm groups and cold groups. No benefit for blood loss, for bleeding, for blood transfusions.

And then finally, length of hospital stay. 3M may tell you the Bair Hugger reduces the time that patients have to spend in a hospital. But, again, here all the studies except for one were conducted in the 1990s and that isn't reliable now because of the differences. And at the time here the weighted mean differences of newer studies show a nonsignificant three-minute difference, three-minute difference. There was no difference in ICU times, although there was a substantial increase in cost if you got the warming treatment. There's no benefit, no reduction in the length of stay. That's what 3M knew in its internal

documents.

Now most of the evidence that you'll hear from our side will be things like this. It will be 3M's words in a deposition like this. It will be 3M's internal documents that were confidential and not shared with the outside world. But 3M also knew about studies that other folks have conducted that show the Bair Hugger increases the risk of surgical infection because it increases the number of potentially contaminated particles over the sterile field.

We'll hear again from Dr. Jarvis that we'll talk about these studies. And, again, 3M admits that every single study shows that the Bair Hugger increases the number particles over the surgical site.

And with all of the studies whether it's studies that we rely on if it's studies that 3M relies on, all of them have problems. None of them are perfect. If science - and there's always variables that happen in science and you'll hear about those. There will be legitimate criticisms and evaluations of studies on both sides.

And so that's why most of our evidence will be about what 3M knew in its internal documents. And if there are studies out there you hear about in the evidence that say that the Bair Hugger doesn't increase the risk of infection or that there is no evidence that forced air warming increases the risk of surgical site infections, we're going

to show you evidence that actually there is evidence that forced air warming increases the risk.

We also wanted to know about studies that said the opposite, the studies that 3M is going to rely on to suggest the Bair Hugger doesn't cause infection. There are those studies out there. You'll hear about those too. Like I said, there are studies on both sides. They all have their limitations. Of the studies that 3M talks about very few if any actually involve orthopedic patients like Kathy O'Haver and different surgeries have very different risks. There's a lot of different risks if you go in for an abdominal surgery or a colorectal surgery versus a knee replacement surgery, different links, different risks.

Some of the studies have very small sample sizes. One of the studies that 3M relies on involved eight subjects, just eight. And from that they try to glean a conclusion that suggests it applies everybody. Again, when we're looking at the studies we look at what 3M says in its internal documents versus what other people say who didn't have access to evidence like this.

Another thing we wanted to know before coming to trial was this. The evidence shows that the Bair Hugger provided no benefit to Kathy. The evidence shows that the Bair Hugger increases - increased her risk of surgical infection. But it wasn't enough for us to know that the

Bair Hugger can cause an infection. We wanted to know if it did, if it did contribute to cause Kathy's infection.

So one of the things we did is we talked to Kathy's doctors. You'll hear their testimony in a videotape deposition, Dr. Bible and Dr. Ballard. By all accounts they did everything right. They followed all the requirements and standards of care necessary to prevent surgical infection. We had our own experts look at the medical records and both Dr. Bowling and Dr. Jarvis concluded that Kathy's doctors did everything right. They are not a potential source of infection in this case. Dr. Jarvis looked at other potential sources.

You'll hear about Kathy's incision opened up at the top just a little bit as she was doing range of motion exercises several weeks after her surgery. And so we wanted to know is it possible that the infection started there versus when she had her actual knee surgery. So you'll hear about how it's not likely that that was the source of infection because that's actually a key symptom of already having a deep joint infection in the knee that is now working its way up off of the prosthetic and into the rest of Kathy's body causing some sepsis and infection problems.

You'll hear how in these types of infections that bacteria can adhere to the prosthetic. There's no blood

flow there to bring white blood cells to fight the infection like our body naturally does. It creates what's called a biofilm. And it just kinda sits on the prosthetic and grows and grows and grows until it bursts out and starts causing the infection and shows signs in the rest of Kathy's body. That could take days. That could take weeks. It could take months. And you'll hear it can even take years to show that sign of infection.

And the most likely source and the cause of Kathy's incision opening up is because that infection was finally starting to work its way off of the prosthetic and into the rest of her body.

Dr. Jarvis also looked at some of the other equipment in operating room. None of the other equipment was a likely source of contamination in the operating room because it simply didn't have the ability to overpower the protective airflow keeping the bacteria and contaminants outside of the sterile field.

And we got to the depose 3M's experts and we asked them, can you identify any other source of potential contamination that you can say with a reasonable degree of professional certainty that contributed to cause Kathy's infection and they couldn't identify any. You won't hear anything - you'll hear about how there's other stuff there but you won't hear from anybody that it either was solely

at fault or even partially responsible for causing Kathy's infection.

3M will tell you that there's bacteria in operating rooms. Operating rooms are designed to minimize bacteria around the surgical table and in the sterile field. There was bacteria in that room. 3M knows it. Doctors and hospitals know it a that's why that's important. It's important because that room is designed to push that bacteria away. It's designed to keep that bacteria out. It's important because the Bair Hugger disrupts and overpowers that protective cone around the patient.

The evidence is good to show us that that bacteria would not have made it into the sterile field to infect Kathy's knee without the Bair Hugger disrupting that air flow causing those thermal plumes, moving all those contaminants over the sterile field and over the operating table.

We might not know exactly which bacteria was the exact one to infect Kathy's knee. But the evidence is going to pinpoint the decision-making that happened all the way back in 1987 and in 1996 with 3M moved the Bair Hugger out of the recovery room into the operating room and took off the warnings to doctors and hospitals about airborne contamination.

The evidence will pinpoint that decision-making that

caused the bacteria to move into the sterile field and caused Kathy's infection, an infection that has caused her severe limitations even to this day that affects her mobility and her ability to live her life like she used to, like she deserves to.

And my partner Danielle will spend a few minutes with you talking about that.

MS. ROGERS: Good morning. I want to talk to you about Kathy. I will to talk to you about her harms and her losses. At the end of this trial you'll get a verdict form and you'll actually be determining how much money should be included on that verdict form. And it's our job to show you and help figure out the level of harms and losses that 3M has created, nothing else.

3M will agree, harms and losses are real. At the end of the trial Judge Phillips will give you the law and you're going to have to follow that law. You're going to consider the harms and losses and everything else is outside the box.

So I need to tell you about harms and losses and talk to you about how severe they are. I'm not doing this for your sympathy for her. It's okay to feel sympathy but sympathy is outside of the box.

At the end of this trial we're going to show you exactly how to calculate how much to put on your verdict.

We'll show you how to figure that amount and how much it will take you to fix Kathy's harms and her losses, the harms of losses that can't be fixed and make up for the harms and the losses that can neither be fixed or helped.

But before you get to that point you need to know what the harms of losses are. Let's go back to November 29, 2016. That day started off like any other day for Kathy with the exception she was going in for a knee replacement surgery. She went in thinking she was going to come out with a new and improved knee. Instead, Kathy developed a deep joint infection, a surgical infection, an infection that got so bad that her knee did have to be cut back open. They had to wash out here knee. They had to remove the infected tissue, take it out, clean it and put it back in.

But it didn't stop there. She didn't go home. She spent the next six weeks at a rehabilitative center away from family, away from friends to treat the infection of here knee. I want to stand up tell you that all the pain stopped there but it didn't. And to this day it still hasn't.

So let me tell you about Kathy. Kathy is a mom of three boys. She has several grandchildren. She has a life-long partner. When she testifies she may say Darrell is her partner. Darrell may be a boyfriend but either way they've been together for about 20 years doing things

together. They used to go camping. They would fish. As a couple they would get out and walk around the grocery store and smell the fruit together. They would do their chores together.

Darrell's a chef and he and Kathy worked together. These are the things that she would do before November of 2016. All that was before her surgery. All of that was before her infection.

She has been in constant pain every day since. I told you Kathy's pain didn't stop after they opened her knee up, washed it out, carved out the infected tissue and put the new on back in. It worked out that way because the infection doesn't stop. She continues and has difficulty walking without a cane and often times has to use a motorized wheelchair.

I think of it this way. Kathy's life has two categories; life before the infection and life after the infection.

Before the infection I told you about what Kathy and Darrell would do in their spare time. But you're also going to hear about Kathy's previous employment. So Kathy like most of us took pride in work. She often identifies herself that the job is a reflection of who she is. She has great work ethic and she loved her job. It was a point of pride for her. Because of the infection she had to

retire early as she was no longer able to work.

And now I have to speak about her job. She did love her job. She was a maintenance worker for the Oak Grove School District. In other words, she was a nighttime janitor and she loved it and she was good at it. You're going to hear from her former coworker Marlene who is going to tell you that Kathy did take pride in her work and like what she did, but the Kathy couldn't do that anymore because right after infection she can't work, she can't walk. That's the difference between life before the infection and life after the infection for her.

Like I said earlier, Kathy's pain didn't stop when they found the infection. Kathy's life after the infection is so different. She lost a part of her identity and it was taken away from her and she was unable to walk. She wasn't able to work. Life before the infection Kathy was an outgoing person. You're going to hear her mom tell you that. I told you about the things that Darrell and Kathy did together. I told you about her job being important to her.

But I want to talk to you about Kathy's personality. Kathy was a happy person. She was an outgoing person. Because she did identify with her being a good worker and she did identify and enjoyed doing things with Darrell, her lifelong partner and she loved being with her family and

friends.

But life after the infection is different for her and it's depressing. She's no longer very mobile. She is not the same person that she was. Life after the infection changed that and who can blame her. I mean, she suffers from daily pain, constant pain. She can't physically do the things she loves with the people that she loves. She can't work. Her leg hurts. Life after the infection is one that is that for Kathy because the harms and the losses didn't stop with the infection.

The evidence will show you that Kathy's life after the infection is more likely than not because the Bair Hugger was defective and unreasonably dangerous when used during her knee surgery. The evidence will show that 3M put Kathy at risk because their product, the Bair Hugger provided her no benefit during that knee surgery. And if they put her at a higher risk of infection the evidence will show that 3M is liable for Kathy's life after the infection.

One of the questions we wanted to know before coming to trial is how bad is that. I've already told you she had to have additional surgery. You're going to hear that in more detail. But she also had the six weeks away from family and friends where she's stuck in a rehabilitation center where she consistently administered IV antibiotics in helping her trying to recover as much as she could.

I don't have to stand and tell you about the constant pain she is in. You guys can see that for yourself. When she was discharged from the hospital in November of 2016, she went back to stay with her mom. She had a home health nurse, home health nurse come in and it looked like she healing. The bacteria that got into her knee during the surgery caused an infection, a deep wound infection. On December 31st this infection was serious. She ended up going back to the hospital having that surgery.

Evidence of Kathy's replacement surgery, evidence of her infection, evidence of her pain and her losses, evidence of her life after the infection is all unrefuted. These things happened and they continue to happen. Not one person in this trial is going to tell you that Kathy didn't undergo knee replacement surgery November of 2016 because she did. And not one person in this trial is going to tell you the Bair Hugger device manufactured and developed wasn't used in that surgery because it was. And not one person is going to tell you that she didn't have an infection. Even 3M's own expert, Dr. Mont agreed Kathy suffered from a deep wound infection because she did. And not one person's going to tell you that Kathy didn't suffer loss because she has.

The evidence of her surgery; the evidence of the use of the Bair Hugger; the evidence of the infection and the

evidence of her loss is unrefuted in this case.

The only person you hear from regarding Kathy's economic loss is Dr. Sam Smith, a witness we'll be calling. He will talk about the harms and losses economically. And in the talking of these harms and losses, these are losses that can be fixed. They can be helped. These are losses – we're talking about lost income, lost retirement contribution, household services and the reduction or value of life. These losses and harms can be calculated and fixed. All these can be helped.

As I mentioned, before the infection she was a maintenance worker at school. After the infection she could never work again. When you talk about lost wages you have to take into consideration her previous wages that were calculated in that matter of lost wages including her retirement. Dr. Sam Smith is an expert in economics and he did an economic calculation of lost wages. For her work history he calculated how much she was making and how much she will lose for the remainder of her life because of the injury, because of the infection.

Dr. Smith will explain those calculations. As I mentioned, she worked at the Oak Grove School District and he'll be able to estimate those losses. If we start – for purposes have today we estimate that her retirement age is 67. Her lost income according to Dr. Stan Smith, her

income at retirement of $464,871 and that's at the retirement age of 67.

But because her other losses have to include what she would have to have other people do for things that she could do before the Bair Hugger and before the infection. She used to be able to do chores around the house. She can't do those anymore. Darrell does those. So if she wasn't able to rely on Darrell she'd have to have help. Again, we're going to use the age 67. If she lives longer, we would calculate that with 67.

Dr. Stan Smith will tell you that the loss is $486,476. That's in addition to the lost wages. Dr. Smith also did another calculation. He did a calculation showing what a reduction in her life is. Her life is valued at more than loss of her income. And he was able to determine a number for that for her at $2,767,343. We start at this age. Remember, if you work longer that number is higher.

We'll be asking you for the economic damages of $3,718,690. If she lives longer, that number goes up. These are the harms and losses that can be fixed. These are the ones that can be helped. These are the harms and losses that economist Dr. Sam Smith can look at and put a number on.

We'll be hearing about the harms and losses that can't be fixed, that can't be paid. They're far more than what

we talked about. This injury has affected every aspect of Kathy's life. It has affected her relationship with Darrell. It's affected her relationship with her family and friends. She will tell you it has affected who she is to her core. Kathy tried and she tried to have a normal life, but life after the infection is hard and it's sad and it's so much less than it was before.

She doesn't go camping with Darrell. She doesn't go fishing with Darrell. She'll say she can't get on the floor and play with her grandkids. She doesn't go into the kitChan and help Darrell cook. They don't go around the grocery store together smelling fruit. If she goes to store she's in a wheelchair. These are the losses that can't be fixed and cannot be helped. So Kathy will live the rest of her life as life after the infection. That's before the infection. Life after the infection is this.

From the beginning to the end, everything we show you in this trial is to see what Kathy's harms and her losses are and how much money it would take to fix. You see approximately 4 million dollars to pay for household services that she'll need for the rest of her life just to get Kathy almost even.

And so in cases like this these are just figures for the economic losses. They take care of the bills. They pay back some of the lost income. When you look at the

rest, all that cannot be fixed what this has done to Kathy's life and her relationships, her grandkids and her lifelong partner.

What about her relationship with her family and friends? In this kind of case that's the most serious part. At the it if this trial I'm going to stand here. I'm going to ask you for – that amount will be at least $10 million. Thank you.

THE COURT: Thank you, Counsel. Opening statement by the defendant.

MR. BLACKWELL: May I approach, Your Honor?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: I'm sorry, Judge. Can we take a break? We've been going about an hour.

THE COURT: We've going been going an hour and 15 minutes. How long will your opening be?

MR. BLACKWELL: It'll be an hour or less.

THE COURT: We'll probably take another recess before we break for lunch. So it'll only be like a 10 minute recess.

(RETURN TO OPEN COURT.)

THE COURT: Folks, we are going to take a short morning recess before the defendant gives their opening statement.

(INSTRUCTION READ.)

We'll get started at 10:25. Thank you.

(BREAK AT 10:13 AM.)

THE COURT: So I just wanted to revisit just kind of the rules that I have; that it is one attorney per witness. So once an attorney begins direct examination then that that attorney will object during cross-examination and the attorney responsible for cross-examining will object during direct examination.

Additionally, in closing argument I expect one attorney to give the first half of closing argument and one attorney to give the second half of closing arguments so there will be no tagging in during either of those.

And same with there's one counsel for defendant that will give closing argument on behalf of the defendant, no tagging in in that regard either.

If you want me to revisit that I would ask you to do so prior to closing arguments. Anything further from plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From defendant?

MR. BLACKWELL: No.

(THE JURY IS SEATED AT 10:30.)

THE COURT: We'll now have the opening statement by defendant. Mr. Blackwell.

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

OPENING STATEMENT BY MR. BLACKWELL

MR. BLACKWELL: Good morning ladies and gentlemen. We haven't had a chance to talk. My name is Jerry Blackwell and I'm speaking on behalf of 3M in this trial. You've heard now from the plaintiff's counsel and you noticed one thing, I didn't interrupt. And I didn't do that because I wanted to give them every opportunity to tell you anything they wanted to say that they thought would be of assistance and would help them meet their burden of proof in this case. Now it's my turn to talk with you. My hope is that they'll be fair and give us exactly the same opportunity that we gave them. Now in terms of who I am, I am from Minnesota. As Mr. Emison told you yesterday, we were from out of town. When he said that, I wished I wasn't. But I'm from Minnesota, originally from North Carolina. I come from a big family. And so we didn't have much but what we got was good manners. So we understood that when we were in someone else's house like I am in yours, to be on your best behavior. So I'm a guest here. We are a guest here and we'll be on our best behavior in talking with you about this case.

I'm a husband, happy husband, a father, a lawyer, a beekeeper, meditation. Now I tell you all these things because they say that if you talk to anybody long enough you find out something that you've got in common. So one of the things I know that we all have in common is that every one of us right now within you somewhere you have a pain; you have a hurt; you have something that you carry around based upon something that somebody said about you or somebody you care about that either wasn't true or it wasn't fair. They didn't tell the truth, the whole truth and nothing but the truth. We all have that.

That's how I feel. That's where we come from in this case is things that have been said about us that weren't fair. They weren't the truth, the whole truth and nothing but the truth.

A couple of examples right off the bat. You heard Mr. Emison get up and tell you about all these doctors who are concerned about infections and we're calling 3M and 3M knew, 3M knew, 3M knew. I can tell you now that there's been no treating physicians who ever contacted 3M to say that the Bair Hugger caused a surgical infection in any patient, not one.

And I won't even stop there. You heard discussions about Al Van Duren. There is evidence that forced air warming increases the risk of infection. It was the

motivation for a person named Memarzadeh's work. The whole truth, they didn't tell you what Dr. Memarzadeh's work was or who he was. You will learn he was with the National Institute of Health listening to arguments made by this lawyer. It was the motivation for Dr. Memarzadeh to do his work. He researched the claim that was make by these lawyers and he created this model. What was Dr. Memarzadeh's conclusion if you're gonna tell the whole truth.

He says this model validates the study, concludes that forced air warming does not increase the risk of surgical wound infection. That was the punchline. So what you saw from Dr Van Duren in the quote he showed you, this doctor, he's just saying somebody has said that. There was the motivation of Dr. Memarzadeh's work at the National Institutes of Health. They did an investigation and they concluded there was no risk. But I can't even stop there.

There's something I want to show you. This will be a simple thing that I'm going to show you that you're going to see and learn about. It's simple but it might be the most important thing you have seen. It's so easy, so simple. It costs about $20 you'll learn. You don't need fancy computational fluid dynamics models like the sort that Dr. Elghobashi would do. You don't need expensive experts from all around the country. Just take this little

thing.

It's called an agar plate. Now you probably have never had an agar plate. You may have had a barbecue plate but not an agar plate. Now what an agar plate is for is when you're trying to find out whether something emits bacteria, you could use an ager plate for it. You take the top off of it. You scatter a little so-called medium in there. It's food for bacteria. And if the particular product is shedding bacteria it will go in there and it will grow, right.

Their claim in this case is that the Bair Hugger is emitting bacteria. A $20 agar plate. What you'll learn is that that is so easy but it was done. They took this Bair Hugger and they took the blanket where the little holes come out and they put agar plates under it. It's been done not once, not twice, not three times, not four times, many times. How many times have they ever been able to grow any bacteria from the so-called particles coming out of the Bair Hugger? The answer is 100 percent zero, never, never. So the question of whether or not the Bair Hugger is emitting bacteria itself directly. in fact, utilized using agar plates.

And so we'll be talking about the science and these studies a little later on, but this is where it begins because this is so easy to do. I would challenge counsel.

But if they have it - if they claim that the Bair Hugger causes infections and it's emitting bacteria, let the first thing that show you not be some document from 3M unless the 3M document say, look, it's emitting bacteria. Show you the test. Show you the test.

If it's a case about a cup that leaks, how hard is that? Get a cup. Let us see. Leaks, no. So how hard is that? Twenty-dollar agar plates. And you watch how they run away from that the entire trial. Watch the evidence and see because it's so easy because particles are not the same as bacteria. Particles are not the same as bacteria. Some particles will carry bacteria. Some do not. Some grapes have seeds, some do not.

This was a case that started off with knowing that no matter how many times they tried they could never culture bacteria coming out of the blanket of this Bair Hugger. So you talk about particles in general. Because why, there's no bacteria otherwise.

If there is, get the science, get the testing, show it to you. No lawyer's fee. Show it to me. Show me the test. It's the burden of proof, ladies and gentlemen. It's the most important three words in this trial, burden of proof. It's not a burden of accusation or a burden prejudgment or a burden of innuendo. Burden of proof. That's easy. Agar plate.

So we talk about particles. When what was in the wound of Ms. O'Haver, it's not about particles. It's about it being bacteria and if he Bair Hugger emits bacteria, that's been tested. And if I know it, I suspect they know it based on the testing.

So I want to show you several things that you're going to learn by the time this case is over about the Bair Hugger. Number one, there's no testing that shows that it emits bacteria. Pardon my handwriting too. No test shows that it emits bacteria. You heard them talk about particles. I want you to listen to the evidence each time and see if you take the next step to get to one of the matters in this trial, do the particles mean bacteria. Say it because particles and bacteria are not the same, not the same. No testing shows that the Bair Hugger emits bacteria. Not only that, no testing shows that it increases bacteria in the air of an operating room. No testing shows that it increases the bacteria.

So this stuff about blowing air and stuff and blowing around when the heat is rising and so on, that's been studied too. The Bair Hugger is the most tested patient warming device in the history of planet Earth. There are over 200 clinical studies. You didn't hear about many of those when Mr. Emison stood up. He went back to Sweetland Bed Warmer in 1938. And then it was back in 1987 when the

testing was just getting started. But he wasn't showing all the testing that's been done over the past 35 years, some 200+ clinical studies because this is the most utilized patient warming device across hospitals in the entire nation, 9/10 of them use it for patient warming.

How come in surgery, orthopedic surgery, other at CenterPoint, hey all use this device to warm their patients during surgery if there are no benefit? How come the lawyers don't know if that can be true. I'm going to show you it's not. So it's never been shown to increase bacteria in the air in the Bair Hugger. And there is not one study that concludes that it causes infection. 200+ clinical studies and not a single one of them, not a single one of them, not a single one of them concludes that the Bair Hugger causes surgical site infection. If it's true then why don't they? Not one.

So you will learn that helping to maintain the patient's body temperature does promote health. It does promote life. This is what the doctors know. This is why they do it you'll learn because it does promote a healthy life.

Now let me pause just a minute because I came out of the block hot today. I wanted to introduce you to just a couple of people over here who will be here throughout this trial. You've met my co-counsel Lyn Pruitt, a wonderful

person and a wonderful lawyer and Steve Torline. And I particularly love Steve because he's from here. Steve Torline, I've known Steve for a very long time. And I also want to introduce you to sitting out here amongst us Bill Childs. And Bill is from 3M. He's actually second-generation 3M. His daddy was an electrochemist at 3M and his mother was a chemical engineer there. So he is here on behalf of the men and women of 3M who associated with the Bair Hugger and you'll hear about what happens in this courtroom when we're talking about their work. So I wanted you to meet those people.

Now I want to show you a bit about the Model 750 and talk a little bit about the Model 750 Bair Hugger. This particular model was manufactured - it was cleared by the FDA in 2000, in the year 2000. And you can see the parts here. You've got a hose that attaches to a patient warming blanket that has all kinds of little perforations on the bottom that fits over the patient's body.

Now the environment within that blanket is hot. It is dry within there, not the most conducive environment for growing bacteria. That is probably one of the reasons they never cultured any bacteria using an agar plate in this claim. You will find as well at the bottom of this is a filter underneath these vents.

It's not just any filter. The type of filtration that

is used for the general surgery in a typical hospital you'll learn is not a HEPA filter. It's a different type of filter called a Merv 14. It has a Merv 14 rating. And that Merv 14 rating means it has a filter that is a 0.2-micron filter. That means nothing to you except just know that it's one inch. There are 25,400 microns. So this filter are less than one, 0.29 in this micron filter. That's what's in the HVAC system in the operating rooms for general surgery. That's the same filter that's at the bottom of the Bair Hugger, exactly the same filter as the one they use for general surgery in the operating rooms.

And you will learn that the Bair Hugger is the only piece of equipment in the operating room that blows air that contains a filter, an HVAC grade filter, a Merv 14.

And so why don't you culture bacteria from this blanket? Part of the reason must be the filter also that's on this. Now what you will find is after talking about the particles and before you know it, they started taking it apart. They can't prove that any bacteria actually comes out of the blanket. So let's pull the hose off it and start swabbing the hose and let's start taking it apart to see what we can find in it because we certainly can't find it outside.

That's not the way it's designed to be used. So you may see or hear about some of the testing, studies in the

trial where not being able culture bacteria coming out the blanket as it's being properly used. You will learn that there are some studies that said to simply pull the hose off. Now it's blowing around like a leaf blower. It's not a leaf blower. That's now the way it's designed to be used.

So does it emit bacteria when the product is used the way it's supposed to be used, when it is used and the way it was used in Ms. O'Haver's surgery?

Now the first model you observed by Mr. Emison of the Bair Hugger was created in 1987. It was not designed by 3M at the time. 3M acquired the company that itself was making the Bair Hugger in 2010. That's when 3M arrived on the scene. This Model 750 remains in use and was still being used in service as latest 2016 in Ms. O'Haver's surgery. But they stopped making it in 2014. It's still being used and it's still being service even today. So I'm going to tell you more about that in just a few minutes.

You were told about this Model 200, you know. Maybe it's a Sweetland Bed Warmer. It looks like a giant hairdryer blowing into something but now it's inoperative. It's not the same product in operating rooms. They have a product that works in the operating. We've heard that temperature controls were put on it and used in order so they don't get the burns. The noise was an issue so they

had to address the noise factor for it to be in the OR. The filter was added to it also so they get a product that is suitable for use in the OR that's cleared by the FDA for that purpose.

Now if you listen to all that you heard this morning you may have been wondering, if all that's true why hasn't the Food and Drug Administration taken it off the market. What you'll learn is that that hasn't happened and that the Food and Drug Administration continues to support the use of forced air warming having heard ...

MR. EMISON: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. EMISON: Your Honor, this was the subject of a motion in limine and pretrial motion on the letter from the FDA. I understood that the Court had not yet ruled on the admissibility of that letter and whether it was going to come in. And that's hearsay and there is no foundation laid. And now 3M is making a description of what that letter says and that the FDA supports the continued use of the Bair Hugger and I would object and move to strike.

MR. BLACKWELL: Our discussion was specifically about joint injury in that letter, not the facts of it, Your Honor.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

MR. BLACKWELL: So the FDA supports and continues to support the use of forced air warming in surgeries for all the benefits and reasons that I'll show you in just a moment. But in terms of the better health consequences with respect to the heart, infections etc. that you see in a moment, they have seen the science. And based upon the science the FDA continues to support it.

But not only that, I wanted to introduce you to or tell you about you're going to learn about the Second International Consensus of Musculoskeletal Infection from 2018. Over 800 leading experts from 92 countries around the globe analyzed and answered consensus questions on the prevention and diagnosis of the treatment of orthopedic infections. This is 2018. This is not old studies or old science. They considered whether the use of forced air warming during orthopedic procedure increased the risk of subsequent surgical site infections and periprosthetic infections, that is knee implant, hip implant, joint infections.

"A super majority of delegates" - those aren't my words. That's how they describe it. "A super majority, over 90 percent agreed that there's no evidence to definitely link forced air warming to increased risk of periprosthetic joint infections." That is artificial

implant joint infections. So these are 800 of the world's leading experts, no axe to grind, experts of bone and joint infections looking at the science, not old science, not abated science, 2018.

They did the similar type thing in 2013 with a similar outcome and point of view. And this was based upon the science. You will learn that when there was data collected data collected, for example, by the Centers for Disease Control - you'll hear about this. That according to the CDC infection rates went down from 2008 to 2014 for hip and knee replacements. But at the same time, you'll learn that the Bair Hugger sales and use at the blankets of the units were going up, but also the upper body blanket, sales were also going up. Sales were also going up which if it is this that is causing infections this is data that should be considered but it's not consistent with the case you'll learn.

Now I want to make another point here just in front. And this relates to Ms. O'Haver. And nothing that I say that we say in the trial that was meant to be either offensive or indifferent to Ms. O'Haver. We didn't come here to either attack or be disrespectful that way. Everything we say is to defend ourselves because we think we've been wrongly accused and our product has been mischaracterized. That's why we say what we say.

I wanted to point out something to you though related to the surgery for you to consider. So as you heard, the knee replacement surgery was on November 29th 2016. Now on December 14th 2016, you'll learn that the staples were removed at Dr. Ballard said the wound looks good. After they had done the surgery on the knee and the way they closed it up was to use staples to close it up. So at this point they're removing the staples. And he says, the wound looks good, looking good. And looking good is pretty much the opposite of looking infected on that December 14th of 2016.

Now you'll learn that it was on December 19th – it was on the same day actually, December 14. The staples were removed, looking good. She's doing physical therapy and the wound was reopened due to the physical therapy on that day, December 14th. It was five days after that the doctors prescribed the use of antibiotics because you've got an open wound. It was five days after that that she was able to get back into see the doctor again where they decided then to wash it out, use some antibiotics and then to stitch it up. So that's an open wound for five days.

The first sign, no sign of infection up to that point. So even when they go in to stitch it up there's no sign or mention of an infection on December 14th. On December 27th and you'll learn from her medical records this was the

first time that the left knee appeared red and that was a potential sign of infection. That was on December 27th. At this point, nearly a month and a half after the surgery on December - I'm sorry, November the 16th.

January 2nd, this is according to her doctor that there was a successful irrigation and debridement procedure where they washed it out. They had to go back in to remove the stitches from the 19th, washed out the wound, not replaced the device but to simply clean up the tissue around. So they did an irrigation and debridement, closed it back up again and the doctor described it as a successful process.

Now we're not here to tell you that Ms. O'Haver doesn't have issues with her left knee implant. But I am here to tell you that are doctor is not saying that the issue is an infection. It's with the implant and that some work better than others. But this is what happened on January 2nd.

And another thing you should be aware of and you'll hear about during the course of this trial was that in March of 2017 she had a stroke also that we will talk more about and the implications for that having occurred having nothing to do as far as the doctors are concerned with either the implant or having had an infection.

Now I won't even stop there because on January the 2nd

also when she had been brought back into the medical facility, part of what they did when they were dressing that wound with debridement and irrigation is they washed it out and they did a culture of what they found in the knee so they were culturing it for bacteria. And what they found was something called gram-positive cocci. Gram-positive cocci is the kind of bacteria it was. And what you will learn is that gram-positive cocci reflects a kind of bacteria. It's a family that includes in that family things likes staph aureus that would be commonly found on the human skin itself.

And what you will learn about infections from surgeries of all kinds is that the most common source of any bacteria is in an infection, surgical site infection is the person's own body and own skin. And I will show you why in just a moment. But here they found gram-positive cocci which is consistent with the kind of bacteria that would be found on the skin, not airborne in the air but on the skin.

You will learn that in one to two percent of joint impact surgeries there are surgical site infections no matter, in one to two percent of them. But what you will learn in this case that when all is said and done it's not possible to rule out an open wound weeks after the surgery itself that's been open for five days as a source for an

infection nor is it possible to rule out bacteria found on or in the body as a source for the bacteria whether it's an argument that it happened in the surgery or outside the surgery, it's bacteria that's commonly found on the skin itself.

Now you're going to hear from a number of their experts. And Mr. Emison mentioned a number of them already. And you'll see their names. They're pretty much surrounding us here. They're everywhere.

Now the plaintiffs operated from CenterPoint Medical Center in Independence, Missouri. So it's right in middle of all of them. Wonderful orthopedic surgeons at KU, infectious disease specialist right here. So the tell you you're going to hear from Dr. Jarvis of South Carolina. You gotta ask yourself, how many infectious disease specialists did they have to find? What you're going to learn and I want you just to listen to the evidence and sort of apply the common sense. This was a surgery in 2016.

Now how is it as you listen to the evidence is a doctor going to come here from another state and then profess to be able to tell you in 2022 how an invisible bacteria moved in an operating room at 2:00 PM in Independence, Missouri six years ago? Any visible bacteria. You're going to hear from them. We'll question

them. And we just ask that you apply your common sense.

You heard them talk about Dr. Ballard, the treating orthopedic surgeon. He was there every minute, every second, every step, every process. What does Dr. Ballard say? He has no opinion or conclusion as to cause of Ms. O'Haver's infection and he was right there. He's the treating doctor who did nothing wrong.

So you'll hear from the experts from outside here. What's does the treater actually say about what is going on?

I want to talk to you and switch gears and talk a little bit more about this concept of normothermia that you heard about in the Model 750. Anesthesia causes normothermia. So you can see the top line here, normal body temperature 98.6 or thereabouts for most of us. And as it dips below that you reach a point where you become hypothermic and it's not very far off the range. Because when the body is put under anesthesia the body's ability to self-regulate temperature drops and you can easily become - the body becomes too cold.

What medical science knows about letting the body get too cold in surgery is that when it's too cold there are more surgical site infections. There are more heart attacks. There are more blood transfusions, length of hospital stay and postoperative shivering. That's been

documented. That's been studied. But this is why in 9/10 hospitals they warm the patients.

Now there may be arguments that the first hour there's no benefit. But for the treating doctor caring about the patient certainly sometimes they have complications. They sometimes take longer than the surgeon planned. Who is going to put their patients at risk of hypothermia when you can simply warm them with a product that has not been shown to increase the risk of infections in the hospital room or increase the amount of bacteria in the operating room.

And you will learn shortly that this is just an abstract thing as it relates Ms. O'Haver. We'll come to that in just a moment.

But, again, on the issue of warming I'm back to the proceedings of the *Second International Consensus of Musculoskeletal Infection.* And here you'll learn that whether keeping patients warm during surgery affects the rate of subsequent surgical site infections and periprosthetic joint infections. This is simply a joint implant device, infection of the implant device. Ninety percent of delegates agreed that keeping patients warm has been found to minimize the risk of subsequent infections and maintain normal body temperatures in patients undergoing orthopedic procedures is recommended.

Eight hundred delegates who were international experts

all over the world with no ax to grind in 2018, not all science, fairly recent science. Their argument that this does apply to orthopedic surgeries, these are bone and skeletal experts who are addressing the issue who are saying it's recommended in orthopedic procedures in 2018 for the benefits.

But you will learn also from looking at Ms. O'Haver's medical records on this that it's not just an abstract study. You may have heard the reference from Mr. Emison about not needing to warm obese patients because they don't get cold. They're not walruses, ladies and gentlemen. Everybody gets cool. Big people get cold. And what you'll learn and what Al Van Duren is talking about is that the larger the body mass sometimes the longer they take for them to get cold. But then also the longer it takes to warm them up again if they go hypothermic. So there's always a disadvantage.

And you'll learn in the case of Ms. O'Haver and you can see from the records that at 1:43 PM on the 16th she's in the operating room. The CRNA who is the registered nurse anesthetist, this anesthesia person is in at 1:49. At 1:56 the anesthesia is induced. At 2:12 a drape is applied. I'll show you that drape in a little bit. At 2:17 there's a surgical incision. At 3:58 the surgery ends. So you can see from the time the anesthesia is

induced to the time the surgery ends is about two hours and two minutes on the timesheets under anesthesia.

But what's happening because the anesthesia person is monitoring body temperatures. That's what they do too. They measure body temperatures. You can see that she's in the OR at 1:43. By the time the anesthesia is applied at 1:49 – at 1:56, I'm sorry the anesthesia is induced you can see that here's the line for what's normal is the blue line. She's hypothermic within minutes of undergoing the anesthesia. The Bair Hugger's turned on. You can see that she then returns to a normal temperature range.

Whatever may be said about obesity and hypothermia etc., she had a surgery that she was under anesthesia for nearly 2 hours. Her body was hypothermic and was warmed by the Bair Hugger during the surgery. You see it right here and we'll show it to you in her records, the interoperative body temperatures of Ms. O'Haver.

So you'll hear kind of more about that but I wanted to address that about the position that because you don't get cold there's no benefit. There was a benefit based on her actual records.

So I'll move ahead just a little bit and talk about the anesthesiologist Dr Bible. You will hear from him. At CenterPoint he uses forced air warming blankets for all surgeries in which he serves as an anesthesiologist

regardless of the anticipated time the surgery is going to take. And not just him, he's always used the Bair Hugger as well at CenterPoint. And as well with Dr. Ballard that he uses the Bair Hugger.

And he was asked questions about would you want to know the Bair Hugger blows dirty air around the wounds? That's just because a lawyer asked that question, not because it was true. Because, again, if it's true it's a simple air blanket. They could show it to you if it's true. It's been studied again and again and again.

Now I'm showing you just by using actual Bair Hugger here with the different parts of the Model 750. Here's the upper body blanket. So when this blanket is actually spread out on a patient this is what it looks like on the patient. The blanket itself is called a Model 522 on the patient. You have a hose port and I showed you that where the hose kind of turns into the blanket.

Now you see here where the Model 750 is on a stand. Listen to the evidence in this case. They have the burden of proof. See if they tell you if they know whether the Bair Hugger was on a stand or not or whether they talk about it being on the floor. Did they even know?

And here you will learn this is operating room number eight where Ms. O'Haver's surgery took place, not the time of the surgery but thereafter. It wasn't the same OR. The

Bair Hugger is on a stand that's six inches from the floor.

Now you learned that the Bair Hugger being used in orthopedic hospitals around the country warming up 50,000 people a day and not one treating physician has ever contacted 3M to say that the Bair Hugger caused a surgical site infection. And there may be an additional reason for that, not just the design of it, the testing that's shown but even the way that it's built.

So how does it actually work in surgery? You'll learn a lot about this. The Bair Hugger upper body warming blanket. You can see the patient's face is there. And here the blanket has been put applied to the patient's skin. And there's an adhesive strip there so it's been put on his chest. There's a strip to secure the blanket. A cover blanket is added. I'm not going to get to the evidence portion but this is just to give you an overview. A sterile stockinette is used on the feet. Then a number of drapes that are put over the patient. And you see where the drape is here.

The anesthesiologist and the Bair Hugger and everything is back there on the other side behind the surgeon. The surgery is taking place down here. This is a view from behind the anesthesia screen. The Bair Hugger is here. The screen is there. Any air exhaust is right here behind that screen under multiple layers of things in

addition.

So let me talk to you about again operating rooms in general. There's a couple of points I have. Again, CenterPoint Medical Center operating room number eight. You'll see more about this in the trial. You'll see the Bair Hugger is there on the stand.

Now we talked too quite a bit about the sterile field, the area that's right underneath, right on top of it all the way down to where the surgery is taking place so waist high. And below the waist would not be considered within the sterile field.

Listen to the evidence. When they talk about the Bair Hugger blowing air, I hope the first thing they do set up one of the Bair Huggers and let you go see for yourself if you can tell anything three inches from the blanket, even three inches anything from the blanket at all. The air that comes down as part of laminar flow in the operating room you will learn is at least 100 times greater than anything that may come from the Bair Hugger. So disrupt the air flow in the sterile field. Listen to the evidence, look at the evidence, see if you believe it.

Now the largest source of bacterial contamination in the OR or operating room is the patient's own skin. I want to show you why what the evidence is going to be about why I say that. The human body is composed of 10 trillion

human cells, 10 trillion human cells. That's like 10 with 12 zeros, 10 trillion. To tell you the truth, I don't know what number comes after trillion but it's 10. But there are a hundred trillion bacteria living on your body. This is known as the human microbiome. So a hundred trillion on every typical person. So we are one part human to 10 parts bacteria.

So why can't you make an operating room sterile? Well part of reason is because there's people in it. And it's not possible you'll learn to make a human sterile. It's not possible to do. You can make them as clean as possible. You can use antiseptics and so on. But at the end of the day a hundred trillion bacteria live on or in the body.

So bacteria that they shed off skin cells. And the medical personnel even when they're completely suited up it doesn't keep out everything. The particles are too small. And there are many sources of bacteria in an operating room even when it's as clean as it can be made. Many different sources you'll learn.

Dr. Mont will come. He's one of the best orthopedic surgeons in this country. He'll come and talk with you about operating rooms. He's about probably the best published orthopedic surgeons in the nation, Dr. Michael Mont. He'll talk about this.

He talks about glove perforations, working on patients in surgery gloves will sometimes perforate. It happens regularly enough in surgeries. The hospital gowns open. The staff simply shedding skin cells by the millions every day.

Circulating nurses. Anesthesia equipment. That's a machine, that's an anesthesia machine. Seams in the floor, electrocautery machines, cabinets along walls, lights above the operating table reached up and manipulated during the surgery, blood and fluid on the sterile drapes, surgical instruments.

I raise all of these for you because, again, burden of proof. Why you jump to include a conclusion that it's a Bair Hugger? So you'll learn also that there are any number of different sources of air movement in the operating room, things that move the air around. Joint infection from that International Consensus Group, this is in 2013. You will learn that they recognize that people in the operating room shed bacteria and are major source of the bacteria. And they circulate through the air currents that are in the OR.

The movement of people and objects and the opening and closing of OR doors there's positive pressure in the OR so air comes down and it's pushing out. If that door is open whoosh, the air flows. You'll learn that that door was

open during Ms. O'Haver's surgery. It was so there are many people moving in and out, moving around the operating room during a typical surgery, just sources of air movement.

There's many sources of air movement to be accounted for, HVAC system, hanging monitors, the reamers. Dr. Mont will come in and talk to us about the sources of air movement. The Bair Hugger's there, again, three inches from the floor and only one of the products on this list that contains a filter, a hospital or OR grade filter in the Model 750 Bair Hugger on this whole list.

So when I make the statement that the most likely source of infection is a person's skin, I want to explain that to you a little more about what the evidence is going to show and why that is. I'll show you a cross-section of the skin. As you can see, there is bacteria on it underneath the skin. We talk about where those 100 trillion bacteria are on the body. But it's not just on top of the skin. It's also underneath the skin. A sebaceous gland, that's an oil gland. We have oil glands within the body. You also have sweat glands. And so when there is an incision in a surgery you're cutting right through all that and the bacteria is contained in the oil glands. Bacteria is contained in the sweat glands of any person.

So you'll hear from Dr. Mont and others that every incision is contaminated, whether or not contaminated with you, contaminated with me. Whether it becomes an infection depends on lots of things that are specific to that own person's immune system whether it becomes a full-blown infection at all.

There's one other concept that I want to at least introduce you to because you're going to hear about it. It's called transient bacteremia. I'll say it again, transient bacteremia. And what transient bacteremia is thought of is if you have would that may be opened in the body and you have an infection in your gums. But if the bacteria gets into the bloodstream, it can find its way there to the wound. It could find its way there from other parts of the body. So it becomes important to know whether there were other infectious processes going on.

You've learned that at or around the time of disinfection weeks after the surgery that there was soreness in the back of her throat and in the laryngitis part of the throat for Ms. O'Haver was happening at the same time. So we'll talk about that as well. The point being trying to determine whether or where a single bacteria may have come from, the most likely source is the body itself. There is no sign showing any bacteria being emitted from the Bair Hugger. Many other sources in the

OR, many the sources on the people in the OR many other sources reached the conclusion it could be only that from your office in South Carolina six years after the fact.

As they say on Sundays, I'm getting ready to bring it home and sit down. But I wanted again to show you this before from the *International Consensus of Musculoskeletal Infection*. I keep showing you this so every time you blinked I've blinded you with science this morning. We'll show it to you when we get more into the evidence portion of the trial.

So I'll show you, this is kind of a summary version because this represents hundreds of experts from all over the world who came to address this topic. And what they said was that no published work related to orthopedic infections was missed. They said we looked at everything. We heard everything. We saw the CFD, the computational fluid dynamics model that they've referred to by Dr. Elghobachi that you're going to hear from. He concluded there's no evidence to definitely link forced air warming to increased risk of their periprosthetic joint infection. Bone and skeletal doctors haven't heard and seen evidence.

So we're going show you bacterial studies again to study whether or not the Bair Hugger emits bacteria. We're going to show you those. I won't belabor them now but it's been studied lots of times but I'll just show you something

else.

You heard Mr. Emison talk about Scott Augustine. He was after he left Augustine Medical became a competitor of 3M. And commits the number of the studies that you will learn that plaintiff's experts rely on to criticize the Bair Hugger.

This person, Mr. Albrecht was an employee of Mr. Augustine. And so you're going to hear about these studies because the first thing they did before we started talking about particles, before we started talk about particles the first thing you'll learn he did was he went to three hospitals in Minnesota because they were in Minnesota. And first they tried to get bacteria to see if they could get it to grow coming out of here, coming out of the blanket using like an agar plate.

They went to three hospitals and they found when they measured bacteria coming out of the Bair Hugger blanket they found there was no bacteria air coming out of the Bair Hugger hose. They couldn't get any bacteria to grow. And there was no difference in the bacteria counts with the Bair Hugger on or off which means it's not increasing the quantity of bacteria in the air in the operating room. So it's not putting out bacteria. It's not increasing the bacteria in the room. That's where all this started.

And you're going to hear the plaintiff's science. You

heard him talking about a 380 percent increase. That's a certain study called McGovern the first one that was mentioned up here. Here's the punchline. For any of these studies involving particles, listen to the evidence that they talk about, listen to the evidence. I hope the first thing they do when they bring up the study is to tell you up front that this study concludes that the Bair Hugger causes infections or not.

You will learn that time and time and time again when the studies get to the punchline, they say these results do not establish causation. Causation is what we're here about. Not one study shows the Bair Hugger caused infection, none of them. And so the McGovern study, this was a before and after comparison of surgical site infection rates between Bair Hugger systems and a warming system called the Hotdog which was Augustine's new one. He is going to compete against the Bair Hugger.

Right in that study the authors note that the study does not establish a causal basis for this association. Mr. Emison just made reference to that study when he stood up here. When we get into the evidence portion of the trial, I want you to hear what that study was all about, how biased it was. It was not even comparing apples to apples. That's why they had to say that this 380 percent, it doesn't establish a causal basis at all.

So what we're left with at that point is a complication. Let's create something we can draw up on the computer. Agar plates are a lot easier to do and that's when Dr. Elghobashi is going to come in. We have an obligation to respond to that so you understand what the limitations are, what it does and doesn't do.

You'll learn for example that if the largest source of air movement in the OR are people moving around or doors opening and closing, you will find that in this model all the physicians stand just like this. Nobody moved. Their arms her here the whole time, no doors open, nothing happens. You'll see. It does not a simulate real work conditions nor does it measure bacteria.

And what you'll learn ultimately is what Dr. Memarzadeh from NIH concluded because the National Institutes of Health alone, whether they conclude from their studies, you'll learn the Bair Hugger patient warming system had no increase in particles being deposited on the patient. The patient's own heat provides protection. That's an important thing.

So when you look at Dr. Elghobashi's model they talk about thermal plumes. Well if a body has an open wound it has a thermal plume too that goes up. And what it found is the particles are so small and are so light that when they approach the thermal plume, the heat coming up from the

wound it repels the particles.

You can look at Dr. Elghobashi's model that's here and see for yourself that not a single particle falls in that wound, none because of the thermal plume of the body. The ultimate conclusions, the model is validated. Forced air warming does not increase the risk of surgical wound infections.

So that's it. The Bair Hugger has never been shown to emit bacteria into the operating room. The Bair Hugger does not increase the bacterial load in the air in the operating room. When the Bair Hugger is used it does equal fewer infections, heart attacks and other positive patient outcomes according to the overall weight of the science. Look at what the International Consensus says on that subject. And finally, Ms. O'Haver's own skin is most likely the source of any bacteria from the 2016 infection.

We won't get to talk to you again until after they have finished putting on their case. We'll get to examine the witnesses. We ask that you keep an open mind to give us a chance, just to give us a chance to talk with you. We've been wrongly accused. Thank you.

THE COURT: Thank you. Counsel for the plaintiff, you may call your first witness.

MR. EMISON: Your Honor, Mr. Farrar will take our first witness. If we could get a minute to rearrange our

things.

MR. FARRAR: Your Honor, I'm going to be playing some clips with Dr. Bowling.

MS. PRUITT: May we approach, Your Honor.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor this the same issue that we've been talking about in opening. Apparently, they intend to just put on a clip of testimony and ask this witness questions about it. These are clips from 3M employees and the Court's familiar with these clips. The Court regains control over admission of depositions.

The Court shouldn't allow these clips of other witnesses during live testimony of another witness. That would be leading their own witness because they intend to play the clip and say the witness will hear some testimony to comment on what 3M employees with the Court has already ruled they can't do.

So this is a waste of time. They're cumulative. They're going to play these depositions at another point in trial. They want to put on cumulative evidence, just a clip, leading the witness. The witness has a specialty in orthopedic surgery and doesn't typically rely on clips of a company in formulating opinions of care and treatment of patients.

This basically amounts to having one witness testify to the credibility of another witness. And that invades the jury's province. They're going to see this witness and they can make their own determination. You can't put another witness up there to say - that's the reason the Court excludes witnesses in the gallery from looking at testimony.

And so I think to do that it's an invasion of the jury's province. They will have the ability to make their own decision about the credibility of that witness.

THE COURT: Any response?

MR. FARRAR: Yeah. So Dr. Bowling obviously read and relied on depositions as well as internal documents. He's not going to say that anything in the clips they did wrong. They actually support his opinions. So he's going to say there are things that the employees at 3M have said that are consistent with my opinions and that bolsters his opinions because 3M agrees with him on the three points so we're going to talk about that.

So if we're reading the deposition transcripts and, obviously, we have them right here. The witness says, of course, that supports your opinions. Did you use that as a basis to form your opinions? In part, I sure did. So every clip is going to be something that supports his opinions.

I'm not going to put up the clip for him to say that guy's wrong. It's going to be that's consistent with exactly what I'm saying and it helps support my opinions.

THE COURT: I think it's appropriate that foundation has to be laid in order for these to come in. I'm not saying that they can't. But my suggestion is let's see where the direct goes. And if an improper foundation has been laid and you don't believe that there has, we'll take that up.

Then you can object and you can come up and we'll have another objection at that time. And then I can receive a continuing objection if you want to. But I need to see it so it tells me if a proper foundation is going to be laid.

MS. PRUITT: Your Honor, as I understand, I have to make my objection. I know this is ridiculous but I've read some things that would suggest a continuing objection in order to preserve the record.

THE COURT: That is your call to make. If you want to come up with every single one of these and object, you may do that. I will tell you, I do continuing objections regularly. But you make whatever record that you think is necessary for your client.

MS. PRUITT: Thank you, Your Honor.

MR. FARRAR: I did provide this Monday.

THE COURT: I don't know who the witness is.

MR. FARRAR: Dr. Bowling.

JACK BOWLING,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MR. FARRAR

Q Good morning.

A Good morning.

Q Introduce yourself please.

A Jack Bowling.

Q Dr. Bowling, correct?

A Yes, sir.

Q Dr. Bowling, what you do?

A I'm an orthopedic surgeon practicing in Wilmington, North Carolina. I've been doing that for 22 years.

Q Any specialties in orthopedic surgery?

A My specialty is adult reconstruction which essentially means hip and knee replacement.

Q Okay. Within that do you have any sort of subspecialties?

A That is a subspecialty. So orthopedic surgery is kind of a relative term, that you go to school and you do a residency for it. And then a fellowship is secondary to that. It's just more education and mine was on hip and knee replacement. Then

after that you have some interest. And so I have interest in management of complex revision of which periprosthetic infections are a part of that.

Q So that was what I was getting at. You treat folks that have had - does that mean a revision surgery?

A Yes.

Q Are there different reasons that somebody may need a - well actually first explain what a revision surgery is.

A So a revision is when the primary surgery fails. And there can be a bunch of different reasons, but we kind of classify them as essentially five categories. One is loosening. The most common is infection followed by loosening. Then there is wear meaning the parts wear. And that's typically a longer-term complication meaning occurring down the road. There could be stiffness where the joint doesn't bend or straighten. Then there could be instability, the joint is lax and the patient feels unstable. So those the main five reasons that we would revise. And number six less frequently is a refracture, a fracture around that knee.

Q Do all hip and knee replacement surgeons do revisions?

A They don't. Revisions are more difficult. The outcomes are not as good. And so most of the surgeons who have done fellowship training meaning an extra year in different knee replacement will be qualified and comfortable doing revision surgery. But a lot of joint replacements are performed by

surgeons who aren't fellowship trained and they may be less comfortable in performing the revisions.

Q So surgeons in your area refer you to clients that need revisions?

A That's correct.

Q They may have had a knee or a hip and they'll send them over to you?

A Yes.

Q Have you done revisions on folks who have had infections?

A Yes.

Q How many times?

A It would be hard to know. I've done in my career approximately 2,000 revision surgeries. And if you figure that just based on the literature thing, about 15 to 18 percent are due to infection than somewhere in the range of probably about 4 or 500.

Q How many total knee replacement surgeries have you done?

A I've done over 10,000 knee replacement surgeries.

Q How many hip replacement surgeries?

A Hip replacement, around 4,500. We tend to do about half the number on primary hips as we do on primary knees. More knees in the country.

Q Do you do surgery every week?

A Yes.
Q Have you this week?
A I have.
Q When did you do surgery this week?
A Monday I did nine surgeries. I was supposed to be in surgery today and Thursday also.
Q We didn't talk about your education. Will you walk us through that?
A Sure. So I went to college at North Carolina State University. I graduated in 1986 summa cum laude in premed. Then I went to Wake Forest University where I did my medical school from 1990 to 1994. And then when you finish medical school you choose a subspecialty or a specialty. Mine was orthopedics. So I did orthopedics from 1994 to 2000. Then at the end of orthopedic training I did the specialty training in adult reconstruction. I did that in Chicago with one of the world's premier revision surgeons.
Q What made you interested in revision surgery?
A I have always kind of tackled difficult problems. I like figuring out how to fix those and being able to help people. And I felt like if I was good at the hard surgeries, I'd be really good at the easy surgeries. So is was just kind of way to make sure that I was in my mind the best I could be for the patient.
Q Do you own your own practice?

A I do.
Q Do you have partners or are you solo?
A I'm solo with two what they call allied health physician assistants.
Q Do you do any teaching?
A I do. During the period since COVID it's been a little less. But prior to COVID I taught probably six or so courses a year.
Q Where at?
A It would vary. There were times when I was asked to give lectures. I think I gave two at the American Academy of Orthopedic Surgery that moves around each year to different locations. I've given industry sponsored education. In other words, we're asked to speak at a conference that's supported by a manufacturing company.
I've done cadaveric teaching. I've done some local where the actual surgeon comes into Wilmington where I'm at and we do a cadaveric training there, watch them in the OR and teach them through the case. Then I've also traveled to do what's called proctoring as well as the didactic portion.
Q What is didactic?
A A lecture, old-school type lecture.
Q What companies hired you to lecture?
A I've work for the Zimmer Corporation as well as Smith-Nephew.

Q Consequently, the knee that Ms. O'Haver had was manufactured by Smith-Nephew. So they've hired you to talk to other orthopedic surgeons?

A Yes.

Q Are you board-certified?

A Yes.

Q In what?

A Orthopedic surgery.

Q What does it mean to be board-certified?

A So when you finish your residency program, again, that fellowship is optional. And so you then become what's called board eligible. You sit for - there's a written test pretty much right after before you finish that you take. If you pass that, I should say, then you're board-eligible.

There's two parts to the board certification. It's an oral exam that occurs approximately two years after you've completed your training. The concept of that is that you will collect cases that you do and perform in your practice. You will submit those cases and the board will choose. When I did it it was 10 cases that they'll pick out of the number. And you'll go and discuss those cases with surgeons who are the instructors if you will. And then you'll pass or fail from that.

Q Do you have to renew that?

A You do. In fact, I will renew in 2025.

Q How long have you been board-certified?

A Since 2001.
Q Dr. Ballard performed surgery on Ms. O'Haver. Do you know if he was board-certified?
A Yes, he was.
Q Are you active in any organization?
A I'm active in a North Carolina Orthopedic Association. I'm active in a National Organization for the American Hip and Knee Surgeons. And then I'm also involved in the American Academy of Orthopedic Surgery.
Q I want to kinda move on. Obviously, you didn't treat Ms. O'Haver, correct?
A No, I did not.
Q You did get a chance to see her?
A I did in June of this year.
Q You're here as an expert witness?
A That is correct.
Q What do you understand your role in the case to be?
A My role is to explain the infectious management and joint replacement from an orthopedic's perspective.
Q Obviously, we're paying you for your time?
A That's right.
Q How much do you get paid?
A I get paid $700 an hour.
Q Do you know how many hours you've spent on the case?
A Prior to the pretrial it was around 70 hours.

Q Do you understand that 3M has an orthopedic surgeon expert, Dr. Mont, correct?

A Yes.

Q Do you know where Dr. Mont lives?

A Baltimore.

Q He doesn't live in Kansas City?

A He doesn't live in Kansas City.

Q Is he affiliated with KU?

A No.

Q I want to talk about what materials you've looked at. Tell me the work you've done in the case.

A So I've looked at extensive records for Ms. O'Haver dating back to 2013 all the way through 2022. I've looked at depositions that were provided by the treating physicians in her case. I've looked at depositions that were provided by 3M from an employee as well as a representative.

Q When you say representative, what you understand that to mean?

A In certain situations a person will be asked to kind of speak for a company which is really - it's hard to get a company. It's an entity. It isn't a person. So this person will represent that company with respect to an opinion.

Q So you've viewed depositions from internal employees like Al Van Duren?

A That's correct.

Q And it's a corporate representative-type deposition?
A Yes.
Q Did you look at any internal 3M documents?
A Yes, I did.
Q Did those documents and those depositions help form the basis of some of your opinions?
A Yes, they did.
Q Did you also do any research into the relevant literature?
A Yes, I did my own to look up articles. Articles are basically an explanation of what scientists might do to kind of determine a hypothesis. So really a basic level were scientists and how scientists will look at a problem is they'll create what's called a null hypothesis. Or in other words, I think this is what causes that. Then they'll formulate a study plan so that they can test that theory. So that's an article.
And then based on the results, once that study is complete they will typically report on it. And the report can be sent to publications. We call them journals but you might call them magazines, same concept. And they will review that through a peer review kind of process and determine whether it meets the criteria to be published so that it can be seen by surgeons throughout the world.
So one of the ways we can access those articles because we don't have all the journals in our library or something like

that is do an online search through something called PubMed and so you can find articles through that process. So I did my own search through that as well as reviewed articles that were provided by other colleagues.

Q I want to ask you something about articles. Do you know the difference between causation and correlation?

A So the problem is that it's difficult to show causation. And so of lot of epidemiological studies, in other words, studies that look at population aren't able to show causation. They're able to just show correlation. There's a relationship between A and B as opposed to being able to definitively show that A caused B.

Q Do articles typically - whatever the topic may be, do they typically say A causes B?

A No.

Q They typically say A is correlated with B.

A That is correct.

Q So it wouldn't be surprising, would it that there's no study that says the Bair Hugger causes infections?

A That's correct, I wouldn't expect it.

Q You would expect for it to say something like the Bair Hugger is correlated, right?

A Yes.

Q And it shows an odds ratio?

A That's correct.

Q By 380 percent?
A That's correct.
Q Did you learn things in the internal documents from 3M and the depositions that are not the assimilated to the public?
A Yes.
Q Things that 3M knew that or not published to the public?
A Yes.
Q We'll come back to that. Can you define - well, let me say this. Are there different types of infections?
A Yes.
Q So if somebody is having a knee replacement like Ms. O'Haver had, what type of infections might she be susceptible to?
A While there's basically two ways to look at it. What is the actual definition of the infection. So there can be a - so we think about tissues in respect to layers. So there's the skin layer and then there's what we call subcutaneous layer. That's the layer between the skin and the covering of the muscle which we would typically call that the fascia layer in orthopedics. And then there's kind of where the I'll use the word organ but in the knees it would be where the joint is.
And so if the infection was in the superficial layer it would be called the superficial surgical infection and we abbreviate that sometimes as surgical site infection. In that

surgical site infection would be the skin which might be simply like a stitch abscess. Then it can be deeper which may be an actual abscess pocket down underneath the skin above the capsule or the layer that protects the joint. Then there can be what we call deep space or deep tissue or organ space. In our world it's synonymous with prosthetic joint infection because the prosthesis is in that deep organ space.

Q If I use the initials PJI, is that prosthetic joint infection?

A Yes.

Q So I we're going to talk about Ms. O'Haver's infection. It was a PJI, correct?

A That's correct.

Q Significantly an infection inside the wound?

A That's correct.

Q I didn't ask you this. Do you know how many total knee replacements are done in the U.S. in a year?

A Currently we're evolving towards a high number of 3 and a half million which is anticipated by 2030 we'll be doing almost 3 and a half million total joints. which of these are predominately the most of those. Currently it's around a million, a million two. It's about 450,000.

Q Have you looked at the costs associated with infections related to joint replacement surgeries?

A I have. The current - it's a very variable because

the treatment of joint infections can be joint operation or can be ultimately end up being three, four and even five operations. So the minimum cost is estimated around a hundred thousand dollars. And the higher costs depending on those more complex and more catastrophic failures could be at upwards of $450,000. The total of that currently runs about 1 and a half billion dollars of costs to the healthcare system.

Q Is that something that doctors and surgeons like yourself try everything possible to avoid?

A Absolutely.

Q What does mitigation of risks mean?

A So it means minimizing the risk. It means making an effort to adjust something that will hopefully decrease that patient's potential for developing an infection.

Q You brought an animation to show how these knee surgeries are done?

A I did.

Q Will that help explain to the jury how it's done?

A I think it will because I think just seeing the steps that we go through helps understand the procedure.

Q Are joint replacement surgeries elective surgeries?

A The vast predominate are. Again, since we've talked a little bit revision, sometimes reversion surgeries are not elective. But the vast majority of primary surgeries are considered elected.

Q Why is that important from the infection perspective?
A It's important for a couple of reasons. Number one is that the environment from the standpoint of patient optimization. So really around the 2010 to 2012 time ratio we started understanding the importance of optimizing our patients to again mitigate those potential risks of infection. And so in an elective manner you the have the opportunity to adjust medications or factors that can help a patient to have less risks. So that's helpful.
And then secondly, if it's emergent you have to do it at that time. So that might sometimes be at the end of the day. That may be in the middle the night. It may not have the same ability for internal cleaning and preparation of the operating suite that you would have if it was elected and scheduled.
Q You could also check to see if patient has an ongoing infection before you do the surgery?
A Yes.
Q And is that standard of care?
A That is standard of care. That's part of the optimization to make sure they don't have a - I recently canceled a patient this week for a cat scratch.
Q You're just moving it down the road?
A Yes.
Q I'm going to play this video. And if you would, you can just tell Chris to stop. And tell us what's happening in

the surgery.

A Sure. Just to kind of give you before we get started, we're not going to show you the incision and things like that because it's animated so there's no people. It's just a model. So we're going to start pretty much with the femoral preparation. So at this point we've already made the incision. We've already exposed everything. This is the femur, the thigh bone part. And so the first thing we do is to put our instruments in we have to make a hole, a cavity so we can put this instrument. This instrument is a guide. So these are called conventional instrumentation.

These are devices that are used to set up against the bone and this is right here called the distal resection. So the femur bone because it's round, we can't just cut around. It's hard to do that. So we're going to basically make some cuts that are going to be kind of a create a pentagon shape so that our femur will fit.

And this particular one, this is the distal cut. So the distal cut is going to effect when the knee is straight. So when you see there the buttons, we're going to see primary +2+4. We're going to be able to adjust the depth of the resection.

So what we've done here is just pinned it into place. And the pins are going to be left in but we're going to take the jig off. Now we're going to use our saw to make out distal resection.

So the first cut we do is this distal resection moving this amount of bone. We want that amount of bone equal to the posterior, which is now what we're going to move to now. So this is how we size the femur. So the femur has a rotation as well as flexion extension. So we're going to put this block against the bone and to make sure that it fits snugly under the bottom part of the femur. Then we have a couple of knobs here. We can choose to take the femur up or down and we can choose to rotate it. And I'm going to show you this here. Right now, we're just pinning it so it doesn't move cause it's hard to rotate things that are moving.

So the tall thing is called a stylus and you can see they're numbers down here. So the first thing we're going to do is we're going to see what size this femur bone is. And when we pin it this is what I was showing about we can rotate it. This is rotating it out of alignment, just showing you that you can do that. And those yellow lines aren't there but that's where our training shows us that we're using landmarks to be able to do this. So the landmarks are to set the rotation such that we put the component on matching the femur that's already there. We don't want to adjust the femur.

This is the stylus like I was saying. So you'll see here in a second it'll kind of zoom in. This is a size 5 which just so happened to be size of Ms. O'Haver. Once we identify that - that's perfectly on the five. If it wasn't and we had to move

it up or down, we could adjust this block so that we cut less bone off the top or more bone off the top. In other words, you can't have 4 and a half or 5 and a half so we have to adjust it to a round number.

Once we're set, we lock it so it doesn't move. It's very important for the precision. We're going to drill a couple of holes here because you can't really cut through this jig. And we're going to take the jig off just like we did a minute ago and we're going to put on a cutting block. The cutting block is specific to the size. So it's basically like a capture slots if you will. If you've ever cut anything on wood sometimes the blade can blend or flex and can make you less precise. So by cutting through these slots we're able to make a very precise cut on the bone.

This is just pinning it into position. And now we're going to use the saw here and make the cuts across the top, the bottom and then what we call the chandlers. This kinda finishes that pentagon shape. So we've taken a round femur bone and now we've kinda made it into the pentagon. And part of that is for two reasons. One is to balance. And then two is for fixation.

Now, again, in the animated version this is not prepped. Normally, the whole the whole foot would be prepped and would be in an occlusive drape. That this is just to show you that this is an extra medullary jig. So the femur, we put it inside the bone. We do the tibia, the leg bone, we do it on the outside.

We just get that in just a little to give us stability. Again, jigs move. And if they move, you can't really be accurate. This is just showing that I can adjust the rotation as well as I can adjust the slope and the ankle of it. So once we kinda got it where we think this is the right alignment for the tibial component, then what we're going to do is go ahead and you'll see in just a second we're going to hammer this in so it doesn't move.

Once that's done then we're going to go - this is called a cutting jig and it's the same concept with the stylus. We're going to measure the bone. In some cases, you'll measure the low point of the bone. In other words, where the bone is recessed. In some cases, you'll measure the top part. It just depends on how much wear the patient has. In Ms. O'Haver she had what we call a knot knee or naugus knee so I would use the topside which is the medial side.

Then we will pin this into position. These are just two pins to hold the jig because, again, it's hard to cut with these extra medullary things on. So we're going to take that off now. Then we just have that little block there that, again, same concept will be to capture device. We're just removing all of the extra parts that we don't need to make our cut.

Once that's done we'll bring the saw in and again we'll cut across the top. What you don't see in these pictures are the soft tissues. So we're protecting those soft tissues to avoid

any damage there.

Once this is done, now we cut. So this is what I was explaining a second ago. So we cut into the femur so that's called our extension gap. That's when your knee is straight. That's called flexion gap when your knee is bent. So those gaps have to be equal. So, again, we make a determination as we were going through that to get those cuts perfectly level and balanced.

This is now sizing. So just like the femur, we have to see what size her bone is. And just like in this case, just like Ms. O'Haver it was a size 4. We're just setting the rotation there and then pinning it into position. The reason is because if you set a flat tray on top of bone it can toggle. So what we're going to do is we're going to is we're going to set the rotation and then we're going to punch it in a second.

These are called trials. So before we put the real parts in we put the trials in and we take the knee through a range of motion just to make sure they we're happy with the range of motion, we're happy with the bend, we're happy with the rotation. Again, this is just showing how we can still adjust this. And once we're set and we say this is perfectly placed, then we'll take the trial off, finish the tibia by punching it which you'll see here in just a quick second as soon as we take this off.

It's just marking the rotation so that when we put the real

one on we'll be able to find back to where we had just decided was the right place. So this the drill. It goes in for about an inch deep and then there's a punch. And the punch has wings on it you can see. Those wings are designed to provide rotational stability so the implant doesn't loosen over time.

The blue is a plastic piece that's just a polyethylene. I tell people it's kind of like the fake meniscus which is the cushion between the two bones normally. Now we have metal, plastic, metal.

And the part you just saw was the patella. You'll see it here at the very end. We do put a patella button on the bottom. The last part here is just finishing up or doing the femur. So then we're gonna take the tibia off. We'll finish up the femur. The reason we have to finish the femur is because these implants have two options where you keep the posterior pre-shape or you take it.

So in this case we're getting ready to make what we call a box resection. So we're going to make a center cut in the bone cause we're going to take the ACL and the PCL. Again, this was the type of implant that was done for Ms. O'Haver.

So this is just, again, a jig that's pinning to the bone. This next thing is going to be a little chisel saw that's going to come in and create a hole. So we ream so we can press the bone. We don't take it out. And we'll take a little chisel and kind of make the edges square cause that's a circle and this

will just kind of make it nice and flush. And that's because we took the ACL and PCL so that's a substitute for that.

So I brought a model after they're done just to show you what that looks like when it's finally complete. The last part is now we put in - this is called the box so it snaps in. And now we're ready to do the final trial. So there's a lot of steps that go into this to get everything set.

This is the final. And we go ahead and put in the real implant so real implant here now. We'll put the real final component in which is going to be a black metal in this case called zirconium. So you're going to see that one come in in a second. And then we'll put a plastic piece in between.

We still have one more chance after the metal femur and metal tibia are on to adjust the thickness of the plastic so you'll see one more blue. The blue is just because we check it one last time.

So there are a lot of steps, a lot of checks and balances when we do a knee replacement. The last piece is the button. Do you see that light goes on the back of the knee cap. And we just kind of squeeze that into place with some cement. And I'm not going to show it but it would be flipped back over. So really the patella is just twisted upside down in this case and it's going to go back into the normal position.

The last piece before we close it is to take out the trial, to put in a real insert. That's why they have it right here in

the picture. This is the indication that this is a real polyethylene insert. Once it's snapped in, the we take the knee to one last range of motion making sure everything looks good and we're done with the knee replacement.

Q Two questions. How long does that normally take you to do it?

A So for me from start to finish meaning the incision to the time that the bandage is on is about 45 minutes.

Q Less than an hour?

A Less than an hour.

Q The implant, is it sterile?

A The implant is sterile. It comes processed in dual packaging so it has two layers of packaging that's been processed in a sterile environment meaning no micro-organisms.

Q Can you define sterile?

A So sterile just basically means that there's a depletion of 80 microorganisms. So typically, sterility is either done through like a gas sterilization where you use something called ethylene oxide. You put it into the room and it we kill anything in the room. Or today what we will use is radiation. So we radiate the implant which has some advantages of diminishing the risk of oxidation or where that the gas used to be able to do. And that's how we process it.

The third way you can process it is with heat. You can autoclave something to make it sterile where you run the

temperature and pressure so high that no organism or micro-organism can live in that environment. You can sterilize it that way also.

Q Is it packaged in such a way that the implants - are they packaged in such a way that they are sterile when they get to the operating room?

A Yes. They're in a dual container so there's an outer box. And there's an inner box. And then oftentimes there's even a sleeve around or packaging around like a plastic wrap around the implant inside the box inside the box.

Q Let me ask you this. Do orthopedic surgeons keep them in the packaging for as long as possible?

A Yes. So when you got to the part where the black metal went on, that's what we would call the true implantation. And at that point we would call a timeout. And a timeout just means that everybody kind of stops and we read the sizes that we determined as we've gone through the procedure. And we kind of call out the sizes that we're gonna use it or speak. So the representative of the company will then make sure that those products are brought into the room. And, personally, I read those actual boxes to make sure that they're the exact right size and the correct size.

And then at that point we open them up. While it's happening my physician-assisted is mixing the cement. I still use a cement so that there's very limited time from the time

that it's open to the time that it's put in. And that time period is probably less than 10 minutes from the time that we open the product to the time that we close, start closing the wound.

Q Why is it important that the implant be sterile?

A The problem with implants is that they don't have any blood flow. I seems silly to say that but it's true. There's no blood flow to that. So once you put an implant into the body if that implant has even a bacteria on it. even as simple as one bacteria, that bacteria may be to elude the normal defense post mechanism, in other words, your immune system and could create a prosthetic joint infection.

So it's important not to handle the implant. I actually change gloves before I open the implant so they're sterile gloves taking the implant and putting it into the body.

Q So I think you said it just takes a very few bacteria to cause a deep joint infection?

A Yes. I mean some of the studies have shown as small as 10 bacteria could cause a deep joint infection.

Q How does that differ from say a ruptured appendix being taken out?

A So you say a ruptured appendix, that's gotta be worse because it's ruptured. That's got to be what we would call a contaminated case. But the problem is is that you're not putting an implant in so it's your normal body tissue. So even

though when an appendix ruptures, not just becomes inflamed but actually ruptures, part of the valve fluid can leak into the gut and create an infection. But the antibiotics that are typically given can get to all the parts of the body. So, therefore, the chance of developing a more catastrophic complication is much less in those cases than it is when you're putting in something that doesn't have blood flow.

Q So you mentioned you read some of the different depositions. Do you remember reading Al Van Duren's deposition?

A Yes.

Q What was his role, do you recall?

A He was the clinical officer, Chief Clinical Officer.

Q Director of Physical Affairs?

A Yes.

Q Do you remember when he started or how long he worked for 3M Company?

A I believe he started around 1994 or 1997, somewhere in that timeframe and worked with them up until 2019. I don't know - I think he changed positions at that point. I'm not sure that he actually left the company but he changed positions.

But during that period of time he worked with the Bear Hugger company.

Q In terms of who at 3M is the most knowledgeable about the Bair Hugger, do you have knowledge about what the corporate representative said?

MS. PRUITT: Objection, Your Honor. May we approach.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MS. PRUITT: This is what we talked about. He's just asking for information that has nothing to do with anything. He's going to show him the deposition and he's asking him. It's a leading question and he's using him to testify to try to corroborate or tell this jury about this witness when this witness is going to be here to testify. And it's going to get worse because there's going to be commentary about what this person does. And we object and it's just leading your own witness with the use of this and I would object.

MR. FARRAR: Evidence is testimony and documents. If I have documents - I do have documents that he relies on I can absolutely show him the documents and have him read them. This is the same. I'm laying the foundation Your Honor asked me to lay as to how I'm going to use these clips. To do that I have to show that Al Van Duren is very knowlegeable about the use of the Bair Hugger.

Now I'm going to play a clip where Al Van Duren says it takes only a few bacteria to cause an infection in joint replacement surgeries which just supports his opinions.

THE COURT. I don't think an appropriate foundation has been laid for this witness for you to play a deposition regarding - I don't think an appropriate foundation has been laid and the objection is sustained.

MR. FARRAR: Can I read the depo? He is relying on it cause it's in his report specifically.

THE COURT: Counsel, what's your response?

MS. PRUITT: It is same issue that he's being asked to comment on another witness's testimony and evaluate his credibility which goes to the province of the jury. And their calling the witnesses in their case. And the jury may make their own determination.

They're asking an orthopedic surgeon to comment on the credibility of a 3M employee or what he says about it. They can argue all they want to in closing that Al Van Duren said the same things that Dr. Bowling has said. Of course, they can do that. But to do it in this manner, Your Honor, is commenting on the credibility of the witness. He's trying to bolster this expert's testimony in a leading manner.

THE COURT: We're gonna go ahead and recess for lunch. We'll take it up outside the hearing of the jury.

(RETURN TOP OPEN COURT.)

THE COURT: We're going to go ahead and recess for lunch. We will get started at 1:30. I have a couple of

phone conferences at 1:00 on other matters. So we will get started again at 1:30.

(INSTRUCTION READ.)

We'll be in recess till 1:30.

(LUNCH BREAK AT 12:13 PM.)

THE COURT: Sir, you may step down. We are on the record outside the presence of the jury. So I thought that might be a better use of our time since this seems to be something that we're going to have to figure out at some point because it sounds to me like it's going to be an attempt to do this throughout the plaintiff's direct examination. I think that when we broke, Ms. Pruitt, you were addressing Counsel's - and I'm sorry I don't have it on my Post-it.

MR. FARRAR: It's Farrar.

THE COURT: Farrar, okay, got it. Thank you. Mr. Farrar's argument regarding the use of playing the videotaped deposition during the direct or reading the deposition in the alternative.

MS. PRUITT: Yes, Your Honor. It's our position that for the record that the attempts by the plaintiff is just to put on cumulative testimony that they're going to be played with the witness. And what they're going to ask this witness to do is comment on an internal agreement. And you can tell from the witness's starting and stopping

with the answer he's been fed this information whether it's a deposition or what. But he's commenting about someone's credibility and that is for the jury to determine because the jury is going to hear this very testimony.

They're going to hear what is title is, what he does, what he said. And all they're trying to do is put the clips up, Your Honor. And it's cumulative and it allows leading during a direct examination which is not appropriate. And you can't play somebody's clip and corroborate something this surgeon believes when that testimony is going to be played. The juror is entitled to make the determination what was said and how it fits into the big picture they will have that opportunity. It's not for another witness to get on the stand and talk about oh, that means 3M knew this.

He has to question they knew stuff that wasn't even in. So the Court can see where all this is going. It's an attempt to comment on the credibility of a 3M orthopedic surgeon who doesn't even regularly rely on this kind of material in giving his opinions. What he said on the stand I'm here to talk about surgery and the environment around surgery, what I think about infection and so forth.

And then to go further and start talking about company witnesses and then give opinions about what the company knew, what they did, what they said when you're gonna be

playing that very testimony. It's improper. The Court has discretion to manage the deposition testimony.

THE COURT: Counsel, your response?

MR. FARRAR: There's no rule citing in that objection. There is a rule for any purpose, clearly, our expert witness can rely on the deposition testimony of the company just like they can rely on documents they read to support their opinions. I'm not in any way attacking the credibility of either 3M or their witnesses. Quite the opposite. The question is does Mr. Van Duren's position support – does it support – is it a basis, that part of the basis for his opinion? And he can say, yes. And we can say let's hear what he said. That's the basis for my opinion, just as he's agreed a document that supports a basis of opinion.

But we didn't say that's what it says. The idea that it's cumulative, we show documents to multiple witnesses all the time. Evidence comes in two forms, testimony and documents. If we can show documents, we can show portions of depositions multiple times. We're not going to bang this time forever, but there are parts of the testimony that 3M that really support his opinions and he's entitled to tell the jury about that.

Playing a clip is a much more efficient way for people to see it and learn about it than reading portions of the

deposition.

THE COURT: So I don't know that I agree with your assessment that you are not going to bang the drum forever. But there's 22 pages of clips that you suggested that you're going to play.

MR. FARRAR: Not with ...

THE COURT: Let me finish please. What I don't understand - I don't understand the use of this testimony. I don't see how it's proper. I don't see how - he can say this is my opinion and this is my conclusion. And by the way, this is a witness from 3M that agrees with me. I don't understand how playing that deposition clip when that deposition has not been played in court.

There's absolutely been no presentation of that witness's testimony before this jury. So then to preempt it and to put this witness on the stand who seems to say this is my conclusion. This is what I believe. And then to throw in a 3M employee or representative in whatever fashion to say yeah, that's what I think too, I don't think that's a proper use.

Depositions can be used for any purpose but it still has to fall within the other rules of evidence whether it be improperly bolstering testimony, which would be what it would seem to me.

Depositions are typically use in these matters as a

form of impeachment. So I don't understand - I don't agree with the use of this deposition in this manner. I don't think that depositions can be used in any manner as just a license to play whatever portions of the deposition during the presentation of evidence especially during live testimony. So I disagree with you.

I don't think this is a proper use of Van Duren or it looks like there's some other individuals in here as well. So here's what I will say. Based upon what I observed with the question and with what is proposed, the objection is sustained and I'm not going to allow the use of the depositions for that purpose.

If you want to give it another shot with another foundation or another manner, I'll consider that but that's my ruling as of now.

MR. FARRAR: So I don't want to step on the Court's toes. He's using his deposition to form his basis of his opinion. I have to have him paraphrase what the witness said.

THE COURT: Do you feel so have to give you guidance regarding what you're going to do or do you feel as though it's my job to give you a ruling?

MR. FARRAR: Ruling by I'm trying not step on this Court's toes.

THE COURT: So I've given you my ruling. If you

want to give it another shot in another way, that's what I just said. I'm not going to tell you how to conduct your direct examination. That's for you to do. It's my job to take up objections and I feel like I've done that.

If you guys want, I can be available a few minutes before 1:30 to make any additional records or we could do this outside the presence of the jury.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: Okay. So I just want to make sure that my thoughts on the use of the deposition are clear. I don't believe that use of the deposition is precluded necessarily. I think it's a very specific process to use it and I think that the order in which the questions are asked are important in order to establish a foundation. I don't believe based on the testimony that I heard a proper foundation has been laid in that regard. So that's why I said, if you want to give it another shot go ahead.

So I don't mean to suggest it cannot be used at all. It's just the process. And I did not feel like foundation has been laid appropriately.

One more thing and I know I told you each day I would tell you when I have to leave. 5:30 today is my time that I've got a be out here.

Go ahead and bring the jury in.

(JURY RESEATED AT 1:34 PM.)

THE COURT: Welcome back. I hope you guys had a good lunch. We're going to continue with direct examination. Sir, I'll remind you that you remain under oath.

CONTINUED DIRECT EXAMINATION BY MR. FARRAR

Q Good afternoon. Before we get started, have your opinions been given within a reasonable degree of medical certainty?

A Yes, they have.

Q Will you agree with me that all of your opinions you will give will be within a reasonable degree of medical certainty?

A Yes, sir.

Q What does that me too you?

A To me it means that when I render an opinion that that opinion is more likely than not accurate to the best my ability.

Q We left off with the idea that it takes a very few number of bacteria to cause a knee joint infection. And I want to talk a little bit about why that is. Can you explain what a biofilm is?

A So biofilm is a – if you want to think about it, it's a polysaccharide, which I think is a doctor word. It essentially means that it's a kind of a mucus or a slime layer

that bacteria, certain types of bacteria create. Typically, those are bacteria called gram positive cocci which is staphylococcus or streptococcus. We've heard those names. Those are most commonly used, but what it does is it kind of forms like a shield if you will that the bacteria can be inside. And that diminishes the host or the person's immune system's ability to identify that there's a bacteria there. And it kind of upgrades that immune system to fight it. So it kind of gives protection.

THE COURT: Counsel, can you approach.

(BENCH CONFERENCE.)

THE COURT: There's an exhibit up on the screen that I don't think ...

MR. FARRAR: It's demonstrative.

THE COURT: I don't think there's been any foundation laid for the jury. Why don't you just make a record regarding what it is and then just say there's no objection. If you want to at the beginning of the direct examination - if you want to talk about no objection that's fine but I just.

(RETURN TO OPEN COURT.)

Q I had a demonstrative exhibit. I believe it was 2191. Would that help sort of explain biofilm and the process of bacteria grown?

A Yes.

MS. PRUITT: No objection, Your Honor.

THE COURT: Thank you.

Q So when that biofilm is over the bacteria, do they grow, multiply?

A So bacteria have kind of a really unique ability to what we call up regulate or down regulate. So at times when it's not favorable for the bacteria to be regulated because it may stimulate the body's immune system, it can actually down regulate and slow down the growth and slow down the metabolism making it harder for the body to fight them. And that's what they initially do.

And then as they slowly start to replicate and they've had time to create this biofilm - you think about building a fortress around it. If in time to do that then they start to up regulate and start to more rapidly proliferate until the point where you kind of see one, is there this layer; two, they're kind of starting to make the polysaccharides or slime layer if you will. Three, they're starting out and you can see four and five are really starting to replicate fast to the point where they kind of erupt out of the glycol calyx protective barrier and start to spread to the tissues and then potentially get into the bloodstream and throughout the body.

Q So what happens for a joint - deep joint infection whenever number five happens, whenever it breaks?

A When it breaks then all of a sudden, the immune system

is able to identify the bacteria there. So it becomes essentially a war between the bacteria and the immune system or what we call white cells. And that war creates things like fluid production, we call that pus. It creates swelling, redness and ultimately it will increase the pressure. You can see that gets larger and larger till it eventually increases the pressure to where it can erupt out. We call that a sinus track or dehiscence of the wound. It opens up and start draining.

Q How long does it take from step one to step five?

A A lot of it depends on a couple of factors. Number one is the host and the immunity of the host. So if a host is compromised, they may have some immune conditions that make them less likely to be able to fight infection, it may go longer before the body reacts to it.

Number two is the virulence or the strength of the bacteria so to speak and how aggressive they are. Some bacteria are fairly - I guess I would say that they're kind of a mild bacteria. They don't really create - so that would take a long time. It may take weeks, even months and even years before they become identified.

More aggressive bacteria can be identified in a few days. So, again, the variance of the bacteria and the host's immune system will determine how long it takes to get through this process.

Q Could this process be going underway while the actual

surgical incision is healing?

A Yes.

Q How does that happen?

A Well if you think about it, so for a woman to have a problem meaning in infection and specifically we're talking about down in the joint or a deep joint infection or a periprosthetic infection, there has to be an inoculation meaning the bacteria had to get there.

So once the bacteria are in the joint and they start this process, remember the incision has been opened by the surgeon and then subsequently closed by the surgeon. So there's a period of time while this process is happening that you're also healing where your body is trying to heal.

In some ways it's kind of a distraction to the immune system because the immune system is trying to heal the surgical incision which is trauma and the body is trying to heal that. And if this bacteria goes undetected, it can slowly progress until all of a sudden you end up with a wound problem, in other words, a disruption of the wound. And at that point then you have to determine is this an infection.

Q You said the word "wound dehiscence?"

A So it's kind of a doctor term we use meaning if the wound separates or breaks open. I think my experience there's really two reasons why it does that. One is nutritional. So the patient who is malnourished may not heal well. We all know

that to be true just in general. And so the surgical room wound maybe not be healing well.

The other example is a patient has gotten an infection where this process it's happening below putting a lot of tension on the layers. So you can imagine this fluid gets bigger and bigger and bigger and starts to stretch the layers. And if they haven't healed well they'll start to separate. So the technical term is dehiscence or separation of the wound.

Q If somebody said that a wound that healed well two weeks after the incision, would evidence that there wasn't an infection and it was in fact the opposite, would that be medically accurate?

A I apologize. I'm going to ask you to repeat that.

Q Let me do it slower or shorter. When there is evidence that the wound is healing well, the incision is healing well two weeks later would that be proof that there's not an infection?

A No.

Q That would be medically - well explain.

A It would be inaccurate. And the reason is because I mean, all wounds don't get infected so we expect wounds to heal. But the fact that in two weeks, a very early time period from surgery to that point in two weeks, if we have an indolent bug meaning a bug that's really slow-growing, that just may not be enough time for the bacteria to reach this process.

I mean, we could have guessed somewhere along the way where the bacteria may be. So the outside looks okay but the inside is brewing so there can still be an infection even though the skin looks like it's healing.

Q Can this process take up to a year before the infection manifests?

A Again, based on the host's reaction and the variance of the bug and the amount of contamination, all of these processes can dictate the speed as to how you get from point A to point B. Although many infections are going to show early, some bacteria are extremely slow growing. For example, that is something called P acne which is a really slow-growing bug that absolutely can take up to a year before the immune system results in an outward expression of the infection so you can identify it.

Q Switching gears sort of slightly. What does the term ultraclean surgery mean?

A To me ultraclean surgery means - obviously, in the operating suite there's a standard for sterility. OR tables clean, opening instruments, etc. That will happen in every case. But the difference between ultraclean and kind of what you might call a standard OR is talking about trying to filter the air.

So we know there are bacteria in the air. The bacteria here today, we're all shedding bacteria. So there's bacteria

that are kind of floating in the air. Obviously, you can't see them.

So in an OR that same thing is happening because there's people in an operating room moving around, moving the patient, etc. And so that all creates this environment of potential bacteria. And those bacteria are what we call aerosolized. So what we want to do is who want to try to minimize that air by cleaning that air as much as possible.

So there's some things like how often the air in the room is exchanged. In other words, if you think about an OR is a square box. There's a certain amount of air in that box and how many times do you change it every hour. So an ultraclean room typically changes 25 times in an hour.

There's also a certain speed and filtration for how the air gets into the room. Kind of when it comes from the vents down into the OR the velocity of that air is moving at a faster pace. Typically, it's considered to be greater than .38 liters per second. So, again, there's a certain flow.

Then there's also filtration that can be in the vents that the air is coming through that HEPA filters we all know at our house that kind of comes back to catch any bacteria that might be in the room - coming into the room.

Q Are joint replacement surgeries ultraclean surgeries?

A Yes, typically. Obviously, older ORs may not be equipped in the same manner. But most ORs that are either today

being built or even and the last I would say 10 years are typically ultraclean.

Q Do hospitals have different operating rooms like ultraclean rooms and then a different operating room for other surgeries?

A It's common when there's - because you think about a hospital covers all kinds of spectrum of surgeries, not just orthopedics. So there's typically ORs that an orthopedic team uses during the day and then there's other ORs. And other ORs that may not use in implant devices will not necessarily meet that same level, that same kind of level. It's costly to create that environment of those HEPA filters and flows in what we call unidirectional flow. Those have costs to them. So you may not need that amount of sterility it what I would call a clean contaminated OR versus an ultraclean one.

Q What would be an example of a clean contaminated OR?

A A lot of valve surgeries would be such as that. So like we talked about earlier, the appendix ruptures would be clean contaminated.

Q I want to talk about particles. Are particles important to surgeons?

A Particles are. And the reason that particles matter is not just the particles themselves but the combination of particles typically carry bacteria. And it's pretty well established that we know that if you take a particular mass and

number of particles and you kind of have an idea that at least in my mind in my reading that about half of that's going to have some bacterial contamination in it. So it kind of helps me understand the more particles there are, the potentially more bacteria there are. And it's really bacteria we care about but they kind of go together.

Q Can bacteria walk or crawl or fly on their own?

A From the standpoint, it kinda goes to what I was saying. Since bacteria are - they're immobile. They don't have legs. They can't move or tumble into wounds and stuff. So they have to be picked up and moved either directly like touching something and then touching yourself. We all know that with COVID we washed our hands a lot because if you touch something and you touch your face you could potentially transmit a virus.

Same kind of concept with bacteria. But then there's also the potential that bacteria are kinda floating airborne and they can kind of deposit in different places. So they can't physically get into the wound unless they either theoretically would fall from the sky into the wound, but more likely they fall onto something that we're using the OR, equipment, instruments, our gloves, our hands, the prosthesis. And that's then put into the wound kind of carrying them down into the wound.

Q Is that what's called air slides?

A So air slides just means that a particle is actually

in the air as opposed to on the surface like this countertop or something.

Q So in Ms. O'Haver's case for instance, could a bacteria from her skin just crawl down the incision and get down to the joint?

A No. There's a lot of kind of concept of what happens at the skin. And we know that we can't fully sterilize the skin. We know that because there are hair follicles and there are sebaceous glands and things that cause us to sweat and that the bacteria can get down into those and be below the level of skin. So if we scrub our skin it can't make it sterile. So we know there are potential bacteria that are there.

But the problem is that, in my mind anyway, that as these bacteria are on the surface and they even be able to start proliferating or growing or doubling OR, but they still have to somehow get if they're on the surface they still have to somehow get into a wound.

So I kind of like it like this. There's not a hole that from the skin down and now all of a sudden there's the prosthesis, unlock the model that we showed today in the video, there's all kinds of tissue and there's layers. And so even though the bacteria could potentially propagate or proliferate around the edge and potential maybe get onto the edge of the incision, that it wouldn't necessarily get down into the wound where the prosthesis lives unless it's put there by being on

something and then direct inoculation moving it down.

Q You said by untouchable aerosolization.

A Correct. Aerosolization just means that it's kind of like snowflakes are falling out of sky and just kind of end up in the wound.

Q You said you treat a lot of patients with infections, correct?

A Correct.

Q And you told me about one of the patients that had a complaint. I want you to tell the jury about that.

A Sure. So I received a complaint from a patient. This was a lady in her early 70s who had kind of the standard comorbidities, nothing that was really out the ordinary. We did a knee replacement on her. Approximately seven months later and this is from memory so it's in that ballpark, she developed redness and swelling in her knee. And we scheduled her for what we call an aspiration.

An aspiration is - when you have redness and swelling, that by itself doesn't equal an infection. It's a symptom and then you have to do some laboratory evaluation, typically bloodwork and what we call an aspiration. An aspiration is when we sterilely put a needle into the joint and we draw the fluid out and we look at it see if there's bacteria in it.

So we determined that she had a bacterial infection. And so since there was a relatively short timeframe, around four

weeks from the onset of her symptoms that she had had a period of asymptomatic, in other words, she did well initially.

I took her to surgery and did what's called a debridement and implant retention, a DAIR procedure. Which means we open the joint up and we scrub all the tissues and we take out anything that looks not healthy. And then we treat with antibiotics for a period of approximately six weeks. Sometimes it's a little longer. And then try to eradicate the infection without having to remove the implant.

So I did that and she cleared the infection, but unfortunately developed a second infection with a different organism, not the same one but a different organism. And so at this time because now she's had two infections it kind of takes you out of doing that DAIR procedure or keeping the implant. So we made a decision to take out the prosthesis.

So that's called an explant. You're removing the parts. So we went in and removed the total knee replacement and put in what's called a spacer. It's essentially just - it looks like a knee replacement, same shape, but it's made out of cement. And the cement has antibiotics laden in it so that it can treat locally the infection. And by removing the infected prosthesis then you've taken away the source of the infection.

So we went through that process and she again was treated for six more weeks and recovered from that. Subsequently, she it put back in. So when you're done with that

process and you clear the infection, you can't leave them with a spacer. You go back put the new implant in.

So we did that she developed a third infection, a different organism again. So each time we successfully eradicated that infection, but she cut two additional infections.

So as you might imagine, she's very upset and frustrated about it. So was I. So she filed a complaint, not a lawsuit or anything but a complaint. In her complaint was essentially I had three surgeries and developed three infections. And I get that. She was very upset about that.

So the medical board reviewed that in North Carolina and asked experts like me here today for an opinion on the case. Two of the experts who were specialists in joint replacement felt that everything was done right. And one of the experts who's a sports medicine, which is like we talked about earlier are the guys who don't do as much of the revision work, felt like I should've just done the explant at the start and that caused her another operation by doing the DAIR procedure and the explant.

And so, ultimately, the medical board concluded that - they sent me a letter and said you need to do some research on the infections, which I did immediately. Within a month of getting the letter I had already done the 10 hours and I continue to be very vigilant in infection care.

So we can always learn. And I felt like, you know,

this was an unfortunate opportunity. I really don't feel like I did anything wrong, but I also didn't get the lady the way I wanted her to succeed. So I used that opportunity to really delve into infections. So I've done a lot of research in infections and that's probably part of the reason I'm here today.

Q Did that make you extra vigilant on infections?

A Yes.

Q You've used the term "mitigation of risk" before. Did it make you start looking in your ORs?

A Yes.

Q And I want to talk about more in a general sense some of the things that orthopedic surgeons do to mitigate the risk of deep joint infections. We talked a little bit about unidirectional flow with the way that the ventilation system works.

A Correct.

Q Can you tell me what the purpose of that is? I'm going to put up a demonstrative that is Exhibit 1516.

MS. PRUITT: Do you have a copy of it?

MR. FARRAR: I sent it to you.

MS. PRUITT: I don't have a copy of it, a hard copy. Can you just show it to me? No objection, Your Honor.

Q Can you describe for me what the sterile field is?

A Sure. So the sterile field is what's in an OR. The whole OR is not sterile. In fact, none of OR is sterile but there's a sterile field that is typically centered over the airflows. And the concept of unilateral airflow is that you're kind of flushing the area. So that the air is coming down from this filterated system. It's going to come down across the field and then kind of move towards the periphery of the room. So any particular debris and dust, anything that would be particularly floating is going to get kinda flushed away keeping that area the most sterile.

So's there's an area that we consider to be the sterile field. It's not really necessarily a certain boundary. It's obviously - it's towards the center. That's why we put the patient in the room on the table directly under this flow. And then we stand to either side of the table. And as you keep going more and more toward the periphery the sterile field gets less prominent.

Q When you say nothing can go below the sterile field, if one of the tools you're using, if it goes one inch below the operating room table, what do you do?

A We would get rid of that and get another one. For instance, what happens sometimes is the tubing because there's tubing - like we use the suction tubing. We use cautery and those things. But we have tubes or cords that have to pass from the field. So we typically run it vertically up and down along

the patient and then over to the machines that are more toward the periphery.

And if one of those were to - let's say the clip that holds it in place came loose and it fell off the field. With just get rid of that, remove it and put a new one up. Because once you fall below, you kind of think of this table height. Once you fall below that table height, you can kind of see in the green kind of table height. So anything above there is sterile and below there is not. So if it falls below the table height it has to be replaced, whatever that is.

Q Do your hands ever drop below?

A No. I mean, I know it's kind of cliché, but I know if you watch any TV show she see the surgeons always come into the OR with their hands up. And we really are trained from medical school that once you've washed your hands you always have certain protocol to start at the fingertips and kinda of work your way down. Then these are sterile and you keep them up as you come into the OR. So we never have our arms down. It really becomes second nature to always keep your hands at waist high.

Q Is everything that's in the red considered dirty or contaminated?

A So I would say yes to that because the term nonsterile to me in an orthopedic OR theater in a concept of infection is more - I think it's important for us to assume things are not

sterile equals dirty or contaminated than it is to say well, it might be, it might not be. I think that's so we assume anything below the table height is contaminated.

Q So is the purpose of this unidirectional flow in the operating room is to limit the amount of particles in the sterile field?

A Yes.

Q Do you have an opinion as to whether there is a correlation between the number of particles over the surgical site and the risk of infections?

A Yes.

Q What's that being?

A Well there's multiple studies that have shown that the higher that the particle count, again, the concept again is particle count equals some percentage of bacteria that are in that particle count. So the higher the number of particle count then the higher the risk of a bacteria being inadvertently dropped, moved, put into the wound to develop a potential surgical site infection. And there are studies that have confirmed that concept.

Q Other than the studies, do you have any other basis for that opinion?

A Well I've reviewed the depositions of 3M representatives, Mr. Al Van Duren as well as Jay Issa who is a representative of the company. And in their opinions ...

MS. PRUITT: Objection, Your Honor, improper foundation.

THE COURT: Overruled.

A And their opinions in reading their depositions they concur that the increased particle count is a risk of potential surgical site infection.

MR. FARRAR: Your Honor, I'd like to play a small clip from Jay Issa's deposition.

THE COURT: Ms. Pruitt.

MS. PRUITT: May we approach.

THE COURT: Sure. Come on up.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, he's already asked the question and he's already gotten the answer. Now he wants to do cumulative on top of it. I would object for the same reasons. The Court has discretion as to the question and this is cumulative. He's leading the witness and I object.

THE COURT: So as to cumulative the objection will be overruled. The Court finds proper foundation has been laid. I would say that I will caution you in terms of asking too much about what the video is going to show so we don't get cumulative in nature. If you want while these clips are played, I'll leave it you to make whatever record you want. If you want to stand up - have a standing objection to each of these or we can visit at the bench.

MS. PRUITT: I would like to reassert the objections made on the record before lunch and we did that twice. One was at the bench and one was outside the presence of the jury. I would like to reassert all those on a rolling basis as to each clip. I'd also assert cumulative leading objection in addition to my other objections about bolstering and I would like it to be continuing.

THE COURT: The objection will be received. The Court is receiving both of the objections that were made before and after outside the presence of the jury. And as to your current objection, the Court's receiving those as a rolling continuing objection. And if I believe that my ruling would change based upon the questioning of plaintiff's counsel, then I'll have you guys approach and I would change my ruling at that time. Does that make sense?

MS. PRUITT: Yes, Your Honor.

(RETURN TO OPEN COURT.)

(VIDEO CLIP PLAYED OF JAY ISSA.)

Q Dr. Bowling, does that support your opinion about the correlation between the number of particles and the risk of infection?

A Yes.

Q Do orthopedic surgeons want to minimize - let me ask you this way. Do orthopedic surgeons want to minimize the

number particles over the surgical site?

A Yes, to decrease the potential risk of infection.

Q Do you have an opinion as to whatever medical device increases the particles over the sterile field, does it increase the chances of an infection in order to be a surgeon?

A Yes. I just want to make sure I understood the question so I'll be very clear. If a device increases the number of particles over the surgical field, in my mind there's also bacteria that are potentially associated with the particles that would increase the risk of infection whether it be surgical site or a periprosthetic infection.

Q What's the basis of that opinion, sir?

A The basis is based on literature review, based on my own personal knowledge and education with respect to infection as well as the review of the depositions that I alluded to with Mr. Van Duren and Mr. Issa.

MR. FARRAR: Your Honor, I'd like to play another clip, Exhibit 3539 from Mr. Issa's deposition.

THE COURT: Same objection?

MS. PRUITT: Yes, Your Honor.

THE COURT: The objection is noted and overruled.

(VIDEO CLIP FROM JAY ISSA'S DEPOSITION WAS PLAYED.)

Q What's the basis of that opinion?

A Again, it's based on reviewing multiple mechanist

studies that are readily available to the public as well as my own knowledge basis of reviewing the depositions of Mr. Al Van Duren and Jay Issa.

MR. FARRAR: Your Honor, I'd move to play Exhibit 36 of Al Van Duren.

THE COURT: Same objection, Counsel?

MS. PRUITT: Yes, Your Honor.

THE COURT: The objection is noted and overruled.

(VIDEO CLIP OF AL VAN DUREN WAS PLAYED.)

Q Does that support your opinion, Doctor?

A Yes.

Q Let me ask you this. Do you have an opinion as to whether or not the Bair Hugger generates heat that creates thermal plumes that carry bacteria and particles to the surgical site?

A Yes, sir.

Q What that?

A My opinion is that the heat - the excess heat, exhaust heat that comes from Bair Hugger creates a - heat rises. And so as the heat rises it creates again these kind of convection currents or air currents that carry particles over the surgical field.

Q So the Bair Hugger's on and the blanket is on the patient. Where does the heat go?

A So, again, if you think about our picture where the

patient is lying on the operating table. For knee replacement they're going to be on their back. And so the Bair Hugger is going to be across their chest and upper torso. So that heat is going to - because we have drapes over the top of them. So the Bair Hugger because it needs to be close to the patient so it can potentially provide convection warming.

Then what will happen that we have drapes over the top of that. And those are the big drapes you see in an OR you see on TV. So any air that's flowing is going to kind of be blocked by these drapes and therefore pushed down towards the floor. So my concern when this air is going down to the floor and then rising because it's hot and we all know hot air rises. But it's going to be forced down from the blowing mechanism of the fan of the Bair Hugger and then it's gonna come down and then come up and over the field. And that's how it deposits particles over the field.

Q So do the drapes - and we're talking about like an airplane so this is the head and arms. The drapes that you're talking about come down close to the floor?

A Yes. So they're going to drape down at least probably within six inches of the floor.

Q Okay. So the heat will come in and then you're sayhing it rises like that?

A That's correct.

Q Your opinion that the Bair Hugger can create hot air

and thermal plumes that carry bacteria and particles to the surgical site, where do you get that?

A My review of the literature as well as the review of the depositions of Mr. Al Van Duren and Jay Issa.

MR. FARRAR: I would like to play Clip 65 which is a clip from the Al Van Duren deposition.

MS. PRUITT: Objection. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Number one, I object to any other questions regarding plumes. He's not qualified to give those opinions. He's not - he's not an airflow expert. He's an orthopedic surgeon. He's giving opinions that are outside of his expertise. And they're actually aren't his opinions because he hasn't given his opinion yet on his report. He's an expert outside the field of his experience to these opinions. You can give them more than one time and try to play the clip on top of that. I object to the whole thing. It's improper for this topic.

MR. FARRAR: He's an expert in orthopedic prevention of deep joint infections. He clearly has to know how they happen to be able to say how to prevent them. So he has studied before becoming an expert in this case on this issue. He studied after it and now he has additional information which would be the deposition and documents.

But I know I'm playing three or four in a row but that's all that's happening.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q Doctor, do you have an opinion as to whether or not the Bair Hugger increases the risk of deep joint infections?

A Yes.

Q What's that opinion?

A I do feel it increases the risk of deep joint infections.

Q Was that based on the chain of events that we just talked about?

A Yes.

Q Could you explain it?

A Yes because again, as we said, the problem from a surgeon's perspective is we want to minimize potential contamination of the site. That's why we do things we talked about the sterile field; with the scrubbing a certain way; with coming into the OR and keeping our hands up; anything that comes off the field getting rid of. So we really are vigilant about making sure that the environment is as sterile as possible and that even includes prepping the patient, etc.

And so what happens is if we - and through my reading of the literature that's out there, that understanding is that these kind of mechanistic ways that the - I guess the kind of

consequences if you will of the system that is putting hot air down to the floor where we know that we're all shedding and skin cells tends to fall to and it's kind of flushing that air up and blowing that over the area.

We have multiple studies that show that there's particles of debris that's increased over the surgical site then it would make sense to me that that device is contributing to increased particle count. As I said, where there's particles there's potential bacteria attached to those particles. And those particles are now deposited in the wound which we only know a few need to actually make it down to the joint to create a prosthetic joint infection.

So it's my opinion based on putting all these puzzle pieces together and my knowledge and my experience as well as the review of the literature and the review of these depositions this makes sense to me that this is an increased risk of - unnecessary risk of infection.

Q Is there a quantified risk?

A There is a way to quantify the risk and that's been done by a study by Darouiche where they essentially ...

Q Darouiche ...

A I'm sorry, Darouich is the author. And the reason that's important is because what he did was a really interesting study. They took a device that essentially has a really high HEPA filter on it and they blew ambient air that had been

filtered to 99.97 percent filtration over an area creating essentially a square where the incision was. Then they looked for colony forming units where essentially there when you didn't use that device versus when you did.

Q Can you define colony forming units?

A So a colony forming unit is essentially - we have a agar plate and you have a bacteria colony. In other words, you can blow air over this and then you see how many bacteria kinda grow from that. So you can count those. There are different ways they can count colony forming units that are beyond my expertise - that they can measure those. Again, I don't claim to know exactly how they do that but they're able to do that.

And the Dr. Darouiche was able to show that for every 10 increased - 0 to 10 it doubled the risk of infection, 10 to 20 doubled the risk of infection. So there's a way to quantify why it matters that these particles are there.

Q So did that compound - so you said it doubles every 10. Does that mean four times for 20 and eight times for 30?

A If you keep going back to zero, then each time it compacts, yes.

Q We sort of got away from the things that orthopedic surgeons do that help mitigate and prevent deep joint infections in the OR. So the first one we talked about is basically the configuration of the operating room of unidirectional flow in that sterile field. What do you wear?

A So when we come into the operating room from our home we change into what people call scrubs. They are basically cotton shirt/top that we wear. We wear either shoes that are specific for the OR. In other words, they never leave the OR or covers over the shoes so you do not bring something in on your shoe.

We wear a hat. There are different kinds of hats. There is a hat for people with hair. For me it's not necessary so I use a regular surgeon's cap. It's tight fitting. The concept initially was to prevent people from sweating onto the field. That's why the caps were originally done.

And then in an OR that is not putting a sterile device in we just wear your masks and potentially eye shields like glasses or something like that. But when we do a joint replacement we use a full body suit where we look like spacemen. If you've ever seen it, it's just a suit that goes over the top. There's vent in the very back that brings out the air. And it's typically connected to a battery power to create the fan that blows air. Cause when you're in the bodysuit you won't be able to stand it long without that fan.

MR. FARRAR: Your Honor, I'd like to show Demonstrative Exhibit 21.

THE COURT: Ms. Pruitt, any objection?

MS. PRUITT: I have no objection.

Q Is this the spacesuit we talked about?

A Yes.

Q So this what the ORs look like when they're doing a knee replacement in the OR?

A That's correct.

Q This is different than when they're doing a colorectal or appendectomy surgery?

A That's correct.

Q Do orthopedic surgeons usually double glove?

A Yes.

Q Do you?

A I do.

Q What's the purpose?

A So the purpose is because again we don't have blood flow to the prosthesis. So any bacteria - and we have to think about this like one bacteria that gets by our defenses can cause this patient a significant catastrophic event. So the problem is when you're only wearing one pair of gloves there's the potential cause we handle objects that aren't necessarily sharp but you can imagine from the video I showed you where we're cutting the bone, the bones can be sharp an can tear a glove. So we use double gloves.

And we use a special kind of glove that's called an orthopedic glove. It's a very thick glove so it's not like the doctor gloves you see at the regular doctor's office that are kind of thin. These are more very thick gloves that go on the

bottom and then we use a second glove on top just to prevent the risk of an inadvertent glove tear and the potential skin contamination from us to the wound.

Q Do you change your gloves during the surgery?

A I do.

Q Why do you do that?

A Well several times when there's a potential increase risk of contamination. So the first one is when you make the incision, we make an incision with a scalpel blade. Because we're cutting through the skin often times when we kind of make that initial exposure through the skin subcutaneous tissue, it's what we call the capsule ecogram. And we will change gloves at that point because we kind of consider the skin area to be less sterile and potentially contaminated so we'll change them there.

And the second time that I will change them is once we've done the cement because cement can affect the velocity of the latex gloves. So the cement that we use to glue the implant to the bone. So once we've done the cementing, we'll change gloves again before we start to closure process.

Q If one of your gloves gets torn or perforated, is that something you document?

A No, not typically because you really haven't violated.

Q Better question. If your tore your glove where your skin is exposed, you have to document that?

A As I said in my deposition, I've not had that happen

so personally I can't say that. But I've taken care of a lot of patients that have been referred to me. And reading ER notes and reading records I've never seen that documented on any operative notes in surgery.

Q In addition to the things that you do, do you do things for the patients to felt help prevent infections?

A We do.

Q What do you do?

A So it starts even when the surgery is planned. So we optimize the patient. Optimization is kind of a new word over the last 10 years. Essentially, what it means is we go down each of their comorbidities and try to make adjustments that are going to decrease patient risk. So try to get them in as good a shape if you will for the surgery as possible.

Q And then once we've done that, we come to the day before surgery we'll have the patient do a - there's different types of washes so to speak. I use a chlorhexidine wash. So it's a kind of a soap stuff that their shower their whole body.

And in the morning when they show up to the OR that morning we'll also do an wipe with these chlorhexidine kind of like - they look like wipes that you might get for baby wipes kind of thing, but they're a special solution. So we'll wipe the leg and we'll kind of wipe most of the body. They won't do a full wipe of the whole body at that time but it will over the areas that are exposed.

Then when we go to the operating room and once they're positioned in the operating room, then we will do a prep is what we call it. So we prep the extremity, in these cases the knees. And we prep, as Dr. Ballard did, we prep from the hip all the way to the toes, what we call the whole leg so that the whole leg has been prepped so there's less chance of any potential contamination from the drapes.

And then from the draping I use an incised draping which is just basically a sticky draping that has iodine on it that's kind of an orangey color. And I'll put that over the incision. It kind of sticks down the edges and then we make the incision through that. So there's a process that we do all the way up to the time so preoperative to the time of surgery.

Q Do you give antibiotics?

A We do. Antibiotics are given. And the recommendation has been to do them within an hour of what we call cut time or incision time. So we will typically use one of the second generation cephalosporins like cefuroxime or Ancef unless they're allergic and then we'll use one of the other antibiotics such as Erthromycin or Clindamycin.

Q After the surgery do you give antibiotics?

A I do. The recommendation is that - there are actually several recommendations. WHO, the World Health Organization doesn't find that post surgery makes a significant difference, but we have historically done that for 24 hours. So we do for a

24-hour period which is typically several doses after the surgery.

Q How many people are normally in an OR for a joint replacement surgery?

A So I break it into two sections. There's the what I would call the term surgical team. And those are the ones that are at the table that you saw in those pictures, the guys in the spacesuits. And we'll typically have what we call a scrub nurse who is responsible for passing the instruments. We'll have the surgeon of course. And then we will have one or two assistants. In my OR I only have one assistant but it's not uncommon to have two which would mean you would have four people at the operating table.

Then I didn't think of - in the OR itself, the square box fo to speak, you're going to have at the top of the table we're not sterile. We're not wearing the bodysuits. You'll have the anesthesiologist or CRNA. So it's usually one or the other, not typically both. You're going to have a circulating nurse who's in charge of documentation and getting anything so we might need.

And then in a joint replacement you going to usually have a device manufacturer representative who is going to make sure all the products are there. And you can have one or two of those. have.

Q Is it common for people to come in and out of the

operating room during surgery?

A That's a big point of contention for all of us who do joint replacement. We would love to say no, that once we close the doors, we kind of put a lock on it and you can't go in and out, but unfortunately there are times when people have to go in and out. We try to minimize that risk of traffic we call that, try to minimize that is much as possible.

And so if you can make it zero, then I think you've done the best. But if you can't make it zero, you try to make that number as low as possible because of that risk.

Q I want to talk to you about Ms. O'Haver's surgery and the procedures that you went through. In your notebook under tab 12, her medical records. If you need to refer to them, feel free. Do you remember her surgery date?

A It was November the 29th 2016.

Q Her surgeon's name?

A Dr. Ballard.

Q Did you go through the records to make sure that all these steps were done for Ms. O'Haver?

A Yes.

Q Did you examine the OR, not personally, but did you do some research on the OR to make sure it had a unidirectional flow?

A Yes.

Q Did it?

A It did. I believe it was 34 exchanges per hour.
Q Is that high or low?
A That would be high. That would be very efficient.
Q Did Dr. Ballard wear a spacesuit?
A Yes. He called it a bubble suit but yes.
Q Did he double glove?
A Yes.
Q Did he change his gloves throughout the procedure?
A. Yes. He documented specifically changing them after the incision.
Q Did Ms. O'Haver take a shower or was she prescribed a shower?
A Yes.
Q Was her skin prepped?
A May I ask something?
Q Sure.
A Because I forgot when we did these. One of the other things that's important is to look for carriers. So we do in our preparation of things that we do preoperatively before surgery, we will typically do what they call an RSA screen which is a staph screen. And if they come back positive then we'll treat that with an ointment that's placed in the nose to eradicate the risk because there are about 30 percent of the population are carriers for methicillin sensitive staph aureus and about four percent are positive for methicillin-resistant

staph aureus. So we want to identify that up front for two reasons.

Number one, we'll typically treat it, as I said. But also, we'll change the intraoperative antibiotic in that most of us myself included will all add Vancomycin to the Cephalosporin if they have a positive culture and we treat that.

I'm sorry. I forgot that but yes, she had that done also.

Q Uhm, so we have the skin prep. Was her skin prepped appropriately?

A Yes.

Q What did he use, do you recall?

A So he used the iodine solution and scrub.

Q Antiobiotics were given within an hour of the incision?

A Yes.

Q Was the antibiotics appropriate?

A Yes. She had an intolerance to Ancef so he chose to use Vancomycin because her BMI was 42. He gave her 1.25 grams which is an appropriate increase because of the size.

Q Was she given antibiotics post-surgery?

A I assume. I don't know that one to be clear today. I'd have to look at the records. I don't have that in front of me.

Q Is there documentation of anyone leaving in and out of the operating room?

A I believe there was documentation of the anesthesiologist and the CRNA switching and that's the only time that I saw traffic.

Q So the door opening?

A Yes, that's what I saw.

Q Did you see anything in the medical records - you also looked at the depositions of Dr. Ballard and Dr. Bible, correct?

A Yes.

Q Did you see anything in either the depositions or the medical records to indicate there was any deviation from the standard of care?

A No.

Q All procedures to help prevent and eradicate infection were followed?

A Yes.

Q Did you see any evidence of the breach of the sterile field?

A No.

Q If there's is a breach of the sterile field in a surgery, is that something that's supposed to be documented?

A I think yes but I think there's some interpretation as to what the breach was and the significance of it. And so I think the significant breach that the surgeon felt put the patient at risk would be documented. And I don't know an example of one that wouldn't be, but again if there was one that

was felt to be minimalistic, then they may not document it. I don't know.

Q Do you know how long Ms. O'Haver stayed in the hospital after her surgery?

A I believe it was seven days off of my memory.

Q She was discharged on December 9th?

A So that would been in 11 days.

Q Is that normal?

A No.

Q Do you know why she had to stay in the hospital longer?

A She had a general anesthetic. And a general anesthetic means that there is an intubation so they put a breathing tube down into your windpipe or trachea. And she had some potential injury to that meaning that there was some swelling. She developed some acute shortness of breath and went through workup for the things that concern us when people are short of breath such as blood clots or pulmonary embolism. That means when blood clots break away and go to the lung, which can be seen in a knee replacement.

So she underwent a process to work that up. And she underwent a CT of the neck and she was ultimately diagnosed with pharyngitis from the intubation. So she required a couple of night stays in the ICU to monitor because obviously if you have swelling in your throat that can become very bad very quickly.

So they put her in the ICU to monitor her and make sure that didn't happen. And they gave her a high dose of steroids and antibiotics for the injury.

Q Was that in any way related to her infection?

A No.

Q Totally different issue?

A Totally different issue.

Q And did she recover from that?

A She did.

Q I want to move forward. Do you remember the first time that Dr. Ballard and his office saw Ms. O'Haver after the surgery or after she was discharged?

A I believe it was on the 14th of December which is two weeks.

Q If you look under tab 12, I'm not going to put it up on the screen but if you'll just look at it. Exhibit 1543 - I'm sorry, wrong one. Exhibit 1542, that's December 14th visit?

A Yes.

Q What did Dr. Ballard note about how her wound looked?

A Just to be clear, she was seen that day by the PA Lisa Howerland. And it states that there's a specific under plan, it says, "Notes. Per Dr. Ballard her incision looks good. Just put dressing on the incision." I assume that he was in the office as I do sometimes and they're being seen by the PA, but I go in and make sure everything looks good. I assume that's what

happened.

Q Does the incision look good indicate one way or the other that she has a deep joint infection at that time?

A No.

Q Why not?

A Well because, as we've said, the deep joint infection could be there and percolating if you will down in the joint and hasn't risen to the level of an immune response or a wound problem at that point.

Q What is typically the first symptom of an infection?

A The most common symptom is pain. Probably the earliest symptom is going to be very generic constitutional symptoms like pain, swelling, potentially even redness of the area. Sometimes although not often in patients who have acute infections, but in the more chronic infections patients may develop fevers with time.

Q We've looked at that chart that was the demonstrative that had one through five with the biofilm. If there's biofilm over the bacteria while it's growing and it hasn't sort of ruptured, are there any symptoms that a patient would have?

A That's the point. Sometimes all they may have is pain which in an early postoperative period; pain, swelling, stiffness, joint dysfunction are all going to be normal in two weeks. So you may inadvertently think that that is fine when in fact those are early signs.

Q Was there anything abnormal about her December 14th visit to Dr. Ballard's office?

A Not that I was able to identify.

Q The next time is gonna be December 19?

A That is correct.

Q What stands out to you about that visit?

A Well it was five days later and that's not typical. Usually at the two-week mark if everything was going well we would see the patient back in about a month as opposed to five days. So that was first thing is why is she back so soon.

And then in her what we call HPI in part of the note which stands for history of present illness, basically, what's going on at that visit, it says that she is concerned because she had blood and fluid coming out of her incision.

Q What does blue and fluid coming of her incision mean to you?

A At two weeks post-op it means infection.

Q Why?

A Like I said before, there's really - when wounds dehisce there's really - I think it is two categories. One is there's some sort of systemic cause that the wound isn't healing; like the patient has some sort of autoimmune disease, rheumatoid arthritis, something where their ability to normally heal is minimized. And she didn't have any of those type symptoms or comorbidities.

And then the other group is infection. So when something is going well and then all of a sudden acutely starts to show really bad meaning the wound is draining, then that is consistent with a joint infection.

Q According to the records, in your opinion, was this the first sign of infection for Ms. O'Haver?

A Yes, although I think there was some potential redness that was seen by the home health nurse that came out between those two days.

Q Did she have a fever at some point also?

A I believe that was on the 15th.

Q So the day after this - the 19th, I'm sorry.

A I think the fever was on the 15th but I'd have to look at the records to be sure.

Q On this visit on the 19th was she prescribed any medications?

A She was. She was given an antibiotic.

Q What would be the purpose of that?

A Well they felt it was an infection. And so in my mind I don't think there was any question that they thought it was infection. I do think at that time it's difficult to know whether it was an SSI or superficial infection or a prosthetic joint infection or deep infection. So they put her on antibiotics to see if it would clear up.

Q We know now which one it was, right?

A That's correct.

Q What was it?

A It was periprosthetic or deep joint infection because it didn't clear up. In fact, it got worse.

Q Ultimately, how was she treated for that?

A Ultimately on this visit or ultimately?

Q Ultimately.

A Ultimately, she was admitted to the hospital with a diagnoses of septic joint or infected prosthetic joint and that was on January the 1st of 2017. And then she underwent the next day that procedure I was describing in my own experience which is called a DAIR or debridement and implant retention.

So they open up the joint, wash everything out, antibiotics, and hope that the infection can be eradicated that way.

Q Exhibit 1515 was offered to the Court. During that DAIR procedure was there any necrotic tissue found?

A Yes.

Q What does that tell you?

A So infection is - like I was describing earlier, between the pathogen or the bacteria and the immune system is essentially a war going on and the tissue is kind of the battlefield. So if you can kind of imagine that in your head. The damage to the battlefield is necrotic tissue. It's tissue that's been damaged. It's tissue that the blood flow is no good

and it's tissue that starts to slough or kind of break away and become part of the purulence of the joint infection.

Q How do you deal with that as a surgeon?

A So we typically do what's called an excisional debridement. So we'll take a knife and well go around and trim any of that necrotic or damaged tissue off of the joint because we feel that the problem is that bacteria are probably laden in that tissue so we want to get rid of all that tissue. So an aggressive debridement and synovial resection, that's the lining of the joint, that's what we do.

Q How long did it take Ms. O'Haver to recover from that procedure?

A I believe she was in the hospital four days. And then because it required IV antibiotics she went to a rehab facility to receive the intravenous antibiotics.

Q How long was she there?

A She was - I think it went a little longer. I think she was supposed to go till about mid-February and think the antibiotics continued till early March.

Q During that DAIR procedure were there cultures taken?

A There were.

Q What does that mean?

A So what happens is when we open up - we know there's an infection. But what we want to do is we want to figure out what organism specifically is causing the infection so we can

tailor the antibiotic treatment to that specific organism.

And so cultures are how we determine that. We swab the tissue and even send the tissue samples to the microbiology and pathology department where they culture that tissue and try to get the organism to grow so that we can identify it.

They also look at it under a microscope immediately to try to see if they see any bacteria and that's called a gram stain.

Q What was the results of the culture?

A The cultures did not grow an organism.

Q Why would that be?

A In my opinion, it's due to the fact that she was on an antibiotic and had been on for approximately 15 days prior to being admitted. So the problem is that antibiotics work. So people always say, well why don't you just give antibiotics. Antibiotics work. They get rid of the infection in the areas where antibiotics can get to so into the tissue. But what they don't do is eradicate in the prosthesis.

So that's why you have to open up the knee in this case and scrub the prosthesis and hope that you can effectively get all the bacteria away from that or at least decrease the volume of bacteria so that the antibodies can work.

So if she was on antibiotics the tissue that he swabbed may have been responding to the antibiotics but the infection was still there and it had gotten worse despite being on antibiotics.

Q Was there a gram stain done?
A A gram stain was done.
Q What's a gram stain?
A So it's essentially a dye. So we take some of the fluid and we put it on a microscope slide and then we put a re-agent or a dye over it and it will stain for certain bacteria. So if there's certain bacteria like staph and strap that tend to be gram-positive, it'll turn blue.
Other organs like pseudomonas and E.coli are gram-negative so we can kind of get an idea with the gram stain. It's not the best but it's the first step in trying to identify what the organism is.
Q What were the results of the gram stain?
A So there were two slides. One was seen gram-positive cocci and the others they didn't see anything.
Q What does a positive mean?
A Well they identified a bacteria inside the wound, again, confirming that there was a prosthetic joint infection.
Q Do you have an opinion as to when that bacteria that caused her deep joint infection got into the joint?
A Based on the timing of symptoms and the lack of any identifiable other source, I'd have to say that it - the most likely cause was intraoperative inoculation during the surgery.
Q Was the basis - you said the timing of the symptoms?
A Correct.

Q Anything else?

A And the fact that there was no identification of a secondary cause.

Q Did the fever factor into that at all?

A Fevers typically occur with more chronic. So she didn't really have a fever early on. I think it was almost three weeks before she developed a fever. It might've actually been four weeks, but three and a half weeks before she developed any signs of a fever. She was seen twice in the office and at neither one of those she had a temperature.

And so because acute infections are deemed to be interoperative inoculations as opposed to any potential seating from any other site.

Q So in terms of determining the cause or whether the infection was inoculated to use your word, why does the time between the surgery, symptoms or diagnosis matter?

A The reason the time matters is because if you think about it, if there's an infection and we already say different organisms are going to take different times to kind of erupt to that where it's obvious that they have an infection. And so if a period of time passes, let's say two years, and then the patient develops an infection then that is considered a late infection and most likely the source in that case would have been - came from somewhere else, it wasn't from the initial surgery.

The problem is that's a big-time window. And the reason that time window is so large is because you have some bacteria like MRSA we've all heard about that would happen very quickly. And then you have some bacteria that are much more indolent, slow-growing like coag-negative staph that may take weeks, months or even years to show up.

Q Is there literature that discusses the length of time between the surgery and either symptoms or the diagnosis that support your opinion?

A Yes.

Q What does that literature say?

A That it breaks it down into essentially three groups. The first group is acute. That's within the first 90 days. The second is between 90 days and two years and that's considered subacute. And then after two years it's considered late. And there are some that just kind of group acute into one big group. But both of the studies make a distinction between early infections or intraoperative cause and late infections are typically hematogenous.

Q Hematogenous, what does that mean?

A So it means it got into the bloodstream. So remember, bacteria doesn't have legs to so they can't like crawl to places so they have to move. So if you had an infection, you know, on your neck and it wasn't treated and there's bacteria that got into the bloodstream, they could then go throughout the body.

bacteria which are so small they can squeeze out of the blood vessel. So they're following along the blood vessel and they get to a spot and they can actually kind of squeeze out into the tissue.

And If they get around a prosthesis it's not that they went there. They went everywhere. But your immune system that was chasing them everywhere couldn't get out of the blood vessel and so therefore they got away. And if they got away in the knee joint that's where infection comes from.

Q So if the literature tells us that infection is diagnosed within 90 days is this presumed to come during the operation?

A That is correct.

Q And how long was it for Ms. O'Haver?

A Her surgery was 11/29 and she had surgery but the wound of 12/19 in my opinion is the diagnosis of infection. So that would have been 20 days, right at three weeks.

Q You had a chance to actually do an evaluation of Ms. O'Haver, right?

A I did.

Q Where was that?

A At my office in Wilmington.

Q Do you have a date on that?

A June of 2022.

Q It is on tab 2 if you need to refresh your

recollection on that. Maybe tab three.

A I'm sorry. It was 5/13/2022.

Q Why was it important for you to see Ms. O'Haver?

A For a couple of reasons. One is that, as I've kinda said, I have a fair amount of experience, I would say a lot of experience unfortunately with joint infections that I kind of treat. I'm kind of the local expert on that.

And I know that infections sometimes become dormant and they kind of - everything looks like it's reasonably okay and there may still be infection. So I wanted to see her for that and make that evaluation. Also, I wanted to review how she was doing.

I think it's important when you're reviewing records, that's part of it. You can kind of see what happened. You get a chronological history. But when you can actually talk to the patient you get a little bit more of an idea of what was going on in that timeframe and what happened and from her perspective which obviously isn't medical but it adds to it. So I think both of those factors, to know how she's doing today and to do know not only from a doctor's standpoint but also to get the patient's perspective.

Q Did you just do your normal exam that you would on one of your patients?

A Yes.

Q How was she doing?

A We kind of grade things in the joint replacement world as poor, fair, good or excellent. And obviously we hope every patient is excellent but she's probably more in that over to the left side of equation between probably poor and fair. And I base that on the fact that she has restricted range of motion, significant pain, difficulty ambulating, requires the use of an ambulatory aid, can't work anymore, had to retire, doesn't enjoy some of the things that she really enjoyed doing. We had a nice conversation. She'd never seen the beach so she got to see that.

Anyway, so I think at the end of the day her outcome although she has a leg, it is a dysfunctional leg and it affects her every day.

Q Speaking of the ambulatory aid, what does she use?

A A cane.

Q Also sometimes a wheelchair?

A Any distance. So like shopping she told me she has to use the cart to do shopping.

Q If the DAIR procedure was successful and got the infection out, why is she still having these problems?

A That's the problem with infections is there are a couple of factors that could cause that. Number one is when you have an infection there's a lot of damage. So think about surgery, a typical surgery for an elective case as being a laser focused operation.

So we make small incisions. We're extremely protective of the soft tissue. We avoid cutting into the muscles and we're extremely kind of delicate if you will. I know that sounds funny from an orthopedic who is using saws but it is. It's delicate. And when we have an infection all that goes out the window.

There's a significant amount of soft tissue destruction and damage to the tissue. As I said earlier, we're cutting out tissue and we're dissecting things. So I always think of a DAIR procedure or an explant as a cancer treatment. I've got to get all to the end. Because if I leave one bacteria in there the chances of success go down. So it's an aggressive dissection. Sometimes we have to take out part of the muscle. Sometimes we have to take out part of the ligament. You have to do things that we don't do when we do a normal elective knee replacement. And that results in morbidity such as scar tissue which results in limited motion, swelling, stiffness and dysfunction.

And then there's always the potential - anybody who still has pain and swelling and stiffness and warmth can still have the infection even years down the road that can manifest itself.

Q What do you see as her progress?

A Again, if you took all those things that I just kind of described about her when I saw her in the office and how that's affected her physically as well as emotionally, I think her prognosis is and you never hate to say poor, but I mean I

think having the expectation that she's gonna get better from this is not real. I think this is her new life. I think how that it affects her, that outcome I'm sure would be graded poor.

Q You said physically and emotionally. What did she talk to you about her emotionally?

A She told me that one of the things that she liked to do was camping. She can't do that anymore. It's hard to walk with a cane out in the woods. She can't take a bath. It's simple things that we take for granted cause she can't get out of the bathtub. She's used to take a bath, now she's a shower person.

It's embarrassing she says to have to go to the grocery store or Target store and ride in the buggy because you always feel like you're in the way and she's trying to reach things. So it's just frustrating from that.

And a lot of us really enjoy our jobs and the work that we do. And she enjoyed being with the kids and she worked at a school. And she had to retire from that and quit doing that and she's only 60. So these things as they go down the line they affect her from the perspective of quality of life not just the results of the joint.

Q I'm not sure we said this but the issue is on her left knee, right?

A Correct.

Q So the left knee is correct?

A The left knee is correct.
Q Did she have a total knee replacement done on her right knee before that?
A She did.
Q How was that?
A Had no problems with her right knee.
Q So no infections or things like that, correct?
A Correct.
Q When you examined her did you look at her right knee also?
A I did.
Q How was it doing?
A So it's what I would expect from a traditional total knee replacement. In other words, an excellent outcome. She has great range of motion, great stability, no swelling, really no pain. The little bit of pain she does have I felt was due to compensation for her left knee deficiencies and dysfunction. The joint itself was fine.
Q Is that something we can use as a baseline to how she would be doing today but for the infection in her left knee?
A Yes, it's the same patient, just a different outcome.
MR. FARRAR: I'm going to sort of change gears. I'm happy to take a break now.
THE COURT: We're going to go till about 3:15.
Q Doctor, do you agree that if the medical device has no

that any risk is unreasonable?

A I do agree with that.

Q Is that part of the mitigation of risk that you talked about?

A Yes.

Q In your research do you have an opinion if there's any evidence that intraoperative warming is beneficial for patients having joint replacement surgery?

A No. Intraoperative warming really has a limited role in total joint replacement due to the short duration of the procedure and the potential risk that it would impose forced air warming is what I'm specifically talking about.

Q And, I want to make sure we're clear. When we're talking about intraoperative warming, what does that mean?

A Under the procedure there is some sort of device - there are multiple devices, but some sort of device that is keeping the patient's temperature - elevating the patient's temperature I should say.

Q Are joint replacement surgeries low complication surgeries?

A Yes.

Q Does that make the use or the benefit of the Bair Hugger exceedingly hard to prove?

A Yes.

Q What’s the basis of that opinion?

A Well if you think about it, if the chance of an infection like in my own practice, if there's a chance of infection because of my infection rate - most of us today know that that is .2 percent. We try to get it to zero. It was 1.5 and we made some alterations to get that down. But at .2 percent, essentially, you'd have to do 400 surgeries to 500 surgeries to show one infection.

So the problem that you run into is that if you have small complications, you have to have a lot of volume, a lot of patients to be able to show that. And that can be challenging to get that many patients enrolled.

Q Is it fair to say that in most medical devices there's a risk-benefit analysis done?

A I would say always there's a risk-benefit from the time that you make a decision to do an operation on a patient through all the steps that we've talked about here to even the postoperative care are a risk-benefit and that's the art of medicine.

Q So what you're weighing is this is the potential benefit. And you weight it versus the risk and you have to make an educated decision?

A That's correct.

Q And that goes back to there's no benefit to anything that's unreasonable, right?

A That's correct.

Q We discussed earlier you believe there is a risk to use of the Bair Hugger?

A Yes, I definitely do.

Q I want to turn to the benefits, specifically for Ms. O'Haver. Do you have an opinion as to whether or not the Bair Hugger has any benefit for the first hour of use?

A I do have an opinion. And I think based on my review of the literature and my review of the documentation as well as my review of the depositions of Mr. Van Duren and Mr. Issa, there is clearly documentation that during the first hour there is a diminishment in your temperature, your core temperature that occurs because of the induction of anesthesia. That has not been able to be altered or modified by the use of any of the warming agents specifically the Bair Hugger has not been able to alter that.

Q The part of the basis you said was the deposition of Al Van Duren?

A Yes.

MR. FARRAR: Your Honor, I'd like to play the clip of Al Van Duren.

MS. PRUITT: Objection.

THE COURT: The objection is noted and overruled.

(CLIP OF AL VAN DUREN'S DEPOSITION WAS PLAYED.)

Q Dr. Bowling, one of the other things that you said you relied on was some of the internal 3M documents?

A That's correct.

Q In your notebook there is a tab - would you look at Tab Number 8 please?

MS. PRUITT: Your Honor, may we approach.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, we were supposed to exchange exhibits for each witness. I've not received any documents, internal 3M documents in front of this witness at all. I don't know what Tab 8 is. I haven't seen it. We've had these situations where there are a couple of documents where a witness might have a lot to say about them. I don't know what it is because I haven't seen it. He talked about clips. He talked about examinations. And I don't know what document is involved and I haven't been informed about it.

MR. FARRAR: There's not been any order that we provide the documents. That would be my core work of use with the witness. I gave her a notebook this morning that has those documents in it. Tab eight is the same tab that the Court has, the witness that I have and opposing counsel has.

THE COURT: There was not necessarily an order but the attorneys talked it. So we can take it up outside of the presence of the jury. We can go ahead and take our

afternoon break now.

I have concerns. I understand - I just want to make sure that the record is clear, Tab 8 is Exhibit 8. My list doesn't jive with this.

MR. FARRAR: Sure.

THE COURT: If you're referring to the exhibits as identified in the plaintiff's exhibit list. We're going to take a recess. I would ask that you identify any documents that you're going to use during your direct examination to opposing counsel and we'll take up any objections prior to the jury coming back out.

MS. PRUITT: Your Honor, I don't have a book.

MR. FARRAR: I gave it to you this morning.

THE COURT: I think it's on your counsel table.

(RETURN TO OPEN COURT.)

THE COURT: We're going to go ahead and take our afternoon break.

(INSTRUCTION WAS READ.)

We will break until - it's 3:05. We'll take a 20-minute break. We'll get started at 3:25.

(BREAK AT 3:05 PM.)

THE COURT: We're outside this hearing of the jury. Ms. Pruitt, would you like to make a record?

MS. PRUITT: That's correct, Your Honor. It's my understanding that Counsel intends to use Tabs 5, 7, and 8.

THE COURT: If we could identify those in terms of the exhibit list.

MS. PRUITT: Number 5 is Trial Exhibit 903. Number 7 is Trial Exhibit 1338. And Number 8 is Trial Exhibit 1733.

THE COURT: Any objection to 903?

MS. PRUITT: My objection as to 903 is there's been absolutely no foundation laid for this document. It's an Arizant document and it's about Bair Paws, a gown which is not even the product that we're talking about in this case. It's not relevant. It is hearsay because this particular document is a memorandum. It's hearsay. It's not a business record.

It deals with a different device with regard to a Bear Paws gown and it's just inadmissible because there's no establishment that Al Van Duren has the authority to comment or anything else on this memorandum, but most importantly it's just hearsay. It's not a business record.

MR. FARRAR: It is not hearsay at all. It is a statement by a party opponent which is not hearsay. It's not even an exception to the hearsay rule. It's his definition and it is not hearsay.

It relates to - there's a table which Your Honor ruled on in a pre-admission on page 12 that compares the advantages and disadvantages to pre-warming versus

intraoperative warming which is forced air warning.

And under the advantages of pre-warming it says it can be used intraoperatively when intraoperative warming is contraindicated in orthopedic cases.

So in 2007 Al Van Duren is indicating that the Bair Hugger should be contraindicated for orthopedic surgeries. It also says an advantage of pre-warming does not contaminate the surgical field if effective during the first hour of a post-induction hour and it reduces the incidences of surgical site infections, reduces the potential for nosocomial which means hospital acquired transmission of pathogens by eliminating the need for intraoperative warming.

Clearly, the company in 2007 is identifying a risk and they have not warned about it. So one of the things that Dr. Bowling in his report discusses is there are things that orthopedic surgeons expect medical device companies to be warned about. Obviously, significant risk to their device for infections is one of those things.

So this goes to show that they knew about those risks so they needed to warn about it. So where Dr. Bowling has relied on it is that a reasonable risk that they know about I would expect to be warned about it in the medical community.

THE COURT: The objection to 903 is overruled.

Your objection as to 1338?

MS. PRUITT: Your Honor, I don't have an objection to 1338.

THE COURT: And your objection to 1733?

MS. PRUITT: This is an email. In the email chain is a third person. It's clearly hearsay. It's not a business record. It's just an email to a Jana who nobody knows who Jana is and there can't be a proper foundation laid with this witness for this email document.

MR. FARRAR: This is again an email from Al Van Duren to Janice Stengard who is an employee of 3M. It would have been Arizant in 2008. It is again a statement by a party opponent. It's not hearsay. It's outside of the hearsay.

The last paragraph in it discusses - the second sentence, "In fact, for shorter surgeries described in the document interoperative forced air warming will have little if any effect on core temperatures."

And in the very last sentence, "Pre-warming is inexpensive and highly efficient and not associated with adverse events. Everything has been equal. Pre-warming is far more effective than fluid warming or intraoperative warming which is already ineffective." It's something Dr. Bowling saw and relied upon for his opinion that intraoperative warming is not effective for the first hour.

THE COURT: So given that the proper foundation has been laid, the Court will allow testimony as it relates to 1733 in that portion that you just referred to and the portion of 1733 if it is established that this witness relied on that in forming their opinion, then the Court will allow inquiry in that regard as it relates to 1733.

MS. PRUITT: I think I made a record that it's our position that this is a statement for the truth of the matter asserted and it's hearsay.

THE COURT: Yes, ma'am, you did make that objection. Thank you.

MS. PRUITT: And I have ...

MR. FARRAR: Sorry.

MS. PRUITT: If you're finished. I'm not.

MR. FARRAR: I just want to make sure I'm clear. I can offer it into evidence or have you already accepted it into evidence and I need to redact the top part?

THE COURT: It has not been offered into evidence.

MR. FARRAR: If I do I'm only offering the one paragraph and I need to redact the other parts?

THE COURT: I don't know that you necessarily need to redact it, but only that portion of which this

witness relied on in forming the opinion should be published to the jury.

MR. FARRAR: Understood.

MS. PRUITT: Your Honor, I'm cautious of the time and I know the Court has to leave. I'm not going to put you in that situation. I just want to let the Court know I'm not going to be able to get my cross-examination finished. I don't like being interrupted, but I just want to alert you that I don't want to be in a position of being rushed either and I don't want you to.

MR. FARRAR: He's here tomorrow.

THE COURT: I'm not going to make you and we're going to recess at 5 o'clock no matter where we are in the questioning.

MS. PRUITT: Thank you.

(JURY RESEATED AT 3:30 PM.)

THE COURT: Bring them out. You may be seated. We're back on the record. You may continue with the direct examination of Dr. Bowling. Sir, I will remind you that you remain under oath. Counsel.

CONTINUED DIRECT EXAMINATION BY MR. FARRAR

Q Dr. Bowling, we were talking about Exhibit 1733 which is under Tab 8 of your binder.

A Yes, sir.

Q And, I think I asked you about this but I just want to make sure. Is this a document that you used to rely on for your opinion that intraoperative warming is largely ineffective for the first hour?

A Yes in combination with the studies that I've already talked about.

Q Who is the author of this email?

A This is Mr. Al Van Duren.

MR. FARRAR: Your Honor, we'd offer Exhibit 1733 into evidence.

MS. PRUITT: I have no objection to that one portion that we just discussed.

THE COURT: The portion that was previously discussed as 1733 shall be admitted.

Q What's the date of the email, Dr. Bowling?

A April 3rd, 2018.

Q Do you see this is an email from Al Van Duren? What I want you to do, doctor is read that last sentence for me if you would.

A The last sentence?

Q Yes, sir. Up on the screen here or you can read it in your book.

A "Pre-warming is inexpensive highly effective - Pre-warming is inexpensive, highly effective and not associated with any adverse events. Everything else being equal, pre-warming is

far more effective than intraoperative warming which is largely ineffective for the first intraoperative hour."

Q What is pre-warming?

A Pre-warming means that when a patient has - so there's three stages to a surgery. There's the preoperative, intraoperative, and postoperative. So in the preoperative phase that's where you can do things to increase their core temperature that when you'll go to the operating room you'll kinda get them up so that when they lose a little bit they'll still be good.

Q So let me ask you this. How does this email support your opinion that intraoperative warming is ineffective for the first hour?

A Because as we've spoken about, a total knee replacement typically is right at about an hour. And we already know that there's been data that supports the fact that no matter what you do intraoperatively that you're going to see from the induction of anesthesia, you're gonna see a drop between 0.5 Celsius and 1.5 Celsius. So if you can bump that up a degree or so then they're going to normalize back to normal on that drop that you really can't do anything to avert.

Q Ms. O'Haver's surgery was longer than an hour, correct?

A Yes, it was 101 minutes.

Q One hour and 41 minutes. Do you have an opinion as to

whether or not the Bair Hugger has any benefit to obese people?

A Yes.

Q What is that?

A That because the body hypoxia is ineffective in warming obese patients.

Q What's the basis for that opinion?

A The fact that you retain heat. So when you're heavy it's like an insulation layer, the fatty layer. So when you're exposed to an environment like a cool OR you lose less of the heat. So when you put the heat on the top you really can't get it to the tissues to elevate that temperature back.

Q And do you have a basis for your opinion that the Bair Hugger does not have a benefit for obese patients?

A Yes, that was an explanation of why, but the basis of that opinion is it's based on studies that I reviewed as well as the testimony of Al Van Duren and Jay Issa.

MR. FARRAR: Your Honor, I would like to play Clips 25 and 26 of Al Van Duren.

MS. PRUITT: Same objection, Your Honor.

THE COURT: The objection is noted and overruled.

(CLIP 25 WAS PLAYED.)

MS. PRUITT: Same objection, Your Honor, for the record.

THE COURT: Noted and overruled.

(CLIP 26 WAS PLAYED.)

Q Doesn't that support your opinion that the Bair Hugger has no benefit for obese patients?

A Yes.

Q What is the clinical definition for obese?

A So obese is the body mass index over 30.

Q Ms. O'Haver's looking pretty good today cause she's lost some weight. Do you know what her BMI was at the time of her surgery in November of 2016?

A Yes.

Q What is that?

A Forty-two.

Q Given Mr. Van Duren's testimony and your experience and literature, did the Bair Hugger have any benefit for Ms. O'Haver during her surgery on November 29th, 2016?

A No.

Q Do physicians like yourself have an expectation that medical device companies will warn them of significant risks of their products?

A Yes.

Q I'm not sure - you looked into the history of the Bair Hugger so it's evolution from different models, correct?

A Yes.

Q And, I'd like you to come and show the jury, ladies and gentlemen of the jury with the Court's permission the first model, the Model 200.

THE COURT: Any objection?

MS. PRUITT: No, Your Honor.

THE COURT: Doctor, I'd just that as you move further away from the court reporter, keep your voice up. Thank you.

Q Dr. Bowling, is there any indication on this device as to whether it should be used in the operating room?

THE COURT: I'm going to interrupt you just for a second. Any jurors in the back, if you guys want to stand up to take a look, you can or if you want to kinda move, I'll leave that up to you.

Q Perhaps the better question is is there any indication it should not be used in the operating room?

A Yes. There is at the very front right under Bair Hugger, there's a caution that this machine is not intended for use in the operating room.

Q You opened up the lid and in lid is there a box that has a label of warning?

A Yes.

Q What is this warning?

A "The possibility of airborne contamination should be considered if patients with infected wounds are treated with the Bair Hugger."

Q Thank you, Doctor. This is the Model 750. And there's a section on warnings there also, right?

A Yes.
Q And you understand this isn't the exact one that was used on Ms. O'Haver but this is the model, correct?
A That is correct.
Q Do you see any warning about the issue of contaminated air being blown around?
A No.
Q Is there any device that you're aware in the operating room - you can go back, Doctor. I appreciate it. Any other device you're aware of in the operating room that takes dirty air off or near the ground and blows it on patients?
A No.
Q To your knowledge, has 3M ever warned about the increased risk of infection by using the Bair Hugger intraoperatively?
A No.
Q To your knowledge, has 3M ever warned physicians or doctors that the Bair Hugger can contaminate the surgical site?
A No.
Q To your knowledge has 3M ever warned doctors or physicians that there is no benefit to the Bair Hugger in the first intraoperative hour?
A No.
Q To your knowledge has 3M ever warned that the Bair Hugger had no benefit to obese patients?

A No.
Q Are these the things that you would expect a reasonable medical device company to warn you about?
A Yes.
Q Why?
A Well without that information you can't really make a valid risk/benefit ratio.
Q What do you mean?
A In other words, as we've kind of talked about, everything that goes on in an operating room has risks and benefits and we have to weigh those risk/benefits. And as we weigh them if we aren't given information, that if we had that information it would tip the scales one way, then it's not fair for us to try to make a determination about the risks if we're not aware of those risks.
Q I may have asked you but I want to make sure I have the wording right. Do you rely on manufacturers to give you information about risks?
A Yes.
Q I'm not saying you but obviously you, but is that reasonable for the surgeons in this community?
A Yes.
Q Can you define the term contraindication?
A Contraindication is essentially a device or equipment that should not be used in a specific procedure based on the

potential risk of that.

Q Do you have like an example maybe?

A There was, as we just read, an example is that if you will, the warning on the first Bair Hugger said should not be used in the operating room. That to me would indicate a contraindication of using it in the operating room.

Q To your knowledge, has 3M ever warned doctors or hospitals that the Bair Hugger should be contraindicated for orthopedic surgery?

A No, that has not happened.

Q Have you seen information that internally they believe that it should be contraindicated for orthopedic surgery?

A Yes, I have.

Q Would you turn to Exhibit 0903? Have you seen this document before?

A Yes.

Q Is it something you would rely on for your opinions in this case?

A Yes.

Q There's a box on page 12, actually who's the author?

A The author is Al Van Duren.

Q The date?

A September 6, 2007.

Q There's a chart on page 12. Without reading or saying exactly what it says, does this discuss the need for

contraindication of the Bair Hugger in orthopedic cases?

A I was finding the page.

Q Without reading it and just answering, does the chart on page 12 discuss the issue of contraindication for the Bair Hugger in orthopedic cases?

A Yes.

Q Is this something you relied on for your opinion, sir?

A Yes.

MR. FARRAR: Plaintiffs move for 0903 into evidence.

MS. PRUITT: Objection.

THE COURT: Defendant's objection is noted and overruled. Plaintiff's 0903 will be admitted.

Q While it's coming up, you do understand the benefits, advantages and disadvantages versus intraoperative forced air warming, is that correct?

A That's correct.

Q Could you blow up the chart please?

Q So when it's talking about advantages, this is the advantages of pre-warming before the patient goes into the surgery room as opposed to using something like the Bair Hugger, correct?

A That's correct.

Q What is the second, I guess the third advantage?

A "Can be used when the intraoperative warming is

contraindicated such as aortic (aortic cross clamp, orthopedic cases inference.)”

Q Let's do it this way. I want you to go ahead and read a couple more of the advantages. If you go down two more, what is that one?

A "Does not contaminate sterile field."

Q We talked about that. That's something that surgeons care about, right?

A That's correct.

Q You don't want to contaminate the surgical field?

A That's correct.

Q Pre-warming wouldn't do that, correct?

A That's correct.

Q At least that's according to Al Van Duren. Can you read that please?

A It says, "Effective during at least the first post-induction hour."

Q What does that mean?

A That it works in the first hour after anesthetic induction, in other words, the anesthetic start time. If the first air warming doesn't work, this does.

Q And that's what we talked about and heard some testimony from Mr. Van Duren on, correct?

A That's correct.

Q What's the next one?

A "Reduces the incidence of surgical site infection."
Q That's as compared to the use of the Bair Hugger, correct?
A That's correct.
Q The surgical site section, what does that all entail? Is that just superficial or is that a --
A So a surgical site infection is the umbrella. The superficial surgical site infection, deep surgical site infection and then deep organ space or prosthetic joint infection. So those are the three categories under the term surgical site infection?
Q So it's reducing the incident of deep joint infections?
A That is correct.
Q Was is the next one?
A "Reduces the potential for nosocomial transmission of pathogens by eliminating the need for intraoperative work."
Q Was does nosocomial mean?
A The hospital required pathogens.
Q Can you tell us what that means?
A So what that means to me is that when a device is sitting in an operating room where there are potential bacteria those devices can become inadvertently contaminated. And if you're using that intraoperatively that could potentially allow that contaminated equipment to potentially infect a new patient

who's coming into the room.

Q Are these risks associated with the Bair Hugger that you as an orthopedic surgeon would expect a reasonable medical device company to tell you about?

A Yes.

Q I want to show you one more exhibit, Doctor. And it is Exhibit 1338. I believe there's no objection to that one.

MS. PRUITT: No objection.

THE COURT: 1338 is received.

MR. FARRAR: Your Honor, I want to make sure I'm moving it into evidence.

THE COURT: I just received 1338 into evidence.

Q Dr. Bowling, this is the operator's manual for the 750?

A That is correct.

Q There's is a couple of pages, again, at the top it says, “Contraindications.” And Dr. Bowling, can you read what contraindications appeared with the 750?

A "Do not apply heat to lower extremities during an aortic cross clamping. Thermal entry may occur if heat is applied to ischemic blends."

Q And you are looking at the document that's right before this. Do you recall that it said on contraindications aortic cross clamping is one of them, correct?

A Correct.
Q And then orthopedic surgery is the other one, right?
A Correct.
Q Does it appear only one of them made it to this?
A Yes.
Q Which one?
A The one that made it is the aortic cross clamping.
Q You do your surgeries in North Carolina at two different places, a hospital and a surgery center, correct?
A That is correct.
Q At the hospital did you stop using the Bair Hugger?
A Yes, we did.
Q When?
A The timeframe was 2014, early 2015.
Q Why?
A The decision was made to move to a conduction blanket that had similar benefits without the potential risk of surgical site infection that can be seen with the forced air warming.
Q So if you wanted to warn patients, there's other ways to do it?
A Yes.
Q Is it just like a heating blanket basically?
A So essentially it is. It's a blanket that's placed onto the bed that the patient is on so it doesn't blow any air. It doesn't blow anything. It's just like a heating blanket so a

warming conductive blanket.

Q Do some doctors just use a warm cotton blanket?

A At the hospital it's pretty much using that device. But the answer is I'm sure there are surgeons who, in fact, I've read Dr. _____ deposition where he uses just a warm cotton blanket at times.

Q The point being if a surgeon or really the decision to warm is mostly the anesthesiologist, right?

A Correct. They are the ones monitoring the temperature. As a surgeon we don't really see those numbers so we're not really sure so we are relying on the anesthesiologist to provide that.

Q The point I was making, I guess, Doctor, is if you want to warm a patient there are other ways to do it, right?

A Definitely.

Q So this is it - we talked about risk mitigation. Would you agree that there are some devices that have to be in the OR and some that don't?

A Yes.

Q Is the Bair Hugger one that has to be in the OR or one that does not have to be?

A Definitely not. We haven't used it for years.

Q To be fair, you do surgeries at a surgery center and the folks there require the use of the Bair Hugger in the OR, correct?

A That is correct.

Q How it that being used?

A It's put on every patient despite the procedure that they may have, even patients that have short-term. Essentially, they're still education to be had and I'm involved with collaborative work with our anesthesia teams to educate to the lack of benefit. Therefore, with no benefit the potential risk tips the ratio that we should not be using it.

Q Is there information that you have that you can't share with them?

A Yes.

Q Why?

(BENCH CONFERENCE.)

MS. PRUITT: What he's getting ready to say in the document and the litigation there's no protective order. That's what impact is the truth. And that is impermissible and I will object. It's not relevant that he is going to say I have my confidential documents and that I can't tell people because - it's highly prejudicial. It's not proper.

MR. FARRAR: I'm going to assume that on cross-examination by saying you actually still use the Bair Hugger or you used to use it. So what I'm trying to do is establish that. It's because he's not making a final and he can't tell people making the final decision why, why

it's so unsafe.

I am inoculating across as a hundred percent for that to come in. It's a fair way for him opposite truthfully to be able to explain why they're still using the Bair Hugger while he's testifying that it's basically unreasonably dangerous.

MS. PRUITT: We don't know if that's the truth because they've never made a decision based on that information. He can tell them but that's speculation that they told they wouldn't use anymore and it's complete speculation.

MR. FARRAR: I'm not going that far.

THE COURT: The objection is sustained at this point. If the door is opened in cross-examination I think that inquiry - I will allow inquiry.

(RETURN TO OPEN COURT.)

Q Dr. Bowling based on all the evidence that you looked at, the documents, the depositions, the medical records and your examination of Ms. O'Haver, do you have an opinion as to a reasonable degree of medical probability as to what caused her surgical - or her deep joint infection?

A Yes.

Q What's that?

A I feel that the Bair Hugger is the most likely source of the contamination of the wound that resulted in a prosthetic

joint infection.

MR. FARRAR: I'll pass the witness, Your Honor.

THE COURT: Cross-examination.

MS. PRUITT: Your Honor, can we have just a moment to get set up?

THE COURT: Counsel, if you don't mind - Mr. Farrar, would you mind moving your - thank you.

MS. PRUITT: May it please the Court.

THE COURT: Counsel.

CROSS EXAMINATION BY MS. PRUITT

Q Hello, Dr. Bowling. How are you.

A I'm well.

Q I'm going to hand you a copy of your deposition that you gave in this case. I have it there handy for you because you may be referring to some of your deposition testimony. Is that okay?

A Yes.

Q Now I want to clear up just a few things before I start talking to you about several issues in this case. You began your testimony this morning by telling the jury about your revision surgery experience. Do you recall that?

A Yes, ma'am.

Q And I want to make sure that it's clear. Ms. O'Haver's surgery did not fail, her device did not fail, did it,

sir?

A The device did not fail. She did require a second operation.

Q Okay and I'm going to make sure I understand that. So the device itself did not fail and the hardware do not loosen, did it?

A No, the hardware did not loosen.

Q And the hardware did not wear like you were discussing this morning, did it?

A Correct.

Q And so when you were telling those things to the jury when you were discussing that to tell them what your experience level was, right?

A That's right.

Q Do in Ms. O'Haver's case what happened was they went back in and did a procedure called the DAIR procedure, is that right?

A That's correct.

Q And, the DAIR procedure stands for Debridement and Implant Retention, right?

A That's right.

Q And debridement and implant retention means she got to keep the implant, right?

A That's correct.

Q Which the way you described it for the jury in levels,

that is the least - fortunately the least serious thing that would've had to been done for someone with an infection in their joint replacement, right?

A No. Infection is by definition a catastrophic failure even if we're able to save the implant. The outcome is still significantly below what would be expected from a primary knee replacement.

Q Sure and I understand that. What I'm trying to establish is that the first degree of what you have to do to treat the infection. If antibiotics alone don't work then that's the first stage that you use to try to treat the infection is the DAIR procedure, correct?

A I just want to be clear. Antibiotics won't work for prosthetic joint infections. But from the standpoint of her case this was the original second procedure if you will. And to this point today we see that it has potentially succeeded and potentially not. It depends on how you look at it from perspective.

Q Okay. And you said I think earlier in your testimony that that procedure - what date was a procedure done, sir?

A The DAIR procedure was done on the 1st or the 2nd. She was admitted on the January 1st of 2017 and the procedure was done on the January 2nd of 2017.

Q And you were talking about her healing that took about six weeks. Do you recall that testimony?

A It took about six weeks?
Q As far as the infection being treated?
A Yes, the antibiotics typically run for about six weeks, that's right.
Q And so have you seen her medical records from her treating physician between that date, January, 2017 and 2022?
A I've seen many medical records from her treating physicians including her dermatologist just this year. And I've also seen records from the postoperative care that she sustained during her hospitalization. And I've seen, I believe, that's the extent of the records for that, yes. I have not seen ID other than the hospitalization infectious disease records.
Q So have you not reviewed the records of her treating orthopedic doctor for 2019, '20, '21 and '22 if there are any?
A I have not, but I honestly don't understand the pertinence in the case if the infection is already treated. And I did evaluate the patient so I do have a good understanding of how she did.
Q To your knowledge, has any treating physician that treated Ms. O'Haver told her that she still has some kind of infection in her knee, sir?
A No, not to my knowledge. I would raise the suspicion that she may still have an infection in her knee based on her clinical findings that I saw back in May.
Q And you know that she has recently gone back to that

doctor, her treating physician and that they actually did an x-ray and attempted aspiration on her knee cause she was complaining of pain. Have you seen that record?

A I have and I don't think that was her treating physician, Dr. Ballard. I believe that was her dermatologist and yes, they did aspirate her knee. The CT scan that was done at the time showed a large tumor and they did try to aspirate that but did not get any fluid out.

Q And they also looked at the hardware and the hardware was all in place, correct?

A That's right. They looked at an x-ray which showed no loosening.

Q And a doctor, Dr. Schultz, is it your testimony to the jury that he's a dermatologist?

A I don't know what he is. It doesn't specifically say in his records. I know in the same records that you're describing there's was a punch biopsy done of her calf area. So I don't know exactly who he is. He's not been part of any of the previous treatment.

Q Well do you know that he's her primary care physician, sir?

A No, I do not know he's her primary care. I made the assumption since he did a punch biopsy.

Q And he has had some experience with treating joint replacement patients as a part of his primary care practice?

A Sure, I would assume that. We have a very - it's a team that treats joint infections involving not only just the surgeon but also the primary care and infectious disease doctor. So yes, I would expect them to have experience with that.

Q And did you read his notes at the last visit with her where he said, "The etiology of Ms. O'Haver's pain in her left knee is unknown."

A Yes, I read that and I would agree with that. At this point, as we sit here today we do not know why she still hurts.

Q And etiology means the cause basically, right?

A That's right.

Q And so her own treating doctors have done an x-ray, attempted to do an aspiration which was unsuccessful and concluded that the etiology of those complaints of pain in 2022 were unknown. Would you agree with that?

A I would agree if that's what they said. I would not agree with the fact that that is a thorough evaluation.

Q Let me ask you about your evaluation of Ms. O'Haver if I can. Did you take x-rays of her knee?

A We did take x-rays of her knee.

Q Where are they?

A In my office. I wasn't asked to bring them so I don't physically bring them.

Q Did you give them to the lawyers?

A I was not asked for that.

Q So there are x-rays of her knee when you examined her in 2022 that you didn't bring with you and that we haven't seen?

A To the best of my knowledge, it is. I would have to look back at my records to see. But to the best my knowledge, yes, that is a true statement.

Q So if the ladies and gentlemen of the jury wanted to know what your x-rays show, we're not able to tell them that, are we, sir?

A No, we can tell you that. I reviewed the x-rays and I didn't see anything mechanically wrong with the x-rays.

Q Did you not see anything wrong with the hardware, correct?

A No, not what I expected, no.

Q You didn't see any loosening of the hardware?

A No, I did not.

Q So you did x-rays on her. Did you also attempt to do an aspiration as well?

A No, there was not as significant reason to do that at the time I evaluated her.

Q So your findings in June of - was it May or June?

A It was in May.

Q So in May your examination based on the diagnostic tests you did did not give you any kind of information to suggest that her implant or something about her implant was causing this pain?

A And think it's important to understand my role in this position. I was not her treating physician nor did she seek a second opinion from me. I asked the attorneys if I could evaluate her to get a better understanding of her medical history, which I had read in the records, but I wanted to get for myself a better understanding as I testified earlier to. I think reading the retrospective records is one piece. Talking to a patient and understanding their experience and what they went through helps to find an opinion and so that's why I did that.

I was not functioning as her treating physician at the time and clinically I did not see anything that was overt that would've required me to say, despite not being your treating physician I think you have an active infection. I need to address that or have someone address that. I did not see that. So, therefore, I would also say that I don't have a definitive diagnosis for the dysfunction that she has other than to claim that it is secondary to her infection to subsequent scarring and healing from that.

Q So did you prepare a doctor's note of this examination that you conducted?

A I have a handwritten note and I incorporated everything in the handwritten note into my expert report which is in the last page of the expert report. So that is my notes.

Q So I have a copy of your reports that are in my hand

and I'm going to give you one as well so we can track. My last page doesn't show the report from you on your evaluation.

A It's right before the bibliography and the explanation of what I reviewed. So it's on page 23 of 30, the last page of the written report prior to the bibliography page.

Q So on page 23 of your report it says, "Evaluation of Katherine O'Haver 12/16/1961" which is the date of birth, right?

A That's correct.

Q And it was performed at your office, correct?

A That's correct.

Q As part of your evaluation in this, look at paragraph two with me please, sir.

A Yes.

Q You considered as part of this examination of her that you requested to be done, her medical comorbidities and say that included a prior right-side cerebrovascular accident, correct?

A That's correct.

Q Which she reported to you that it was mostly resolved but she still reports numbness on the right side and memory issues, correct?

A That is correct.

Q And it also looks like you reported as comorbidities an overactive bladder, migraines, diabetes type II, asthma, hypertension, hyperlipidemia, depression and nicotine dependence. She was smoking one pack per day but is now

diminished to a half a pack per day. Did I read that correctly?

A You did.

Q And you discussed her right total knee replacement surgery in 2014 with Dr. Ballard as well, right?

A That's correct. I listed it as a prior surgery.

Q Did you review the record on her prior knee surgery where Dr. Ballard replaced her knee and did a right joint replacement?

A I did.

Q And you're aware from reviewing those medical records that the Bair Hugger device was used in that procedure on her right total due replacement, correct?

A Yes, I am.

Q She did not get an infection as a result of her right total replacement, did she, sir?

A She did not have an infection because of the right knee replacement.

Q And you also reviewed the records for her DAIR procedure, didn't you, sir?

A I did.

Q And did you note in the records that when she had her DAIR procedure a Bair Hugger was also used in that procedure?

A I did.

Q And she didn't get infection as a result of that procedure after the DAIR was done, did she?

A Well she had an infection so we really can't conclude to that because she was given antibiotics and had a DAIR procedure. So if she had developed one it would have been treated by the procedure and identified.

Q So in your answer are you trying to suggest to the jury that when the Bair Hugger was used during that DAIR procedure that somehow she got an infection on that too?

A No. I'm also saying that we also can't say that she didn't have one because it would've been treated by the same treatment. So you can't conclude either way.

Q You can keep that document because we may refer to that on some other subjects. I also want to clarify one other thing. You told the jury that your estimate of the length of time of her surgery was 101 minutes, correct?

A That's correct.

Q Can you tell me how you calculated that time?

A Incision to end time. And I cross-referenced that to the tourniquet time. I believe it was a difference about three to four minutes in tourniquet up to down. Most surgeons today start it with the procedure and deflate it at the very end of the procedure.

Q So your calculation of 101 minutes is from the incision to the end of the surgery, right?

A That's correct. That's the time for the potential risk of contamination.

Q And do you know what time the induction of anesthesia was with regard to this patient?
A Not off the top of my head.
Q Now I want to talk to you for a moment about Dr. Ballard. You've read Dr. Ballard's - Dr. Ballard is her treating orthopedic surgeon, right?
A That is correct.
Q And you've read the deposition testimony of Dr. Ballard?
A That is correct.
Q And you've testified to the jury that Dr. Ballard did nothing wrong, right?
A That is correct.
Q And certainly you'd defer to Dr. Ballard about what he observed while treating Ms. O'Haver, correct?
A That's correct.
Q And you understand the Dr. Ballard was deposed and has testified in this case that there were no alert signs of infection when he stitched her wound closed on 12/19, right?
A Correct.
Q And he also testified that it is possible for bacteria to enter through an open wound, do you recall that testimony?
A I do.
Q And you disagree with Dr. Ballard about bacteria entering through an open wound?

A No, I don't disagree with the fact that he said bacteria could enter through an open wound. My opinion is that the wound was infected and the wound dehisced as opposed to that the bacteria came in through the open wound.

Q Now I want to talk to you for just a moment about being hired in this case. You charged to give testimony in this case and bring your opinions to the jury, correct?

A That's correct.

Q And your hourly rate for reviewing this case is $700 an hour, right?

A That's correct.

Q And your hourly rate for giving a deposition is $800 an hour?

A That's correct.

Q What are you charging to be here at trial?

A Trial today my 24-hour fee is $7,500.

Q So when did you get here, sir?

A Last night around 11:15.

Q And you traveled in from North Carolina?

A That's correct.

Q So would you charge $7,500 for yesterday when you traveled?

A No, I would not.

Q Did you charge an hourly rate for any of that travel time?

A Only the time that I was airport working on - I haven't charged anything yet but the hours that I spent working on the preparation for trial.

Q And so would that rate that you spent in the airport be the $700 an hour or $800 an hour?

A Seven.

Q And so today you're going to be charging them $7,500 for coming here with this jury, right?

A That's correct.

Q And it looks like because of the time situation you're going to be staying overnight. So you'll charge $7,500 again for tomorrow?

A Yes.

Q I think I heard you tell the ladies and gentlemen of the jury that so far you've spent 700 hours?

A No, ma'am, 70 hours.

Q Seventy hours at $700 an hour, right?

A That's correct.

Q So that's $49,000 that you've charged doesn't include - does it include additional prep time?

A That is to trial prep so that includes the deposition and all that but for trial prep, I have not.

Q So trial prep, how many hours approximately to you think you've spent for trial prep?

A I think between 20 and 30 hours.

Q So that we be an additional 20 to 30 at $700 an hour?
A Correct.
Q So that's another $14,000 if my math is right?
A Your math is correct.
Q So in addition to the 49,000 there's 14,000 in prep time. There's today $7,500 and presumably tomorrow $7,500, is that right?
A That's correct.
Q Okay. Now when Ms. O'Haver's counsel retained you as an expert in this case, you were ready working with Ms. Zimmerman and Mr. Farrar on another matter, weren't you?
A Yes.
Q And that other matter did not involve a Bair Hugger, did it?
A No, it didn't.
Q And in that other matter you gave opinions against a product manufacturer, right?
A Yes, I did.
Q And you worked with plaintiff's counsel and other matters since then, right?
A Related to that same product manufacturer, yes.
Q You were first retained in this case in the fall of 2021, is that correct?
A That's when I was first contacted, yes.
Q Okay. And when you were first contacted you were

provided a binder with documents from Ms. O'Haver's lawyers, right?

A That's correct.

Q And what you were provided was some article presentation, some email correspondence from Mr. Van Duren, some presentations by 3M and a few depositions, is that right?

A That's correct.

Q And after you reviewed that material you told them that you would take a look at this case and give your opinion, correct?

A That's correct. To the extent because I want to be clear, that kind of all got jammed in. So after I got that information, I reviewed that to determine if it was in my area of expertise. I think we all have areas of expertise and I think I've testified today that one of my areas of expertise is infection. And so that's why I then accepted the case and I told them I would review and render an opinion.

Q Okay. And so reviewed the case after receiving this particular material, right?

A After making sure the case fit my expertise, yes.

Q So at the time that you agreed to look at this case for them you had not seen Ms. O'Haver's medical records at that point, right?

A I don't believe I had seen Ms. O'Haver's medical records in the first binder, no, ma'am.

Q And so at the time you received the first binder you knew she had a joint replacement surgery but you didn't know the details of it, right?

A That's correct.

Q And you didn't know her history from the past, did you, sir?

A I did not know her surgical history from the past.

Q And you didn't know how long the surgery lasted?

A That's correct.

Q And you didn't know the surgical protocol for the skin prep in her case, did you, sir?

A No, ma'am.

Q And at the time you agreed to give an expert opinion, you didn't know which model of the Bair Hugger had been used in her surgery, did you?

A No. That's the purpose of reviewing all the records and all the hours that I spent so I could render that opinion once I had all that information. I did not have it when I made the made the decision to.

Q Okay. And that's the whole point I'm trying to make. You didn't have all this information when you decided to be a part and be an expert for Ms. O'Haver and that's all I'm trying to show.

And at the time that you agreed to act as an expert, you didn't know the comorbidities that Ms. O'Haver had and whether

those predisposed her to infection, did you, sir?

A No, I didn't have any records from Ms. O'Haver when I elected to be part of this. Part of the process is reviewing those documents.

Q Now I want to establish for a minute, sir, what you're not an expert in.

A Sure.

Q If I can. You're not expert in operating room design, are you, sir?

A No, ma'am.

Q And you're not an expert in the HVAC system design, are you, sir?

A No, ma'am.

Q And you're not an expert in epidemiology?

A No.

Q And tell the ladies and gentlemen of the jury what an epidemiologist does.

A They study populations and how things affect the population as a group as opposed to individual cases.

Q And an epidemiologist, part of their work they read all these studies and evaluate them and decide what they need, right?

A I mean I think that's part of what we all do is read studies and determine the merits, determine the statistical power of the study and decide what they mean. So I don't think

that's specific to an epidemiologist. They do do that.

Q And they are trained in a little bit higher level - a little bit higher level than you as orthopedic surgeon with regards to epidemiological data and how to calculate all the data because that's what they do, right?

A Right. I think if you're meaning the statistical analysis of the study?

Q Yes.

A I think they have significantly more training in statistical analysis. I don't know that they necessarily have more training in understanding a study and its benefits and its power.

Q Now you're not an expert in anesthesiology, are you, sir?

A No, ma'am.

Q And, I want to make sure that we understand in these types of surgery that your job is actually to perform the surgery, right?

A That's correct.

Q And that the anesthesiologist is the person that makes the call most of the time about what warming device to use and when to use it, right?

A Yes.

Q So the anesthesiologist even with your surgeries, sir, the anesthesiologist is the one who's monitoring the body

temperature and makes the determination or decision as to how cold the patient is getting and how they need to warm the patient, correct?

A That's why it's so important to have the information.

Q Now I want to talk about this for a minute with regard to the surgery. You showed the jury some pictures earlier this morning in your testimony. And I want to look at - can we pull up, Rick, that graphic with the spacesuits on it that Mr. Farrar used this morning?

So I want to talk just for a moment, sir, about this picture. This picture that I'm referring to for the record is Exhibit 2192, Plaintiff's Exhibit 2192. No do you see this blue drape right back here in the back, sir?

A Yes, ma'am.

Q And is that the drape that hangs or goes up between the patient's torso and the anesthesiologist?

A Yes.

Q And so the anesthesiologist and the CRNA, one or both, they're behind that drape, right?

A That's correct.

Q And also behind that drape is the patient's upper body lying on the bed like this, correct?

A That's correct.

Q And if the patient has a Bair Hugger blanket on the upper body which Mrs. O'Haver had, right?

A That's correct.
Q Then she is - her torso from right about here is behind that anesthesia drape, right?
A Correct.
Q And, the Bair Hugger blanket is behind that anesthesia drape, correct?
A Yes.
Q And the surgery itself is going on below that anesthesia drape?
A That's correct.
Q In this case, the left knee, right?
A That's correct.
Q And so if the patient's body is behind the anesthesia drape, you know that the Bair Hugger is tied down around - first of all there's an adhesive strip that goes right around the torso of the patient, is that correct?
A Yes. It's not very effective but yes, there is one.
Q And the arms are out like this and there are ties and the blanket is tied down with two different ties on each different arm, correct?
A And think the ties you're referring to are placed on every patient whether they have the Bair Hugger or not. It's just keeping the arm on the board. I've never heard of anybody tying them on the blanket to the patient. It just lays on top.
Q Did you not know that the Bair Hugger blanket itself

has ties on it?

A No.

Q To tie it down?

A No. I've received no information at all about the Bair Hugger at any point in time from 3M so I don't know that.

Q So your surgery center uses the Bair Hugger blanket, upper body blanket?

A Yes, ma'am.

Q And you are the surgeon that's in the OR when that's been used, right?

A Yes, ma'am.

Q And your testimony to the jury is that you didn't know that that's how they tie the blanket down?

A I've never seen them tie anything down. There's a Velcro band that goes over the top and that's what I'm saying. The Velcro band is used even if we don't use the Bair Hugger just in case basically to keep the arm from falling off the arm boards when the patients are sleep. But I've never seen it tied. I'm not saying there isn't. I'm just saying I've never seen it.

Q So since you've never - strike that. The anesthesiologists are the individuals who - well probably the nurses and then the anesthesiologists are the persons that apply the Bair Hugger before the patient gets in the operating room, right?

A When they're in the operating room. I think once they're in the operating room and transferred over to the table, yes, then that's when they apply it, not before.

Q You can take that down. Thank you. One more question. You testified a little bit earlier today about - I call those spacesuits.

A Yes, ma'am.

Q And you would agree with me, Dr. Bowling, that those spacesuits were designed for the protection of the surgeon and the surgical team that's doing the work on the patient, right?

A No, I think there's also some design concept that if we talk about shedding, if you just have a mask on your face and there's a potential for skin cells to when you are turning or reaching to get something, the mask has some movement and so you could shed into the field. So I think the design may have been originally for that but I think we have to acknowledge that there is some potential benefit to the patient too by having this environment.

Q Okay. Well I'm just trying to establish that this spacesuit was designed to protect you and your assistants from blood and spattering and other things that happen unfortunately in these hip and joint and knee replacement surgeries, correct?

A I don't know the original design so I'm not going to testify to that. I just don't know that that was the intent. I'm just going to say it may have been the intent, but I think

there's validity to both. I tried to explain today that it does have some value in helping prevent infection.

Q It also has some value in protecting you from splatters and everything else going on in that surgical field with that patient.

A Definitely. I'm conceding that it has benefit to both.

Q Now you've also told the ladies and gentlemen of the jury also and you testified today about thermal plumes and heat rising and how that affects the current and how that affects the air in the OR. Do you recall all that testimony?

A Yes, ma'am.

Q There's a field of study that specifically looks at that issue, correct, sir?

A That's correct.

Q And it's called computational fluid dynamics, right?

A Yes, ma'am.

Q Is that also CFD?

A Yes.

Q So when the jury hears it again, CFD, that stands for computational fluid dynamics, right?

A Yes.

Q And those people that are experts in that field, they do models, do you understand that?

A Yes, ma'am.

Q And you've never done a model to evaluate changes in air currents and so forth as a result of a Bair Hugger or any other machine in the operating room, have you, sir?

A No, ma'am.

Q There are those that have, correct?

A Yes, I'm not one of them.

Q Now would you agree with me, Dr. Bowling, that just being an orthopedic surgeon - I shouldn't say it that way. You've worked long and hard with all your schooling so that was a poor choice of words. But being an orthopedic surgeon may not necessarily make you an expert in infection and the cause of infection in prosthetic joints, correct?

A No, I don't agree with that. I think that I would clarify that just a little bit more. I agree with everything you said but I would say in addition to that is that how it interferes with the orthopedic care of that patient then I do think I'm an expert in that arena.

Q And let me ask the question this way. You would agree, Dr. Bowling, that you're not an expert in infectious disease, right?

A Yes, ma'am, I would agree.

Q And there are people that just study infectious diseases and treat infections of all types including knee and hip joint infections, right?

A Yes.

Q Now I want to talk to you for just a moment about something you talked to the jury about earlier today. When you were talking about this lawsuit and this lady that had had three infections and she was very upset.

A Yes, ma'am.

Q I'm going to that topic.

A Sure.

Q In fact, the North Carolina Medical Board required you to take some remedial instruction in infection management, didn't they?

A You know I don't remember the actual wording. You probably have it, but the analogy is I didn't see it as remedial. I saw it as an opportunity because in my mind and in two other physicians who are board-certified, board-trained who were specialists in orthopedic surgery, specifically joint replacement felt that I had followed the standard of care. So I didn't see it as remedial. I saw it as an area where they felt that I needed more instruction on it.

So I felt this world is changing. Infections are changing and I don't want to have patients who fail and I definitely don't want to have patients that have infections that I'm not able to eradicate and so I did that.

I did it with the American Association of Hip and Knee Surgeons. That meeting was in November. I think the report was in October, the letter of concern. And I immediately jumped on

that because I said this is an opportunity to better myself, to have more knowledge and more basis but I don't think is was remedial.

No one said I wasn't knowledgeable. I think the concern was there was some difference of opinion so I did the research with open arms.

Q Let's look at what you said when you gave your testimony under oath in June of 2022. You've got your deposition testimony there in that notebook that I handed you, sir. If you could for me please turn to page 114, line 15 through 18, please, sir. Do you see on line 15 the question was asked of you while you were under oath?

"You were required by the North Carolina Medical Board to take some remedial instruction in infection management.

Yes.

Right and that arose from a complaint, right?

That's correct."

Is that what you testified to in June of 2022?

A Yes, ma'am. And today I acknowledged that exact same thing. I took it - I said you had the exact words of what they said. I took it as an opportunity. I didn't take it as remedial because I was supported by two other physicians. So I felt like that instead of trying to say I just didn't see any value in trying to fight this. I said there's an opportunity here to become more educated than maybe I was at the time. So I

think we all should be open to that. So that's why I did that. If you want to call it remedial, I'm not offended by that.

Q I'm calling it what you said in your deposition.

A Well, no, that's what you guys read to me. I didn't say that. I just acknowledged that that's what you were reading from the medical report.

Q I'm not going to argue with you about it. That arose from this complaint, right?

A Yes, ma'am.

Q And, the North Carolina Medical Board asked you to do 10 hours of infection management training?

A Sure. You can call it remedial. I'm not in any way - what's the word I'm looking for. I'm not trying to be semantics. That's fine. That's what I answered to here. I'm just saying I took it as an opportunity to become even better in understanding infection.

Q And this complaint that you described for the jury was in 2017, right?

A Yes, ma'am.

Q There was another patient that you treated who subsequently developed a periprosthetic joint infection, right, sir?

A Yes.

Q And the timeframe of that complaint was around 2017, right?

A Yes.

Q And that patient complained about your care after a total the replacement to the North Carolina Medical Board, correct?

MR. FARRAR: Your Honor, objection, hearsay.

THE COURT: One second. Come on up, guys.

(BENCH CONFERENCE.)

THE COURT: The objection is hearsay. Your response, counsel?

MS. PRUITT: Yeah. He's given an explanation for this whole thing already. It's based a question about the patient. He went into great detail this morning to explain it and I think I'm entitled to ask him questions about whether a patient complained.

THE COURT: Given that there was direct examination to this, the Court will allow limited inquiry in this regard.

MR. FARRAR: I think it's two different things. That's my issue is there is one revision. I don't ...

THE COURT: Are we not talking about the same one?

MS. PRUITT: There's another complaint.

THE COURT: The objection is sustained.

MS. PRUITT: But I can ask about the subject matter?

THE COURT: Correct but as to the hearsay objection, it's sustained.

(RETURN TO OPEN COURT.)

Q So there were two incidents. The one with the lady that had three infections that you described. And there was another patient complaint, is that right?

A That's what I'm trying - I'm confused myself. I don't know. I mean I just don't know. I've got to get more information than that.

Q We'll get to that. In the case where the lady had three infections, the North Carolina Medical Board had your care reviewed by and independent medical expert who found that your overall care of the patient did not meet the standards of care in North Carolina, isn't that right?

A That was his opinion. There were two opinions that were contrary to that by adult reconstructive specialists who was a sports medicine specialist.

Q But my question was more specific than that, Doctor Bowling. My question was the North Carolina Medical Board had your care and treatment reviewed by an independent medical expert who found that your overall care of the patient did not meet the standard of care in North Carolina, right?

A That was his opinion.

Q Now you recently took a course on the current treatment of periprosthetic joint infections that was put on by

Dr. Javad Parvizi, correct?

A I sat in on that at the American Academy of Orthopedic Surgeons in March of this year.

Q That was in March of 2022?

A Yes, ma'am.

Q And, Dr. Parvizi is one of more commonly known surgeons who speaks on periprosthetic joint infections, correct?

A Yes.

Q And you recognize Dr. Parvizi as an expert in the field, don't you?

A Yes.

Q And to your knowledge, Dr. Parvizi still uses the Bair Hugger, right?

A I don't have knowledge of that other than he wrote an opinion statement in the International Consensus of Orthopedic Infections where he I think stated that he did. But I can't validate or deny that. I don't have that opinion on that.

Q Let's take a look at your deposition and what you said under oath. If you'd turn to page 116 in your deposition please, sir, lines 17 through 19. The question was asked of you in your deposition.

"Do you know if he," referring to Dr. Parvizi, "still uses the Bair Hugger?"

And you said, "I do ..."

MR. FARRAR: Your Honor, objection, this is

directly inconsistent with what Dr. Bowling just said.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: It seems to be consistent with his answer. Counsel, what's your response?

MS. PRUITT: When I asked the exact question before that answer he said, well I'm not really sure. And what he said this time he said, I do know that he does. I read in the 2021 article to that effect.

MR. FARRAR: He said, I don't know right. I read the 2021 article that said he does. That's what he just said.

THE COURT: He also indicated that could not validate it or deny it so the objection will be overruled.

(RETURN TO OPEN COURT.)

Q If you'd take a look at page 116, Doctor, line 17 through 19.

The question was "Do you know if he, Parvizi still uses the Bair Hugger?"

And your and was I do know that he does. I read a 2021 article to that effect."

Did I read that correctly?

A You did.

MR. FARRAR: Objection.

THE COURT: Hold on. Come on up, guys.

(BENCH CONFERENCE.)

THE COURT: So you have an objection? Is there an answer, Counsel?

MS. PRUITT: No.

THE COURT: Why don't you direct the witness to his answer.

(RETURN TO OPEN COURT.)

Q On that, Doctor. Read starting with "I read a 2021 article to that effect that he still uses it." Go ahead and finish that.

A "I read a 2021 article to that effect but I also know that he specifically states that because of that, more data is necessarily and that because of the concerns that alternative warming options may be better chosen."

Q Now you know that Dr. Parvizi published a paper that "There is no scientific proof that the use of forced air warming blanket leads to an increase in surgical site infections regardless of the type of surgical procedure and the type of operating room."

MR. FARRAR: Hearsay, Your Honor.

THE COURT: The objection is hearsay. Counsel, what's your response?

MS. PRUITT: I'm impeaching him or asking him a question about a study, Your Honor. He's aware of it. He's talked about Dr. Parvizi.

THE COURT: The objection is overruled. You may answer.

A Sure. I am aware that he has written an article where he reviewed all of the current studies and came to that conclusion.

MS. PRUITT: Can we put the article up as Defense Exhibit 3523.

MR. FARRAR: Your Honor.

THE COURT: Come on up, guys.

(BENCH CONFERENCE.)

THE COURT: Do I don't think this should be displayed to the jury prior to it being offered and/or opposing counsel being given opportunity to object just kind of procedurally moving forward. It appears as though you have an objection to 3523.

MR. FARRAR: Hearsay.

MS. PRUITT: Your Honor, it's true that that article is hearsay. Medical treatises are used all the time and they don't have any evidence. They are used in these types of cases to go through a science or impeachment for demonstrative purposes they can be shown to the jury but they don't get received into evidence. And that's simply what we do with treatises and that's a common thing to do.

THE COURT: As I indicated to Counsel earlier,

anytime something is being shown to the jury, we need to make sure that we're all in agreement that it's being published to the jury before that occurs.

MS. PRUITT: Yes, I agree.

THE COURT: It might make more sense to show it to the witness before it's handed and before it's published to the jury. Here's what I think. I think we're kinda going off the rails here this might be a good time. It's 4:50. It might be good time for us just to break for the evening so we can kinda get a path and we can figure it out.

(RETURN TO OPEN COURT.)

THE COURT: Okay, guys, we're going to go ahead and recess for the day. I want to thank you guys for your work. You guys have been timely and attentive and so I thank you for that. Leave your notebooks in your chairs. Carly will collect them and keep them in the office tonight. I'll ask that you be back at 8:30 tomorrow morning again.

(INSRUCTION WAS READ.)

Have a great evening and see guys tomorrow morning. Thank you so much.

(JURY RELEASED AT 4:55 PM.)

THE COURT: So we're outside the presence of the jury. A couple of things cause we were kind of mixing up

issues here at the bench. So I thought might be better for us to get - and this is addressing all the attorneys that will be conducting direct examinations or cross examinations.

So I'm a big believer in that nothing's published to the jury until we're all on the same page that it can be published to the jury. So my assumption is anytime something gets published that there's not going to be an objection. And so if it gets published for demonstrative or otherwise that we need to all be on the same page before that is done.

I also think that it's important to refer even if it's a demonstrative exhibit because I making reference of that in terms of it being published to the jury. So it would be helpful for me and I think it's a good record just to make sure that we all know what the jury has seen in terms of the exhibits.

So that is my first. And so my belief is that whether or not it's a study, demonstrative, whatever it is, that we all are on the same page that it should be going up there or I make the decision that it is if there's not an agreement. So in that regard, from anyone on plaintiff's side is there any objection to kind of how we're moving forward?

MR. FARRAR: No, Your Honor.

THE COURT: From defendant, any clarification?

MS. PRUITT: My only clarification is, Judge, at the bench he's stating that I need to show him a copy of it, which I'm perfectly happy and can do. My confusion I think regarding the fact that medical treatises are used to impeach witnesses and talk to about studies, etc. So if I show him the study and he recognizes this as the Parvizi study and says that, then can I put it up so the jury can see what the conclusion of the study was?

THE COURT: So here's what I would say. Yes, and I think that's one of the reasons we - well I'll hear your objection. But procedurally - so and I think that's important to say, I'm showing you blah, blah, blah, and do you recognize it. And now do I have permission to publish it to the jury. And then that's our window of time to take up any objections. So that's why I think that showing it to him there is that procedural step that we all need to be mindful of before it goes up there.

Now, Counsel, your objection? I don't want to talk generally. Why don't we just talk about the objection before the Court as it relates to Dr. Bowling. Counsel, your response to the use of the study and impeachment purposes.

MR. FARRAR: So two parts. It is hearsay. There's no doubt about that. and there is an exception to

the hearsay rule. I don't think the predicate that was laid is improper. So that was my objection was there was no predicate laid.

The other issue is typically Missouri has been a little bit tough for me because I don't have the rules of evidence written down.

THE COURT: They're all up here.

MR. FARRAR: In different states and Federal and state courts are different on whether or not it can be read if it's can be read in or displayed. And, frankly, it's sort of your call on that issue, sure. But, typically, they can be read into the record and not displayed.

THE COURT: So I mean I think it's kind of splitting hairs. I would be okay with both. I mean we're having depo designations that are both being fed and read underneath. And so I guess I am of the mindset that it can be both. So that's kind of where I fall on it.

Now why don't we do this. Why don't we start tomorrow if you want to continue to use this exhibit, why don't we start tomorrow with laying whatever the foundation. We'll just have that be our start place tomorrow if you want to go down that road. If you don't, you don't but will just go from there.

MS. PRUITT: And for the record, I think I've already laid the foundation. He said he knows Parvizi had

authored the study and he even began to talk about it. So he said he recognizes it. But I would like to put it in front of him talk to him. But I think if we go back and look at the record, Your Honor, that the foundation has been laid. I just messed up publishing it.

THE COURT: Sure. I think that it's important that anytime that we're aware that there be a good foundation regarding the statement that he has made as well as the conclusion of the study. And so I don't know that I agree with you that we are quite there. Maybe so but if you could kind of revisit that tomorrow and we procedurally go through the process then I think that it'll be easier for everyone to follow along. Does that make sense?

MS. PRUITT: Yes. The purpose of these are he's told the jury all day today he's quote, looked at literature but he's not shown me and he's not specifically identified anything. He had one study in 2017. So if he's going to tell the jury that the body of literature says X; that in the body of literature might say more than X or less that X or it might say why, then I think I'm entitled to use it to impeach him with the testimony that he's given to the jury about what the literature says. The witness is still in the courtroom.

THE COURT: I don't have a problem with that. I would honestly rather him be in in here than in the hallway

with the jury leaving so I don't have a problem with him being in here.

MS. PRUITT: We're talking about his testimony.

THE COURT: Moving forward, let's be aware because honestly there's so many folks in here in suit jackets that I can't tell if a witness is here or not. So we'll just be mindful of that moving forward.

So here's what I will say. I don't agree or disagree with you. I just think, like I was saying earlier, there's a process to it. So we just need to make sure that we're following the process, laying the correct foundation for it.

I don't disagree and I understand your intention but we just need to make sure that we're following the correct steps to get there. I think that once we all get on the same page as we were talking about yesterday, we'll get a vibe going and we'll get a rhythm going. But so those are my thoughts.

MS. PRUITT: Thank you, Your Honor.

THE COURT: Anything that we need to take up for the record before we recess?

MR. FARRAR: I can't remember if you have 5:30 hard stop.

THE COURT: Sure.

MR. FARRAR: There was a couple of questions to

Dr. Bowling about Ms. O'Haver's comorbidities.

THE COURT: Hold on one second. I'm sorry, Doctor. If he needs to stick around maybe he can go to the jury assembly room across the hall if the jurors are gone.

MR. FARRAR: A couple of questions about the comorbidities. It was Question in Limine 21 where we had – where the Court excluded the idea that her comorbidities come in because they are not the sole cause of the infection. It can't be whether she's prediabetic or a smoker or obese cannot cause the infection. You have to have an inoculation of bacteria. And Ms. Pruitt didn't cross the line but was getting tiptoeing that thought.

I just want to make sure that we are going to approach the bench before we start those questions about this to Dr. Bowling has to whether or not her comorbidities caused or contributed to her infection.

THE COURT: I'm familiar with the testimony that you referred to and I agree with you in that I did not believe that it violated the motion in limine so I had no concerns in that regard. But, obviously, any time that the Court has ruled on the motion in limine and one party wants to revisit that, then we can do that and we should do that outside of the presence of the jury.

MS. PRUITT: I'll ask to approach, Your Honor, because based on the testimony given so far, I think the

door has been opened wide and I'll make a request when I want to talk about those things.

THE COURT: I think that, you know, obviously I know that you guys have an interest in not showing your hand to early. But the fact of the matter is is when a witness is getting ready to get on the witness stand it's time to. We need to have a frank discussion regarding what road you're going to go down and what road you're going to go down. Because huddling up here isn't great in terms of the jury. And so the more things that we can take up and the more objections that we could knock out before.

So what I would suggest is, you know, if you think that door a door has been opened in direct or if you guys think a door has been opened in direct, then say we need to make a significant record on this, can we take a break and I'll give them a five minute quick stand break, you know, where none of us leave but the jury just goes back. So that's what I would say in terms of those types of issues.

MS. PRUITT: And so to make it more efficient, Your Honor, I would request that without the Court having to hear any early than it otherwise would, I don't think it would take us all that long to tell you when I think they've opened the door to issues with regard to one of the MIL rulings.

THE COURT: And do you want to do that now?

MS. PRUITT: Or I'll do it in the morning.

THE COURT: It makes no difference to me. I've got time.

MS. PRUITT: I'd rather do it the morning because I have a whole list and I can't find it.

THE COURT: All right. Okay, we'll do that in the morning.

MR. FARRAR: Since we're talking about doors opening, I have two that I'd like to discuss.

THE COURT: I'll tell you what. Why don't we talk about the doors that have been opened tomorrow morning.

MR. FARRAR: Sounds good.

THE COURT: Door's closed tonight. Let's go off the record.

(OFF THE RECORD AT 5:20 PM.)

PROCEEDINGS

September 29, 2022

THE COURT: We are outside the hearing of the jury. When we concluded yesterday it was suggested that both sides would want to make a record prior to resuming evidence today. So Ms. Pruitt, do you want to proceed first?

MS. PRUITT: Yes, Your Honor. I want to put on the record that I think the door has been opened to a lot of testimony. There was a discussion about it in a motion in limine that the Court ruled on in one of the pre-trials. And what I would like on the record is that this witness has testified on mitigation of the risk. And he has testified that one of the things he does is optimize and minimize the risk for someone getting a joint infection.

He said the fact that joint replacement surgeries are elective is important from a patient optimization perspective to mitigate potential risk of infection. These are things that can affect the patient's risk.

He said risk factors that can impact surgery and he gave an example of the cat scratch where he delayed a surgery due to this being an increased risk factor. He talked about host factors can impact immunity. He said even one bacteria can cause a deep joint infection.

This indicates that there are things about the host

that can impact immunity. It's not fair for them to be able to get up and talk about the risk factors that he wants to discuss and not allow us to talk about the risk factors in the case.

It's not fair for him to be able to talk about host immune system and the fact that it has an effect on whether they get an infection or whether bacteria grows or not and not allow us to talk about the immune factors the things about us to talk about the immune factors and the things about Ms. O'Haver that would've put her in an increased risk for infection.

He talked about the biofilm and he said testimony that this diminishes the immune system. He says there's a war going on between the immune system and bacteria and he suggested and testified that the immune system clearly has something to do with whether bacteria takes hold and turns into an infection.

Based on the testimony it's unfair for him to be able to say that for us not to be able to talk about the other things that impact potential impact her immune system. He said the immunity of the host can make bacteria grow slower. He comments also, Your Honor, on the disruption of the wound as part of the wound healing process. He says that the only two things that he testified about are that either a deep joint infection that came up and caused the

wound to pop open are poor nutrition. And we're entitled to explore the risk factors that she had for failure to heal the wound. Not only are they risk factors that put her at an increased risk for infection but the risk factors for wound healing. That's obviously an issue in this case.

The things that we're asking the Court to let us do under the rules will provide the information the jury can make a determination that in their mind when they view the whole of the evidence, this evidence, they should be able to consider because it may make it more likely than not. It may make it less likely than not and that certainly is the standard.

It's not - they gotten to put up depo clips out of context in our opinion of course in their cross-examination of witnesses. They've chosen what they want this witness to talk about with regard to Ms. O'Haver's overall picture.

To me, Your Honor, it's bordering on just tying our hands behind her back if when we can't talk about the risk factors and the host factors and the wound healing process.

In addition, we're not even there yet but the Court can listen as we go through on damages. Some of these risk factors have everything to do with the damages that they're going to be claiming because they're going to have an expert up here to talk about life expectancy.

So all of these same factors fold into damages. They fold into the testament of the witness. He's chosen which ones he wants to talk about and we're entitled to explore the others so the jury - we can test his opinions and the jury can weigh the credibility take that evidence into consideration.

THE COURT: Counsel, your response?

MR. EMISON: So I agree. We have a life expectance expert. They can talk about this comorbidity in terms of life expectancy. In terms of whether or not the Bair Hugger caused infection - it can't take alternative cause. It has to be the sole alternative cause.

Dr. Bowling did talk about some of things that Ms. Pruitt said, but in general principle not specific to Ms. O'Haver. Generally, these things apply to her. Generally, the immune system as it changed the time between surgery and the infection. And that's important because if you heard Mr. Blackwell in opening say, well 14 days later the wound looks like it's healing well, therefore, it's not an infection. It's the opposite of an infection.

Well that's not true and we know that. So I have to have Dr. Bowling say these infections take a while. They can take up to a year. It didn't for Ms. O'Haver obviously so we know it wasn't that specific conversation but it takes a while. So these are the general principles he's go

to talk about.

So we were talking about his mitigation as a confined cause. It's not the sole cause. There is no way that her being pre-diabetic, a smoker or obese causes an infection. It has to be a bacteria and we know that. So because it's not the sole reason we need to talk about it.

The motion in limine was granted, Your Honor.

THE COURT: Okay. So I will allow limited inquiry in this regard because I do think to a certain extent based upon the testimony of Dr. Bowling that those issues and those factors, those risk factors were talked about in conjunction with an infection.

So in that regard I'll allow him to make inquiry regarding Ms. O'Haver's risk factors and how that was connected to infection.

And then the mitigation of risk, I mean is that what we're talking about in its entirety? Have I addressed everything?

MS. PRUITT: Well he's also talked about optimization and risk factors and told the jury how he would optimize those risk factors but he left some out and they cross over.

THE COURT: So what are you wanting to get into?

MS. PRUITT: I'm wanting to do the risk factor

she's a smoker. She's a diabetic. She had steroid injections which increase somebody's propensity to not heal a wound. All of those things are just go to the issues that he told this jury about, Your Honor and I should be entitled to cross him. This is cross examination on what else is in there that he's actually admitted that can cause a slowdown in wound healing.

But her risk factors when you're talking about - he's talking about what he wants to talk about. And we should be entitled to talk about all of those risk factors.

THE COURT: I don't believe that the door has been opened in that regard. My motion in limine ruling remains the same. But as it relates to any of the risk factors that the plaintiff had as it relates to infection, the Court will allow inquiry in that regard.

MS. PRUITT: Thank you, Your Honor. I would like to make a record. In case it comes up later, I would like to given Offer of Proof which is two documents. And I would like to make them Offer of Proof Exhibits 1 and 2.

The first one is Defendant's 3 Offer of Proof.

THE COURT: Why don't we do Offer of Proofs as letters. So let's do Offer of Proof A and Offer of Proof B in terms of the exhibits.

MS. PRUITT: Offer of Proof A is - it's actually a brief that discusses it. Would you prefer that

we file that?

THE COURT: I can either show that it was filed in open court or you can file it. It makes no difference. Counsel, do you have a preference?

MR. EMISON: Whatever the Court wants.

MS. PRUITT: I will mark it, Offer of Proof A. And then Offer of Proof B, Your Honor, is the testimony and the questions and answers that we would actually be asking this witness, Dr. Bowling.

THE COURT: Any objection to the Court receiving Offer of Proof A and B?

MR. EMISON: No, Your Honor.

THE COURT: The Court will receive those and show that they were filed in open court on today's date. Any further record from the defendant?

MS. PRUITT: On this issue, no.

THE COURT: What other issue?

MR. BLACKWELL: If I may, Your Honor.

THE COURT: I'm going to allow limited argument about this stuff at this point because we've got a jury in the back. Mr. Blackwell.

MR. BLACKWELL: Good morning, Judge. Your Honor, at this point I'm simply alerting the Court to what may be an issue Dr. Elghobashi's testimony.

THE COURT: I'm wondering if maybe lunch break

would be a better time.

MR. BLACKWELL: That'd be fine. It may give me a chance to review what we just received last night.

THE COURT: Just because I'd rather take up issues that are going to arise between now and lunch and then we'll do that. We'll go to lunch at 12:30.

MS. ZIMMERMAN: We will have him on in the morning. Dr. Elghobashi will be up after Dr. Bowling. Can we take it up at morning break?

THE COURT: Okay, that's good. Let's take it up at morning break. Anything else we need to take up by the defendant?

MS. PRUITT: No.

THE COURT: Okay, plaintiff?

MR. FARRAR: May we approach?

THE COURT: Sure.

MR. FARRAR: I'm just handing you a case and I've got a copy for defense on the issue of cross-examination with the learned treatise. And for the record the case is *State versus Carter*, Western District 2018.

In the discussion it talks about how to lay predicate. And it says, "A party seeking to cross-examine the witness by means of an article or treatise must lay a foundation as to its authoritative. If an article of treatise is not self-declaratory as being authoritative and therefore must

not or may not be indiscriminately used.

And text or treatise can be established as authoritative through a concession of the witness herself b dutiful notice or (c) other experts."

The document that Ms. Pruitt put up on the board yesterday is definitionally not authoritative. It was advertising Parvizi was paid a lot of money to write what's called a white paper. It's advertising. I had the emails that Parvizi sent them to 3M's lawyers and their employees edited the final version and it went out and 2012.

It was response to the McGovern study. It's not authoritative. So unless Dr. Bowling says this is authoritative, they cannot cross-examine him.

MS. PRUITT: Your Honor, statements and learning treatises periodical to pamphlets. That is the learning treatises. It's published in a journal. It may be used on direct or cross to test the knowledge and the expert and the reliability of their opinion. *Systolic versus Washington University*, Missouri Court of Appeals 1990 direct examination; *Ball versus Burlington*, cross-examination.

This is generally done by reading from the text. No paraphrasing and asking expert if they agree or not. Statements can become substantive evidence if the witness adopts them.

And so what I'm doing is using them for cross-examination. We are not asking that they be received as evidence. They're learning treatises. They can be used to cross-examine an expert and explore his opinions. Clearly under the law in the State of Missouri, Stallings and Ball.

THE COURT: So it sounds like to me we need to hear the testimony from Dr. Bowling as it relates to this and whether or not what his testimony is about this document.

MR. FARRAR: I just want to make something clear for the record. It's absolutely not published. This paper is not published.

MS. PRUITT: Are you talking about Parvizi?

THE COURT: Let's go off the record.

(OFF THE RECORD.)

THE COURT: Record from plaintiffs.

MR. EMISON: Two issues, Your Honor. What we have is the deposition designation up here for the Court's benefit.

THE COURT: I don't have my depos out here.

MR. EMISON: One clarification. There was a question on the first highlight which the Court overruled the objection. And then the ...

MR. TORLINE: What depo are you talking about?

MR. EMISON: It's Van Duren's 414. I emailed

Mary about it last night. One where the objection to the question was overruled but that the objection to the answer was sustained so we have a question without an answer.

THE COURT: Okay got it.

MR. TORLINE: So the question is which one?

THE COURT: Let me clarify. What I should have done is sustained the objection as it relates to page 253 line 23 from "I mean" to 253, 25. So from that - can I mark on this?

MR. EMISON: Yes, please.

THE COURT: I mean there was - because I sustained the following. So the person that says "I meant there was it was a campaign on at that time to draw attention to it by Dr. Augustine." So that portion of the objection is sustained. The "Again, it was a concern by some customers in 2005 was probably more just a concern" is overruled. Does that make sense?

MR. EMISON: Yes.

THE COURT: So the portion of it is this overruled and that's sustained.

MR. EMISON: Bracketed portion is out?

THE COURT: Correct. What else?

MR. EMISON: And so as the Court is aware there's a stipulation between the parties as to the dismissal of Arizant. And part that stipulation was an agreement

between Counsel that 3M was not going to attempt to disclaim liability for 3M's - 3M was not going to attempted to disclaim liability for Arizant's conduct.

The top here is the daily. It's rough. From the opening statement yesterday but here in opening statement Mr. Blackwell told the jury "Now the first model you'd observed with Mr. Emison was created in 1987. They weren't made by 3M at that time. 3M acquired the company itself was making the Bair Hugger in 2010.

I'm paraphrasing because this is not 100 percent but that's when 3M arrived at the scene. And we believe that that suggested that to the jury that 3M is not responsible for the Bair Hugger and the conduct of Arizant in this case.

I've attached a proposed instruction that would attempt to cure that along with the stipulation agreed to by the parties and an email from 3M's counsel telling me that you have our representation that we are not arguing 3M shouldn't be on the hook for liability of Arizant Healthcare LLC and we're asking for it to be dismissed on that basis.

THE COURT: Have you shown the proposed instruction to defense counsel?

MR. EMISON: I haven't. I just got this this morning.

THE COURT: I think that's it's only proper to allow Mr. Blackwell an opportunity to review the proposed curative instruction and then we'll take this up either after the morning break or lunch. May I have that?

MR. EMISON: It's all in there.

THE COURT: If you could just get that to Mr. Blackwell then I will consider it and hear additional argument from you at that time. Do you want to argue it now?

MR. BLACKWELL: No, just a five second clarification. I think we'll be able to work it out. I also want to clarify because at some point Mr. Emison told me he the point that we are response for Augustine, Augustine Medical and Arizant and so on which is also not accurate. so we want to clarify that for jury. So I think this is a good risk to clarify for the jurors.

MR. EMISON: And I two second response to what the stipulation says in predecessor companies.

THE COURT: Think about it. Let's go off the record.

(OFF THE RECORD.)

(JURY IS SEATED AT 8:53 AM.)

THE COURT: You may be seated. Good morning. Welcome back. I hope you had a good evening. We're going to continue the presentation of plaintiff's evidence in the

cross-examination of Dr. Bowling. Sir, I'll just remind you that you remain under oath.

MS. PRUITT: May it please the Court.

CONTINUED CROSS EXAMINATION BY MS. PRUITT

Q Good morning, Dr. Bowling.

2638 A Good morning.

Q I'm going to hand you a copy of your deposition in case we need to refer to it. You were talking to the jury yesterday and you talked about opinions being based on literature, is that right?

A Yes.

Q And you talked about all the literature that you have reviewed to support your testimony, correct?

A Yes ma'am.

Q And some of the studies that you have used discuss the issue or particles?

A Yes.

Q And some of those studies that you reviewed discussed the issue of airflow in the operating room and what that means and what it doesn't mean?

A Yes, ma'am.

Q And those studies actually discussed the Bair Hugger itself, didn't they?

A Yes, ma'am.

Q Now before we broke yesterday we were talking about Dr. Parvizi. Arguably that doctor Parvizi published a white paper with regard to the issue of forced air warming blankets and whether using them leads to increase in surgical site infections?

A at the time of my deposition I was not aware. It was it's not cited in my report. However, it was presented to me as an article that I referenced when I spoke to an article by deposition regarding 2020-21 I believe. In the defense attorney Cory Gordon who was doing the deposition handed me that article and asked me if that was the article that I was referring to. And I quickly glanced at it and said yes.

But then we went into it and I could not find the quote that I was looking for. I think I followed that up by saying that I had not that I still think it was different article something to that effect in my deposition. So that was the actual first time I had seen that article and I do not quote it in my work report.

Q My question is simply this. Did you read it?

A At that moment, no. It was handed to me in the quick deposition. I glanced at it. It did not read it in its entirety.

Q Have you read it since?

A Are to talking about the conclusion, yes, I have read that conclusion.

Q Do you agree that that conclusion of that white paper or do you disagree?

A You're asking me to remember this that I just read within the last few days. I have to be able to see it to read the conclusions to determine exactly what it said. I don't want to ...

Q The conclusion states ...

MR. FARRAR: Hearsay.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. FARRAR: Hearsay.

MS. PRUITT: This is cross-examination, Your Honor. He's read the article. He said he's read it. I'm asking if he agrees or disagrees with the conclusion.

THE COURT: It's insufficient foundation. The objection is sustained.

Q Dr. Bowling, are also aware the Dr. Parvizi has published an article in the 2017 about the prevention of prosthetic joint infection?

A Yes, ma'am.

Q Have you read that publication?

A Dr. Parvizi has published in the last few years probably close to 500 articles. So I'd have to have more than just have a written article from 2017. He was part of the International Consensus of Orthopedic Surgeons and there's a lot

of reference from his information that is in the journal and I read many of those of which he was an author. And so I don't know - I do cite one that the original author I think was Crystal or something like that. And I might not be saying it exactly right. So I would have to see the article to see if I've read that particular one.

Q You said that you cited it. What do you mean by cite the article?

A Those of the articles that were authoritative to my opinion.

Q Since the articles have been attached to the bibliography, those are authoritative in your opinion, is that correct?

A I relied on those articles.

Q In you didn't cite the article from 2017 that Parvizi published on prevention of prosthetic joint infections, did you?

A I can look through. I'll take a minute to look through there.

Q Sure.

MR. FARRAR: Could I have a copy?

THE COURT: Counsel, are you referring to his report?

MS. PRUITT: Yes.

MR. FARRAR: Oh, it's his report. I thought it was an article.

A No, ma'am. The two articles I cited from 13 of 15.
Q So it's correct for me to say that the article that he was the lead author on dealing with prevention of prosthetic joint infection in 2017, you did not put that article in your bibliography, correct?
A Again, I did not see that article in my paper or bibliography.
Q Now I want to talk to you for just a minute about normothermia. Dr. Bowling, do you agree that the purpose of intraoperative warming is to prevent hypothermia, right?
A And the consequences that occur from that, yes.
Q The consequences that if you don't prevent hypothermia can be bad for the patient, right?
A Yes, there are consequences that if you don't prevent hypothermia can be harmful to the patient, not always.
Q Right. And you agree that when the patient's body temperature drops to a certain degree there can be physiological changes that are detrimental to the patient?
A Yes.
Q And you yourself, Dr. Bowling, perform orthopedic surgery. That's only type of surgery performed by you?
A That is correct.
Q You testified in your deposition that you have a lot of experience not warming patients, correct?
A That's correct.

Q That's because you generally warm your patients intraoperatively, right?

A Yes, that is correct.

Q And you warm your patients intraoperatively when they're having a knee replacement surgery, correct?

A That is correct.

Q Or hip replacement surgery, correct?

A That's correct. I generally warm my patients intraoperatively. I just choose to use a safer product.

Q What I want to focus on right now is whether you use a forced air warming product like Bair Hugger or some other product. The point is you do warm your patients intraoperatively, correct?

A I think I have to speak to that. I think the reason I have to speak to that is because I think that that's considered a standard of care. So it would be difficult in today's environment where recommendations are made based on low study strengths and presumed physiological disadvantages or changes that can occur with hypothermia based on dated literature that we didn't do what we do now.

So, therefore, hypothermia was a more significant issue specifically low temperatures in the operating room is lack of using heated IV fluids, the lack of pre-warming patients in the perioperative that we do now a standard of

care that we did not do back in the 1990s and early 2000's.

So, therefore, it has become part of the skipped protocol and part of essentially Medicare's HQEP protocol which are based basically on protocols that are pathways if you will to guide treatment of patients. And so it's hard to not do that as routine so I think we do it.

I think the real question that I think through is is it necessary. That's where I think some of the newer literature is coming out to speak that it may not be necessary.

Q The standard of care today is for orthopedic surgeons all over the country is that they warm patients intraoperatively, isn't that correct?

A No, I think I disagree with that. I think that has an implication of complex problem. I think most surgeons today want to keep patients normothermic. It's not that their standard of care is to warm the patient. It's that the standard of care's is to try to maintain normothermia. It's not warming the patient intraoperatively. It's trying to maintain normothermia throughout the procedure.

Q And one of the ways you can maintain normothermia throughout the procedure is to warm the patient intraoperatively as you do?

A That is correct.

Q Now you hold privileges, sir, to perform surgeries at

two facilities, correct?

A Yes, ma'am.

Q You hold privileges to operate at Novant Orthopedic Hospital?

A That is correct.

Q There was a different name for Novant before this and it was called what?

A New Hanover Regional.

Q So when the jury see documents or hears testimony, New Hanover or Novant, those are the same place, right?

A Yes, ma'am.

Q The other surgery center where you have privileges is I Surg Care, right?

A Yes.

Q The hospital Novant orthopedic is in Wilmington, right?

A That's correct.

Q Wilmington is where you just testified you warm your patients with hip and knee procedures with a warming blanket called the Hotdog, is that correct?

A Yes, ma'am.

Q Now let's talk about the Surgery Center for just a moment. At the time of your deposition the Bair Hugger was what was used to warm patients intraoperatively at the Surgery Center, is that correct?

A That is correct.

Q Now is it your practice, Dr. Bowling, that if the patient falls below a temperature of 36 degrees Celsius that the anesthesiologist at the Surgery Center warms the patient?

A I don't know that is specific to that number. The anesthesiologists have a kind of a protocol. If the patient becomes hypothermic - what I'm trying to say is they don't ask me that number. They don't say, Dr. Bowling, the patient is down 36 degrees, can we turn on the bed. They just do it so I don't know their protocol. I don't know that that's specific to a number or specific to potential physiologic issues.

Q And so if the jury wanted to know what temperature they turn the machine on, you don't know that with your patients?

A No, I don't have that.

Q That is something that the anesthesiologist who is making the determination of the warming decides, is that right?

A In this particular protocol, that is.

Q And at Surgery Center the Bair Hugger is used if the anesthesiologist decides it's time to turn it on to prevent hypothermia, it's used in joint knee joint replacement surgeries and hip joint replacement surgeries, right?

A Currently that answer is yes. As I've testified to them working collaboratively, the anesthesia team tries to help understand the potential risks and to look at alternatives.

Q We just talked about the fact that when you - well let me just start at the beginning. When you induce anesthesia on somebody or give somebody anesthesia, it has a physiological effect with some people on the core body temperature, is that correct?

A Correct. That's not really able to be addressed by the warming devices.

Q And so the effect of hypothermia begins or potentially begins when the anesthesia is given to the patient, right?

A It depends on their core body temperature when they come in. Some people may be hot-blooded. They come in and their temperature is 37 degrees and so that drop doesn't make them technically hypothermic. So it depends on what they come with and the potential drop. Everybody doesn't drop exactly the same. So some drop less than that and some may drop more than that. I think we couldn’t make a blanket statement to becoming hypothermic.

Q I didn't mean to do that. Suggesting somebody - after somebody has anesthesia their temperature, core body temperature drops?

A Yes, ma'am.

Q Now tell the jury what the time is when anesthesia was induced with Ms. O'Haver in her procedure?

A I would have to see the medical record to tell you what time. I think I testified yesterday I did know the exact

time of the induction.

Q Can we put up Exhibit 2638 please, page 40. If you go in and highlight there on the left on the right side in the middle of the page where it says anesthesia -induced blood so the jury can see?

THE COURT: What exhibit is that?

MS. PRUITT: This is Defendant's Exhibit 2638.

So induction starts you see that and it says 1358. If not military and will be 1:56, right?

A Yes, ma'am.

Q What time did the surgery end?

A At 15:38.

Q What about the incision? Defense Exhibit 2638, page 60 please. Look at the bottom. If we could blow that up so the jury can see it. Procedure ends 15:58?

A Yes, ma'am.

Q Not military that is 3:58 in the afternoon, correct?

A Yes, ma'am.

Q So the difference in these two times if my math is right is two hours and two minutes, is that right?

A That's correct.

Q So for the time the anesthesia was being used on Ms. O'Haver till the end of the procedure based on these records that I showed you, two hours and two minutes, correct?

A That is correct. The time of the incision would be

the start time of the surgery. I think that's important to the jury. You told the jury yesterday. What did you tell them? You can look at your medical records.

A I would like to do that.

Q And you could do that when your counsel comes back up and talks to you.

A I just think this is misleading because the surgery didn't take two hours and two minutes - to me it's misleading to me. I'm just trying to be clear what you're trying to show me here. Which I don't know what I've been shown is what I'm saying. I apologize but I don't want to say something that's inaccurate because I'm confused.

THE COURT: Sure, so Ms. Pruitt's job at this time is to just ask questions. So if your attorney or plaintiff's counsel believes that anything has been misled you'll have an opportunity to get it on redirect.

A Yes, ma'am.

Q So Dr. Bowling, the only thing I'm asking you is the period of time that has passed between the induction of anesthesia and the end the procedure based on those records was two hours and two minutes?

A Okay, yes, ma'am. That's clear. Thank you.

Q Now Dr. Bowling, as a practicing orthopedic surgeon in this country, you have become aware in this litigation that the FDA sent a letter to healthcare providers in 2017 about the use

of forced air thermal regulating systems which included the Bair Hugger, right?

MR. FARRAR: Motion in limine.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. FARRAR: We have a motion in limine. We just asked and the Court ruled it as hearsay and not coming in.

THE COURT: I don't believe at this time that a motion in limine has been violated. What I indicated to get in the substance of it in terms of the letter itself and its hearsay. So if you're gonna talk about the content of the letter, the hearsay objection is sustained.

MS. PRUITT: Your Honor, my understanding of the Court’s ruling was that if there was hearsay within the document that it was certainly going to be redacted out. But I didn't have the understanding that the Court ruled the entire letter was hearsay.

THE COURT: I believe the entire letter is hearsay unless you believe there's an exception that applies to it or that it's, in fact, not hearsay.

MS. PRUITT: I misunderstood the Court's ruling.

THE COURT: I talked about this.

MS. PRUITT: Yes, you did.

THE COURT: Because it's been on both sides and I don’t think there's a public record exception here today as

far as hearsay and I don't believe that there is. There's a public records exception to foundation for some documents but there's no public records exception to hearsay. So although it may be a public record then if there's an exception that applies then that's hearsay and my ruling remains the same.

MS. PRUITT: Okay. Your Honor, I just want to clarify for the record. We've gone through the letter again and found what is hearsay and we're willing to redact it out. Then I want to understand that the Court has determined that the entire letter is hearsay.

THE COURT: So I haven't taken - number 1, I have not seen the letter but I've been advised that there's hearsay contained within the letter and that objection is sustained. I haven't seen the letter.

MR. FARRAR: The issue is the letter is hearsay. The only way they could even talk about foundational issue that you brought up is the blue ribbon and we don't have that. So they are just bringing this in and saying here, here's a document without the appropriate foundation.

THE COURT: Th objection is sustained. If you want to take up the redacted version I think you need to show it to opposing counsel and we can take that up. As for now the objection sustained.

(RETURN TO OPEN COURT.)

Q Are you aware that in the course of getting ready for this litigation that there was a letter sent by the FDA?

MR. FARRAR: Same objection.

THE COURT: The current objection is overruled.

A I'm aware of that. Actually, in preparation for this litigation I reviewed the 3M website and it is listed out there. There's a banner at the top that specifically says that it's archived and that the information may no longer be accurate. So yes, ma'am, I'm aware of that.

Q We'll talk about the website in a minute. So you learned about this letter at some point during the preparation for your deposition, correct?

A Yes, through the website.

Q So it's correct for me to say that you didn't consider the 2017 letter from the FDA in formulating your opinions in this case that you said to the jury?

A If I did not write that letter then it was not used by me.

Q But you did know about the letter as a practicing orthopedist, didn't you, sir?

A No, I did not. I did not receive it as a practicing orthopedist.

Q So you didn't use the letter as an expert when you formed your opinions in this case, right?

A If it is not utilized in my work report, I did not use it as an authoritative document for the work report. I reviewed a lot of records. So I can't sit here today and tell you if it was in any of the documents that were provided to meet.

Q Now Dr. Bowling, infection is a risk of any total knee replacement surgery?

A Yes, it is.

Q Whether the patients are not warmed?

A Yes.

Q And you warm your patients to avoid the risk of infection, correct?

A Yes, ma'am.

Q You do everything you can to mitigate the risk of infection, right?

A Yes, ma'am.

Q But you can't completely eliminate the risk of infection, can you, sir?

A We have not been able to do that.

Q And prosthetic joint infection can occur after knee surgeries despite being the best medical care being provided, correct?

A Yes, ma'am, I do agree.

Q Because surgeries cannot be - infections happen because surgeries cannot be completely sterile, right?

A I agree with the statement but I think we have to be

very careful because we start walking a little bit of a thin line and making comments that since we can't fully eradicate things are important. I think things are very important to continue to look at what we do in 2022 is significantly different than what we did in 2000 with respect to trying to mitigate infection.

I think with medicine continues to evolve and I just want to make sure that I'm not agreeing that since we can't make it zero it's acceptable. No infection is acceptable and there can be significant outcome failures from that. So we have to continue to evolve.

Q My question was really simple, sir. I wasn’t implying that we shouldn’t mitigate risk. What I was saying is do you agree that infections happen despite all of our efforts to mitigate when giving the patient the best medical care an infection can still occur, right?

A Yes, they still occur.

Q Would you agree with me, Dr. Bowling, you cannot completely sterilize the skin?

A Yes, ma'am.

Q You'll agree with me that there’s bacteria in the skin below the top layer of the skin, correct?

A Yes, ma'am.

Q That bacteria lives in the follicles, hair follicles and sweat glands that exists below the outer layer of skin,

right?

A Correct, in the dermis layer, yes, ma'am.

Q The sweat glands and their follicles penetrate both layers of the skin?

A Yes, ma'am.

Q So every time you cut down to the joint there's a pathway for the residual bacteria to get to the joint, right?

A There is potential contamination, yes, ma'am. The pathway is - yes, I think there's a pathway to get down to the joint.

Q So let me ask the question again to make sure it's clear for the record. So every time you cut down to the joint there's a pathway for the residual bacteria to get to the joint, correct?

A There is a theoretical pathway. It can still be deposited from wherever the route to the joint. They can't just fall into the holes so to speak. I testified to that yesterday.

Q Those bacteria that you're describing could come from the hair follicles or sweat glands where the bacteria lives, correct?

A They can come from the endogenous source or patient source.

Q When you say from an endogenous source, is that from a patient's own bacteria in their own body?

A Yes, ma'am.

Q That's with regard to the patient. You cannot completely sterilize the operating room either, can you, sir?

A That is correct.

Q That's the reason you give antibiotic prophylactically shortly before the actual surgery is because even when you close the wound there's still bacteria in there, correct?

A That is correct.

Q And you're trying to boost the body's ability to fight off those bacteria from becoming infections, right?

A That's right. We have given antibiotics prophylactically so it's working.

Q So you would agree that all - let's talk about knee and hip surgeries. Every operative wound in your practice once closed they have some bacteria in them, right, sir?

A That's a hypothetical but I think it's a valid hypothetical.

Q Now in forming your opinion you considered - did you consider the bacteria on Ms. O'Haver's own skin as a potential for infection?

A Yes, ma'am.

Q You can't rule that out, right?

A I don't thank you can rule it out. I just think that through the literature review and my review of the deposition of all the providers we've already talked about, that to me it was more likely that the Bair Hugger was the cause rather than the

patient's own skin,

Q The reasons you gave an opinion about the bacteria on her skin is because you looked at the records and you saw that there was a certain type of prep done with regards to the patient's skin, is that right?

A Yes, ma'am, there was a prep done.

Q Let's look at your report which is Defense Exhibit 3521, page 14 please, sir?

A Yes, ma'am.

Q Now if you look at the box that's entitled "Accepted Strategies to Prevent Surgical Site Infections. Prosthetic Joint Infections. Did you look at this in forming your opinion?

A Yes, ma'am.

Q It says, "Ms. O'Haver was prepped and iodine solutions were used. There appears to be no differences between various skin preparation agents if isopropyl alcohol is part of the preparation." Did I read that correctly?

A Yes, ma'am.

Q What is that?

A That's a direct quote that I took from International Consensus of Orthopedic Surgery article that I reference here with the reference 41 which is just for clarity 41 in the journal of 2019. It is my opinion that those are opinions of that group. So I quoted that as their opinion as we consider that to be a guidance. So I don't - for my personal opinion I

think it's important. And I can't state from the record that I reviewed whether alcohol is used or not. I can just state that the prep was listed as iodine scrub.

Q Let's take a look and pull up please if you will Defense Exhibit 2638, page 53 please.

MR. FARRAR: I don't know what it is nor do I have a copy.

MS. PRUITT: It's a medical record that was stipulated to.

THE COURT: Okay guys, come on up.

(BENCH CONFERENCE.)

THE COURT: So I think any comments towards one another should be done up here at the bench. It’s the heat of the battle and I understand. Let's just make sure we’re being respectful of one another.

MS. PRUITT: I'll just refer to it as medical records. I assumed counsel had it because he did use it.

(RETURN TO OPEN COURT.)

Q So 2638 IS medical records for Ms. O’haver. Rick, if you could pull up page 63 please. Do you see the words that say, “Intraoperative product documentation doctrine says alcohol or alcohol-based prep.”?

A I do see that.

Q It says surgical records, doesn’t it?

A Yes.

Q At least no alcohol prep was used with regard to this procedure according to this record, is that correct, sir?
A That is correct.
Q Now the number of people in operating rooms are a major source of increased particles in the air, is that correct?
A Yes, ma'am.
Q You talked about that yesterday, that the number of people affected airflow in an operating room and the number of particles of the air, right?
A That is correct.
Q And the more people that are moving around in the operating room the higher risk of infection, correct?
A Yes.
Q That is because skin sheds are shed by movement. Like skin against fabric, skin against scrubs, skin against gowns, is that right?
A Yes, ma'am.
Q And you testified yesterday that you thought there was some with the change of personnel or when the people switched out, right?
A That is my understanding of reading the records.
Q You told the jury you thought that was a CRNA and an anesthesiologist, correct?
A That's what I thought, yes.
Q You said it appears to be from records, Dr. Bowling,

there was a switch with the circulating nurse and the anesthesiologist. I just wanted to see whether you saw that in the records.

A I don't remember seeing that in the records but I still think that there was only one change. So if it was a different team, it's one thing but I still think there was only one door opened.

Q The door being open to a surgical suite can disrupt the laminar air flow?

A Yes, it can but, typically, the doors open much more than one, that would be extremely disruptive.

Q That wasn’t my question, sir. My question was the opening of a door can disrupt the laminar flow, is that correct?

A To a small extent, correct.

Q The door opening during surgery can be a source of particles coming into the OR the air, can’t it?

A Again, the answer is yes but the reason we use positive pressure, in other words, a pressure in the rooms at higher pressure than outside is basically it flows out to try to mitigate that risk but it is a risk.

Q You have had patients yourself that have developed prosthetic joint infections like that the case we talked about yesterday?

A Yes, ma'am.

Q In the last seven years you've done around you said

4,200 replacements, right?

A In the last seven years that's about right.

Q In that time you estimated that you'd had eight patients that got a periprosthetic joint infection, right?

A That was from my deposition, yes, ma'am, in that ballpark.

Q You don't disagree with that?

A I was not asked to do reviews so that's basically an assessment based on my known infection rate taking a percentage of that.

Q And that’s eight periprosthetic joint infections that you talked about in your deposition?

A Again, there was no pre-could you tell me what the number is so that I can do a little more thorough review. Like I said, I took my infection rate which I do multiply by the number of cases I did and that's the estimate that again that I testified to.

Q The estimate would be eight considering the facts I've laid out with you?

A Yes.

Q Dr. Bowling, you've had zero infections after your knee replacements at the Surgery Center, correct?

A At the time of my deposition, yes. I’ve had one since then but at the time of deposition the answer is yes.

Q It at the Surgery Center at the time of your

deposition you'd had zero infections. And the Surgery Center is a place where you the use the Bair Hugger to warm patients intraoperatively, correct?

A I think in fairness they probably did operating for approximately three years. So under that pandemic I've only done 400 cases so it's not really apple to apple comparison.

Q My question was simple. Of the surgeries you've done at the Surgery Center you had zero infections when the Bair Hugger was used in the Surgery Center to warm patients intraoperatively, correct?

A Correct.

Q Now you haven't used the Bair Hugger at the New Haven Hospital during the past seven years, correct?

A That is correct.

Q Do you use proper sterile techniques in the New Haven Hospital, is that right, sir?

A Yes, ma'am.

Q It's now called?

A Novant.

Q Let me ask again so we can get a good record on this. You haven't used the Bair Hugger at the Novant hospital during the past seven years?

A That's correct. I have not.

Q I know and I presume you're using proper sterile techniques in the hospital, correct?

A That is correct.
Q Be with the eight periprosthetic joint infections you were not using the Bair Hugger, is that correct?
A That's correct.
Q Now sometimes an incision that has been stitched up can come apart for various reasons, can’t it?
A Yes, I testified yesterday to that.
Q You gave your opinion about what you think the reason was in this case, right?
A Yes, ma'am.
Q When the wound starts to separate or open, that's called medical terms the dehiscence, right?
A Yes.
Q The dehiscence are wound openings that can occur because of bent mechanical movement and stress after the staples are removed if it's not fully healed, correct?
A That is the mechanism's nickname. I think in my experience and what I testified to it's for wound healing or infection.
Q That's your opinion. My question is simple. The wound can separate because of mechanical movement and stress after the staples are removed, correct?
A I think it has to have the underlying cause. That's why I explained that. You'd have to have the underlying cause of poor wound healing to occur. I don't think when we take

staples out, the vast majority of patients that were continuing physical therapy don't have spontaneously dehiscence.

Q So you would disagree that just movement based on experience and knowledge base that just movement doesn't cause the wound to separate?

A There Has to be underlying causes for a wound to separate. So I just agree with your statement that just movement doesn’t cause it to open?

Q Let’s talk about the facts in this case. You've read the medical records, right, sir?

A Yes.

Q You know that Ms. O'Haver on December 14 went home after the staples were removed, correct?

A Yes, ma'am.

Q And you know that she got on the machine which is called a continuous range of motion or continuous passive motion?

A Yes, ma'am.

Q That same machine is used when you’re cleared to exercise and you do the exercises after you've had knee replacement, right?

A That's correct.

Q You saw that the records?

A I saw that they ordered it. I don't remember the exact name of it being CPM but I know that's what it is that the

PAs said she was going to do that because of quad weakness.

Q After she did the continuous range of motion she had drainage coming out. Do you recall that in the record?

A Yes.

Q Didn't she have problems with the wound, not just with drainage but with bleeding? Do you recall that?

A Yes, ma'am.

Q Did you see the records where she called the doctor's office, Dr. Ballard's office and said, I'm having drainage and terrible bleeding from the wound, do you recall that?

A I recall that she contacted the doctor. I believe it was that day or the next day the home health told the doctor to say she had a low-grade fever too. I remember that from the records.

Q It was five days after she began to see the drainage before the wound was re-sutured, right, sir?

A That's correct.

Q And at the time you gave your opinions you didn't know - you misunderstood that there was that five-day period where her wound was draining and bleeding, correct, sir?

A Yes. I think there were some confusion when I gave my deposition in the records and dates but we cleared that up.

Q Confusion on your part and I'm not being disrespectful. But you had assumed that when she went in to get the sutures out or had the dehiscence that she was stitched back

up on the same day?

A Yes, that's true.

Q So when you initially gave your opinions you didn't take into account because you couldn't because you didn't know or had misunderstood it that there was a five-day period in between where she was having drainage and bleeding, right?

A That is correct. And also, I'm asking the question just clarifying. I haven't had a chance go back and review that.

Q Now did you also read in the medical records the note where she called Dr. Ballard's office and said I'm having bleeding from my knee and the Steri-Strips have all fallen off because of the bleeding except for four of them?

A Yes, I do remember that.

Q And so after he took the sutures out what you do sometimes is you put the Steri-Strips across the wound, right?

A Correct.

Q And you put it all the way up and down where the wound is? She had like eight Steri-Strips at perpendicular all the way up and down the wound, right?

A Yes, ma'am.

Q And she was telling the doctor that her bleeding was so bad that all of those had fallen off except for four, do you recall that?

A Yes, ma'am, I do.

Q Now yesterday you discussed that - you told the jury that you thought that a joint infection is what allowed the wound to dehiscence or open up. It was either that or the lack of nutrition, right?

A That's correct.

Q There are other things that Ms. O'Haver has had in her medical history that would also cause or put her at higher risk of failure to heal her wound, correct?

A She has comorbidities, yes.

Q And some of those comorbidities would cause her to not heal as well at the wound area, correct?

A I have opinions that I cited in my report regarding those comorbidities. So I can't make a blanket statement regarding that answer.

Q Well let’s talk about them. You testified under oath that high blood sugar affects wound healing, correct, sir?

A Yes, ma'am.

Q You know that Ms. O'Haver had high blood sugar at the time, right?

A Ms. O'Haver’s count was less than 200 which is considered by the International Consensus to be the high levels. So anything below that is detectable. She had low A1C which is the measurement of your long-standing 6.4 which people also are considered to be perfect to proceed. So I don't think that's a significant risk factor for her.

Q She had high blood sugars according to her treating physician and she was a borderline diabetic. You disagree with that?

A No, I don't agree with that.

Q She was also is receiving injections of steroids?

A Yes.

Q Dexamethasone steroids can impact wound healing, can't they?

A If given within 30 days of the procedure, yes, ma'am.

Q And that fact can be magnified in a patient who is also borderline diabetic, correct?

A Again, borderline diabetes to my knowledge isn’t a significant risk factor for an infection.

Q She also was a smoker, is that right, sir?

A She was a smoker, yes, ma'am.

Q And smoking causes wound healing problems, doesn't it?

A Smoking because the nicotine can cause wound healing problems. I do have to say in Dr. Ballard's records which I thoroughly reviewed noted she quit smoking in September of 2015. There's no documentation in the medical records until after her infection that she was smoking. Ms. O'Haver doesn't remember exactly the timeframe that she quit smoking before and after. That was from my review of the records. So I can't see her today and say with clarity whether she was smoking at the time of that surgery or not.

Q And there are some records that suggested she was smoking at the time the surgery. Did you see those?

A No, I'd be happy to look at them. I looked for records to show that. Specifically, the three records from Dr. Ballard and his PA including the preop gives the specific date. That's why they have to put a little bit of weight with it. But I document a specific date that in mine that has more validity than just she quit smoking because why would I make up a date. It's hard to get confused to think she was or wasn't smoking.

Q So it's your testimony that a long-term smoker, if they quit smoking within this period of time the records reflect if that's correct that Ms. O'Haver had quit smoking does it have anything to do with whether someone's wound will heal properly?

A If the records are correct. Again, I can only tell you what I've been able to review that she quit smoking in September of 2015 and she didn't have surgery until November of 2016. That one year would have diminished her risk essentially to a non-smokers risk and has been documented and a well-accepted understanding.

Q So your answer to my question is yes?

A Would you restate the question so I can make sure?

Q My question was is it your opinion that a long-term smoker that has quit at the time before surgery as Ms. O'Haver has that they don't have any problems with wound healing?

A I think that's way too blanket. I think the question that I understood you asked me was that when I would say yes. I disagree with that answer because this to - they may still have wound healing problems and that they have the same risk as a non-smoker.

Q Now do you agree, Dr. Bowling, that bacteria can get into an open would, right, sir?

A Yes, ma'am.

Q And if the wound doesn't heal and it breaks down, that can be associated with a prosthetic joint infection, right?

A Yes, ma'am.

Q When you worked up your opinions in this case we've already established you didn't realize five days had passed between when the wound was open and she had her sutures to reclose her wound, right?

A That's correct. I was confused there.

Q And you know Dr. Jarvis?

A Yes, I do.

Q He's also an expert and the jurors are going to hear from him?

A That's right.

Q Did you read his deposition in this case?

A Yes, ma'am.

Q Did you notice that Dr. Jarvis made the same mistake?

A The spark for the confusion probably came from because

we reviewed all the depositions and the medical records and the medical records are little confusing.

Q So both you and Dr. Jarvis, another one of the plaintiff's experts, when you gave your opinion in this case both of you didn't realize that the wound had opened and remained open for five days before she saw her doctor, correct?

A The skin but yes. We both did not recognize that.

Q Now you have testified to the jury that not every operative wound becomes infected, right?

A That is correct.

Q Any you also stated in your report that morbidity can create and predispose the patient to infection with or without interactive warming, correct?

MR. FARRAR: Motion in limine, Your Honor.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MS. PRUITT: Certain comorbidities can predispose the patient to infection with or without intraoperative warming. And he put that in his report as part of his report.

MR. FARRAR: The report doesn't say that because it's not so because of the infection.

THE COURT: Your objection is overruled.

(RETURN TO OPEN COURT.)

Q My question was certain comorbidities can predispose a

patient to infection with or without intraoperative warming, correct?

A Yes, ma'am.

Q And you identified in your report that smoking is a comorbidity that could put Ms. O'Haver at an increased risk, right?

A Yes. Smoking could put anybody at an increased risk. If she was smoking at the time she would be at increased risk.

Q I want to talk to you for just a moment. Are you aware that Ms. O'Haver gave sworn testimony? Did you read her deposition?

A No.

Q So when she gave sworn testimony I asked the question "Were you smoking at the time Dr. Ballard replaced your left knee" and she said "Yes." Were you aware of that fact?

A I'm not aware of that fact.

Q Now you identify in your report obesity is one of the comorbidities that could put Ms. O'Haver at increased risk for infection, right?

A I did document that, yes, ma'am.

Q And the jury heard you yesterday talk about what obesity means. Not to be disrespectful but obesity is the medical term, correct?

A Correct.

Q The ranges of numbers on the scale. Some people don't

like to look at it because you might not think the new figure, the number is out and all of a sudden, you're like well, where is this going. But it's a medical term, right, sir?

A That's correct.

Q And she had a BMI which is body mass index over 40, correct, at the time of surgery?

A Yes, ma'am.

Q That would be the category of morbidly obese?

A Yes.

Q Are you a member of the American Academy of Orthopedic Surgeons, sir?

A Yes.

Q And do you agree with the American Academy of Orthopedic Surgeons that there is moderate strength evidence that obesity is associated with an increased reason of infection?

A I do. I think there's more current literature that indicates that the location of the obesity is much more important than the number of BMI.

Q And does the American Academy of Orthopedic Surgeons position talk about where the body fat is located in their guidelines?

A Well I don't have the guideline memorized in front of me so I can’t specifically say that or not. I know the literature is relatively new in the study that I'm referring to.

So I don't know if they say that are not.

Q But you agree with me that their guidelines or their statements asserted are moderate?

A Yes, there's moderate strict evidence the way the BMI for the location of the adipose tissue because of the thickness of the adipose tissue that increase the infection, not the fact that somebody may be obese in their waist.

Q Now you also identify in your report and I'll refer you to page if you'd like to look at page 14 of your report. Defendant's Exhibit 3521, page 14. And you've identified that one of the top two as diabetes in you report as one comorbidity that could put Ms. O'Haver at increased risk for infection, correct?

A Yes. It specifically states when poor glycemic control is the risk, not the fact that you have type II diabetes is not a respecter. Poorly controlled diabetes which would be indicative when either blood sugars are greater than 200 which I've testified to as a well accepted principle or that you would have a A1C over seven which I testified is a well-accepted principle.

Those are the risk factors that we use to determine if a patient has a higher risk.

Q I want to make sure so that we understand this or there could be other doctors testifying today that you don't believe in this case even though you put it down as a

comorbidity such as diabetes in your report as a comorbidity increased risk. You said that your report on page 14.

A I don't see that on page 14 where I say anything about that she is at high risk because of the type II Diabetes.

Q I didn't ask you that. I was asking if you put it in as a comorbidity for her?

A It was a comorbidity. That's what I'm trying to explain. The fact that you have that as a comorbidity but that comorbidity by itself does not increase her risk. Uncontrolled diabetes whether it be Type II or Type I, that determines your risk.

Q So the jury can be clear, it's your opinion that Type II diabetic is not an increased risk for infection if they've had this disease for years and they happen to be, as you call it, controlled at the time of surgery, that that does not increase risk of infection? That's what you're telling the jury?

A That's my opinion.

Q You're aware that her doctors considered 6.4 A1C to be prediabetic, right?

A That's correct.

Q She was eventually diagnosed with full-blown diabetes, right?

A That's true.

Q Now Ms. O'Haver had to stay in the hospital after the

surgery, correct?

A Yes, ma'am.

Q That would be considered as a longer hospital stay for this procedure, right?

A That's true.

Q The reason that happened is because she had intubation and there were some problems with swallowing. Obviously, the doctors should do the job they did once there was swelling that could prevent her from being able to breathe?

A That's right.

Q So you had the knowledge that a longer hospital stay might put a patient increase risk of infection, correct?

A It puts them at increased risk of infection but the bacteria still has to get down to the joint.

Q Of course. So in her case she was admitted to the hospital on November 29 and discharged on December 9th, right?

A That's correct.

Q Now you know from the medical records that Ms. O'Haver was treated with dexamethasone right after surgery, correct?

A That is correct.

Q Right after surgery before she was discharged and went home?

A Correct.

Q And dexamethasone is a steroid, correct?

A Yes, it is.

Q The reason they gave her that steroid is because it decreases inflammation because they're worried about her breathing in case there was a problem because of the intubation issue, right, sir?

A Yes, it was a risk, yes, ma'am.

Q And dexamethasone can suppress immune diseases, where some other mechanisms can't. Dexamethasone suppresses the ability to fight that infection?

Q As you told the jury yesterday, that part of this equation involved a host – that meets the person's immune system has something to do with it somewhere you said between persons and all of these factors, right?

A That's correct.

Q And in this situation the immune system is in the war and you said dexamethasone which might affect her belly or her immune system, correct?

A Right, that's what I'm saying. That treatment with the dexamethasone diminished her body's immune system but there was still bacteria at the prosthetic level to create infection. Just suppressing your immune system doesn't cause infection. Comorbidity still can cause infection. The infection has to be there and these comorbidities might influence the outcome of the war so to speak.

Q So you told the jury yesterday and you explained to them several things that compromise someone's immune system. In

this situation one of those things for Ms. O'Haver that compromised her immune system would be this dexamethasone, correct, sir?

A Yes if we assume and we accepted that she has an infection that dexamethasone created and diminished her ability to fight that infection. Yes, that's what I testified to.

Q I want to talk to you for just a minute about her – the last procedure that she had was January 2nd, 2017, correct, sir?

A Yes, ma'am.

Q She's had no other procedures on her left knee since January 2 of 2017, right?

A No more surgical procedure. She did have an aspiration procedure but no other surgical procedure.

Q So if my math is right that's about five years later that you're examining her, sir?

A That's correct.

Q I'm not meaning to be disrespectful but you couldn't learn anything just by examination of the cause of infection when you examined her five years later, right?

A Well so I disagree with that statement. The reason I disagree with that statement is because I think we as experts when we are asked to render an opinion it is important to take all the information that you can. So not only the information in the records – and, yes, you're correct that the physical exam

that I provided to her at the time didn't add to the ability to make an opinion as to surgery. But the history of the present issues, the discussions I had with her, the conversation of how this process occurred, what happened to her in 2017 from her words I think were valuable in helping render an opinion.

Q I'm not suggesting they were invaluable, sir. My question is you could you learn anything by your physical examination of her about the cause of her infection five years later?

A No, not by the physical examination.

Q Now I went back and checked because I wanted to make sure that the doctor that I referred to in my examination yesterday is Dr. Bryan Schultz, a sports medicine doctor.

A No, that what I testified to yesterday and still today and that's why I accepted your comment that he was a primary care doctor because I didn't know who he was and I could not find that in the records.

Q So if the records reflect that Dr. Bryan Schultz is a sports medicine doctor, that would be something he does treat in looking at people recovering from joint infections, correct?

A All orthopedists would be appropriate to evaluate someone. So I don't know that his training and expertise or what his interests are as I testified to what mine are, I don't know what his are. So that yes, he would be appropriate to evaluate someone, yes, ma'am.

Q Now in your report you discussed something called the 2018 International Consensus in the report, don't you, sir?

A I do.

Q So the 2018 International Consensus is a meeting that orthopedic surgeons and other specialty doctors meet together and are invited to come and look at an array of issues about joint infections and periprosthetic joint infections. And that was done in 2018, is that correct?

A It is an invited group of people. It's not open to just the public orthopedic surgeons.

Q Sure. You're familiar with this group, right?

A Well yes, from the reporting in the Journal of Arthroplasty which I commonly read.

Q When you consider the journal about the process being a journalist it’s not authoritative because each article has to be supported individually, have you looked at this article and renewed your opinion?

A Yes, ma'am.

Q And you cited from it in your report?

A Yes, ma'am.

Q Are you aware that this group constituted a gathering of 400 doctors from over 50 countries reviewing the literature on joint infections?

A I'm aware of that is the total number. Also, where from Dr. Mont's testimony that in each individual category there

was not typically all 400 people. In fact, it was often as small as 40 people. I think he testifies in the one he led there were approximately 40 people in his group. So it's a much lower number than might be known to a person reading it like myself when I originally read it.

Q So Dr. Mont was one of the orthopedic surgeons in this country that was invited to attend this International Consensus, is that right?

A That is correct. He publishes a lot of papers and I think it's mostly academic requirements.

Q And in this particular 2018 consensus, you were not invited to participate, were you, sir?

A No, I'm not active in itself nor was I invited to participate. I don't publish.

Q Of the 2018 International Consensus Group developed a consistent statement on the post-pervading infections, right?

A Yes, they render opinions as to what they think are best care pathways.

Q So you're familiar that the consensus is represented by groups that send or someone is invited like the American Academy of Orthopedic Surgeons, correct?

A I can't to testify that. I don't know enough about if that's what happened or not.

Q During the review of the entire paper you didn't see which organizations participated?

A I did not testify that I reviewed the entire paper. I think it's somewhere around 400 pages. I did testify to the size of the paper. I specifically focused on issues that were pertinent to this case. Those reviews and those that I cited I didn't see anything about representatives who were invited.

Q Are you aware, Dr. Bowling, that that group of 400 doctors includes infectious disease doctors?

A Yes, I am aware.

Q It includes a microbiologist?

A I don’t k now that. Again, I can't testify that I specifically know but I do know infectious disease.

Q It includes anesthesiologists, correct?

A Again, I don't know that.

Q Pathologists, correct?

A Same answer.

Q And you know that this considers the question about forced air warming, right?

A I did and I reviewed that as well as the rationale in the article that I referenced.

Q And you have a copy of one of the papers that were published as the results of that 2018 International Consensus. Is this the paper you're referring to in your report?

MR. FARRAR: Your Honor, can I get a copy?

MS. PRUITT: Sure.

A I'm just checking my bibliography to be sure. Yes,

ma'am. I don't specifically cite it but it is listed.

Q And you discussed it?

A Again, if I told directly from the - but there's information that you glean from the article that you may not specifically cite.

Q It may have been already something of the policies already mentioned to the jury that you as an orthopedic surgeon try to keep up with, right, sir?

A Yes, I feel it's a good article.

Q To now on the first line of the author do you happen to know that is? Exhibit Number 3501. Do you know who Laurie Barnes is?

A I do not.

Q He's an orthopedic surgeon? And if it’s better for you please turn to second page to see if you can place her. These are the questions that the International Consensus voted on at this meeting. Would you agree with me about that?

A The subset that were involved in this I would agree with. It was not the entire consensus.

Q Okay. Question two is “Does the use of forced air warming during orthopedic procedures increase the risk of subsequent surgical site infections or periprosthetic joint infections?” Did I read that correctly?

A Yes, ma'am.

Q And the recommendation from the International

Consensus says, "There is no evidence to definitively link forced air warming to an increased risk of surgical site infections or periprosthetic joint infections. Alternative methods of warming can be effective and may be used" and there's a vote. The fellows agreed to that statement, 93 percent agreed to the question and to the recommendation. Two percent disagree. It was a super majority is a strong consensus. Did I read that correctly?

A Correct.

Q Now you disagree with this recommendation?

A I think - you have to take everything into consideration. And so I feel that there is evidence to link and I would take the word definitively out because I don't think we have definitive evidence but there's evidence to link the Bair Hugger with surgical site infection. So with that statement I disagree with this, yes.

Q So if you were voting - if you had got invited to the International Consensus and you were voting on this question and this would be the recommendation. There is no evidence to definitively link forced air warming to an increased risk of surgical site infections or periprosthetic joint infections, would you vote agree, disagree or abstain if you were voting?

A If I were invited I would've brought the information that I have which is not included in the rationale. And possibly due to the fact that one of the major sponsors for this

is 3M. So the information here is not indicative of the literature that was available that could have been brought at the time. So if I was a voting member I would've said there's more information that I think we need to consider and I would like this information considered.

The answer to your question is I would've voted against it but hopefully I could've at least brought that information so that the opinion - this is simply an opinion of these people who we don't how they - how many were there and we don't know their background for this.

Q So your vote would've been disagree?

A Against, yes, I would have disagreed and you could mention something, whatever the answer is. Under the impression that the International Consensus in 2018 did not review all the literature concerning a link or definitive link between forced air warming and increased risks of infection.

I have you seen emails that have indicated that 3M was involved in the writing of this consensus opinion.

Q Let's look at question four on page 4 of the articles for this perioperative warming and the affect and the rate of subsequent surgical site infections. This is a recommendation. Based on that data from general surgery and other surgical disciplines is normothermia important?

A It has been found to be an important factor during the perioperative period to minimize the risk of subsequent

infections.

Q "Although evidenced during orthopedic surgery we recommend that normothermia is also maintained in patients undergoing orthopedic procedures." It was no 97 percent. It was unanimous the strongest consensus. Do you agree with the recommendation that I just read?

A Yes because normothermia is what we're trying to achieve. There are multiple ways to achieve normothermia using forced air warming. If that was the answer I would not have agreed with that.

Q Then you would agree with this statement that normothermia therapy has been found to be an important factor during the perioperative period to minimize the risk of subsequent infections?

A Yes. I think normothermia is - I would agree with that statement. Whether that amounted to an opinion, I would agree that statement. I would add to that specific studies in orthopedic surgery needs to be considered and they were not in this consensus.

Q The consensus opinion says there is a recommendation that normothermia be maintained in patients undergoing orthopedic procedures. You agree with that, don't you, sir?

A Yes. I think I've testified to that. Normothermia is important.

Q Look at question 8 for me please, sir, on page 7.

Question 8 is "Are light handles a source of contamination during orthopedic surgery?"

Do you recall the demonstrative that we put up that you and I both talked about yesterday?

A Yes, ma'am.

Q Did you see in the top that picture the lights?

A Yes.

Q At the top of the lights this question is referring to light handles.

A Yes, it's the light handles.

Q The handles because the surgeons move those things around depending on where they're going to see what they need to see?

A The reason it's important is light handle covers change for every case. So light handles are different from the actual light.

Q Let's go back to question 8. "Are light handles a source of contamination during orthopedic procedures?" The recommendation is "Yes, light handles are a possible source of contamination during orthopedic procedures." Did I read that correctly?

A You did.

Q And if you were voting you would vote yes, light handles are a possible source of contamination in orthopedic surgery, right, sir?

A Yes.

MS. PRUITT: May I have a moment, Your Honor.

THE COURT: You may.

MS. PRUITT: I'll pass the witness, Your Honor.

Thank you very much for your time, Dr. Bowling.

A Thank you.

THE COURT: Redirect.

REDIRECT EXAMINATION BY MR. FARRAR

Q Good morning, Dr. Bowling.

A Good morning.

Q I want to start with how we met. You were asked if you worked on cases with me.

A I was treating physician for a patient that I referenced in my work product. Her name was Ms. Reddick and she had had a burning hip resurfacing, which at a point around 2015 the company recognized that the product was failing and voluntarily recalled that product.

It became a class-action lawsuit and I was her treating physician and that's the only time I've testified.

Q Before yesterday was the only time you've ever testified at trial?

A That's correct.

Q You're not a professional expert?

A No, I've only done a few of these cases. Like I said,

this is the first time I've testified as an expert as opposed to a treating physician.

Q Like Dr. Ballard. You are like Dr. Ballard in that case as the treating physician?

A Yes.

Q You answered questions yesterday about whether you are an infectious disease doctor. You're not?

A I'm not.

Q Do orthopedic surgeons diagnose and treat infections?

A Yes.

Q Something that is done all around the country?

A We work very close with our infectious disease doctors. They assess what we saw at the time of surgery. They formulate the treatment plant. So if what we saw at the time of surgery was her necrotic tissue and the fluid, if it appears to involve the joint makes a difference in how they treat the patient. So we really have to work closely with them.

Q You were asked about Ms. O'Haver's infection?

A Yes.

Q Do you know who Jeffrey Dahmer is?

A Yes.

Q Did he kill everybody he came across?

A No, there were several that he was involved with that actually escaped.

Q The point is he doesn't have to harm every person

every time to be unsafe, right?

A That's correct.

Q You don't expect the Bair Hugger to cause an infection on everybody every time?

A That's correct. Hopefully we do a good job at mitigating a lot of risks.

Q You were asked a question about despite best medical practice you can't eliminate infections, right?

A Yes.

Q You told the jury – the jury was told that this device is used in 9/10 orthopedic surgeries?

A I was unaware of that.

Q Does that explain why despite this best medical practice we can't seem to eliminate the infections, part of it anyway?

A Well that's kind of what I was trying to explain a little bit earlier. And that is when physician statements are made by organizations based on potential physiological principles. In other words, we know if a patient becomes hypothermic there can be physiological consequences. You're going to be shivering. You could have some physiological things that happen and those can be bad for surgery and recovering from surgery. But we – itself we say well okay because we know physiologically we should make everybody warm and they will use data that is extrapolated from historical timeframes so what we

did in 1996 is not what we do today.

Q And you stated that came from a different subspecialty that doesn't have prosthetic joints. That's the key to prosthetic joints is this is really significant.

A Yes, which could contaminate but there's a prosthetic joint, when bacteria can make a catastrophic outcome. So the answer is if you use data that's old and if you state that has some kind of a correlation but you make a physician statement that says every patient should be warmed and the Bair Hugger's the way to do that, it becomes very hard to do truly randomized controlled studies because you would basically be going against what's considered the physician statement for the standard of care. So as a surgeon or as a scientist that’s currently up with the study it's very difficult to do.

That's why I had the opportunity to read the study just that really came out in May of this year and that I didn’t have access to it at the time of my deposition because it come out after my deposition. But I think it's important here because basically he did a study to look at this and it was collaborative with the University of the Cleveland Clinic in China and used 99 percent China representatives.

The reason he did that was because you couldn’t probably do that study predominately in the U.S. because it’s considered not the standard of care. So I think it puts an onerous scientist to be able to come up with good studies that we look at letting

people become a little hypothermic and what they really do.

And I think he showed that it really doesn't influence his surgery. Is not actually joint replacement. It was G.I. surgery but not in a cardiac suite.

MR. FARRAR: May I approach, Your Honor.

THE COURT: You may.

Q Is this the study that you were describing from this year?

A Yes.

Q This is Exhibit 2022. The study here is discussing the social setting that you were discussing. Can you tell us what was the study about?

A Essentially, what they did is they did a randomized trial and they took these patients who were not obese. They took these patients who were 60/40 female to male and they had G.I. types of abdominal type procedures. What they did was in the two arms of the study was they warmed to 37 degrees and in the other they allowed 35.5 which 36 is considered the baseline of hypothermia. So anything below that is hypothermic.

Then they studied their outcomes and what they found was that there was really no statistically significant difference when they looked - in fact, it wasn't significant that the ones that were a little bit hypothermic actually did a little better than the ones who were warmed at 37 degrees.

Q Would you turn to I guess page 1808 on the very

bottom, the chart?

A Yes.

Q 1808 on the bottom right?

A I got to 1805.

Q You're right. "Aggressive warming is 35 degrees and 35.5 is the baseline." Do you see that?

A Yes, sir.

Q Under secondary outcomes this is the thing we heard regarding surgical site infections. "Transfusion requirements, re-admission, median length of hospital stay." Which one do patients do better at, the 35.5 degrees or the aggressive warming?

A That's what I get. They did better at all of those parameters that you just mentioned surgical site infection, transfusion requirements, re-admissions. They did better at slightly hypothermic with routine warming to 35.5 versus the aggressive warming at 37.

Q If they checked a patient's temperature and then it did decide to drop to 35.5 that would kick a little heat on?

A That's correct because that what they do at the Surgery Center.

Q The Surgery Center, it's not like most places where they just turn this thing on and it runs the entire surgery, correct?

A Correct.

Q Some of their patients it is never turned on for?
A I testified to that in my deposition. I don't know the percentage because again, this is something that says we need to turn it on. I'm sure there are ones that had it turned on early and ones that didn't have it turn on at all. Hopefully, most of all are in the middle and we do a good job prewarming so hopefully they don't get to 35.
Q And you talked about that you are trying to work collaborative to stop using the Bair Hugger, correct?
A Right.
Q Is that information that you have that you can't share with us?
A Yes.
MS. PRUITT: Objection, Your Honor. May we approach.
THE COURT: You may.
(BENCH CONFERENCE.)
MS. PRUITT: I think the ruling was made that he couldn’t talk about this yesterday.
MR. FARRAR: You said if she opened the door by discussing who does use the Bair Hugger, that opened the door.
THE COURT: But that's a decision for me to decide, not for you to decide.
MR. FARRAR: I have to ask the question, Your

Honor.

THE COURT: If you think the door has been opened it's proper that you approach that Court and ask that. I don't believe their questions opened the door. The objection is sustained.

MR. FARRAR: Understood.

(RETURN TO OPEN COURT.)

Q There was a review in this specifically regarding orthopedic patients also, correct?

A That's correct.

Q And how do orthopedic patients do with aggressive warming compared to the routine care?

A Again, they did better with the routine care.

Q We see this little ball across the line. Under here what does it say?

A "Favors routine care."

Q Orthopedic patients in the 2022 study says let's not over warm the patients, right?

A Right.

Q Specifically the PDX?

A Right. Partly to do with the surgeries are shorter and that potential for temperature loss is less.

Q So you know it isn't routine in China for patient warming?

A I do know that.

Q You testified and I just wanted to make sure. Comorbidities cannot cause infections, right?

A That's correct.

Q Why is that?

A Because the infection has to require the placement of a bacteria at a level whether it's superficial or deep organ and we call that periprosthetic joint infections. So the bacteria has to actually get in it. Comorbidities may affect how the person or host can fight that infection but they don't cause infection.

Q You look yesterday at the 750, correct?

A Correct.

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: This is redirect examination. I didn't ask them any questions about the 200 model or the warnings or anything. I didn't ask him one question. That's why he's outside the scope of my cross.

MR. FARRAR: She talked about 750 and she talked about comorbidities when ...

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So Dr. Bowling, the 750, does it have any wording that says don't use with obese people?

A No.
Q Does it have any warnings that say don't use with smokers?
A No.
Q Is there a warning that says don't use with people who may have diabetes?
A No.
Q I want to talk about the wound opening up and the five days. Can you pull up the medical record, Exhibit 1542 please and go to the second page. Doctor, you have this in Tab 12 of your notebook. You see under Plan, what is it says in his history of total left a replacement. Percocet and the dosage and talks about notes per Dr. Ballard, her incision looks good just the dressing on the incision? The date is December 14, correct?
A That's correct.
Q So 16 days or so after the surgery?
A Yes, 15 days.
Q You were asked about some comorbidities like smoking and diabetes. Does it appear that those comorbidities had any negative effect on Ms. O'Haver's wound care?
A Yes.
Q Her wound is looking good, right?
A That's correct.
Q Why did it break open?

A Those happen - when you look at the wound all you can see is the skin. When we sew the skin together you don't really know what's going on below. So the effect of which is my opinion and still hold is that the infection started down below so slowly it was coming towards the surface. And as it does it starts to separate tissues from the bottom layer to the top layer. So the last layer to open will be the skin. Once the skin opens, now you have a deep affection that has kind of manifested itself.

Q So the fact that the wound was open for five days before she went back to Dr. Ballard is when she got her infection?

A No.

Q If the infection starts with the skin and goes down to the joint, does it have to tunnel its way down?

A Yes.

Q Is that something that doctors could see?

A It’s called a sinus tract.

Q Sinus tract?

A Sometimes in the tunnels you can actually see the prosthesis.

Q Was there any evidence of that in her medical records?

A No.

Q Does it help indicate that the bacteria caused an infection and got there during the surgery?

A Yes.

Q You were asked about some literature ...

THE COURT: We're going to take our morning recess. We're going to recess for 20 minutes until 10:50.

(INSTRUCTION READ.)

We'll be in recess until 10:50.

(BREAK WAS TAKEN AT 10:29 AM.)

THE COURT: Counsel one of the things I want to ask about is this study that was Defendant's Exhibit 2022, is that right?

MR. FARRAR: Do I have the wrong exhibit number? It may be Defendant's 2222. I'll find it and get the right exhibit number.

THE COURT: That would be great. We just need to be correct regarding what that is because I have 2022 as a series of letters and numbers.

MR. FARRAR: The number is clearly wrong. So when I put it up ...

THE COURT: Mr. Blackwell, if you want to go ahead and make a record regarding the issue that you brought up before we began this morning.

MR. BLACKWELL: Yes, Your Honor. Your Honor, the record I would like to make it relates to the trial testimony of Dr. Elghobashi who I understand will be the next witness up today. Last night at 10:30 I received from

the plaintiff's counsel three PowerPoints purporting to be in support of the testimony that he is going to be giving today. I didn't see them until this morning. I tend to go to bed early and get up early in trial. So I saw them this morning.

We had made many efforts to get a timely disclosure for his being called pursuant to the Court's orders for discloser of witnesses and what will be supporting these witnesses. But I have some concerns beyond it and it has to do with the ability to be prepared to address what's in these three things.

In addition, there's another deposition clip from March 23rd that they want to use with Dr. Elghobashi although he clearly states in his deposition testimony for this case that he did not read any deposition testimony. That he did not do but just a minimum amount of work for this case which consisted of getting dimensions of operating room number eight.

We were told that he would be relying on the report he gave in the MVL case and the report was from the MVL firm I think in 2017, Your Honor. So I wanted to just explain what we had gotten and what the issues are.

MS. ZIMMERMAN: Just for the Court’s sort of edification, we produced a copy of the first PowerPoint to counsel on March 23rd.

MR. BLACKWELL: I wasn't finished.

MS. ZIMMERMAN: I'm sorry.

MR. BLACKWELL: So to be clear, this one dated March 23rd, Your Honor, dated March 23rd was the deposition for Dr. Elghobashi which was on March 24th, the next day. This is not produced until after that deposition. That wasn't produced on March 23rd of the 24th. So we didn't get to depose him about this at all. It is produced after his deposition.

In his deposition he said he was not aware and hadn't prepared anything at all. So I saw it this morning, the first time I saw it.

Now counsel says that they updated this document with the second one which is dated September 28th, just yesterday. It contains updates for this one. As Your Honor can see, it's called *The Effects of Forced Air Warming on Pathogens Dispersion in an Operating Room.*

Doctor Elghobashi is a mechanical engineer. He has no medical training whatsoever. So how is he going to look at a PowerPoint discussing pathogens is a mystery. And they certainly haven't been able to examine him as to what basis he has for discussing pathogens among other issues.

And the third is dated even today an *Introduction to Turbulence.*

Now counsel did say and I take their word that they

meant for this to be on the exhibit list as Exhibit 1619.

MS. ZIMMERMAN: 1612. My apology if it was wrong.

THE COURT: So 1612.

MS. ZIMMERMAN: Yes. I have to put a new number because there is a 1612. I do want talk about PowerPoint that was disclosed to Mr. Blackwell's team in 2018 is really just to sort of try to explain a very complicated engineering principle to the jury so it's not new.

MR. BLACKWELL: You told us yesterday it was Exhibit 1619 and that's what 1619 actually was. So it's unrelated to Dr. Elghobashi. In any event, I'll set aside the March 23rd one because that's been updated by the other two.

The concerns we have from a preparation point of view is that it raises subject matter that not only is beyond the scope but we've had no opportunity to question him about. And some of the topics in this September 28th update were on the ones we looked at this morning.

THE COURT: I feel as though I have a good good idea that I'm not inclined to allow the September 28 or September 29 in but counsel can try to convince me otherwise.

MS. ZIMMERMAN: Thank you, Your Honor. I think as much as Dr. Bowling was allowed yesterday to walk through a

video just sort of explaining to the jury from a demonstrative standpoint, that we would offer this as an aid in Dr. Elghobashi's testimony to the jury about sort of what are the foundational things that he brings into the courtroom.

We need to know about what he does to understand what he did in this case. So as Dr. Bowling and other experts will be able to say here's what I do. Here's what any surgeon looks like.

Dr. Elghobashi, he would explain what is particle movement and turbulent flow which is something that took a lot of work for me to sort of understand. It's certainly beyond the scope of our team's general understanding. So what we're trying to do is teach the jury about what that is so they can understand what he did in this case. All this information has been well known to counsel but also for years at this point.

THE COURT: Given the dates and the fact that it was not disclosed in a timely manner, the objection as to the PowerPoint's first September 28th and September 29th are sustained. The March 23rd I will allow inquiry into that.

MR. BLACKWELL: The March 23rd one we also just got, Your Honor.

THE COURT: I think that that was not agreed to

by the defendant. So what's defendants position as to the March 23rd?

MS. ZIMMERMAN: What he says is he just got it. We produced it the day after his deposition.

THE COURT: I haven't seen it but it was produced. So you'll have the opportunity if you so choose to revisit your deposition with the doctor.

MR. BLACKWELL: Your Honor, I'd like counsel to show that that was produced the day after his deposition was played.

THE COURT: I've got to stop you guys. So I've got if Gail - we've gone for 10 minutes of a 20 minute break. So that's - let's go off the record.

(OFF THE RECORD.)

THE COURT: We're outside the presence of the jury.

MR. FARRAR: We want to talk to Dr. Bowling about the International Consensus the confidential information, how they can fairly say there's information in internal company documents.

MS. PRUITT: Just like the last objection, he's trying to do that again. The Court has already ruled he can't do that and I don't think I've opened the door for that.

THE COURT: The Court will allow that inquiry.

Mr. Blackwell.

MR. BLACKWELL: Your Honor, I think we worked through what remains from the 23rd so nothing else on that.

I did also want to raise the issue of the plaintiff's clips for use with Dr. Elghobashi.

MS. ZIMMERMAN: We don't plan to play clips with him.

THE COURT: Progress made.

MR. FARRAR: Could I hand this to the court reporter so she doesn't have to transcribe it?

THE COURT: Sure, perfect.

(JURY SEATED AT 11:04 AM.)

THE COURT: You may be seated. We will continue with the redirect of Dr. Bowling. And, sir, I'll remind you that you remain under oath. Counsel.

CONTINUED REDIRECT EXAMINATION BY MR. FARRAR

Q Dr. Bowling, under cross-examination as to questions about your bibliography and articles of literature that you relied upon?

A Yes, sir.

Q I'm going to hand you Exhibit 1753 and just confirm that it's on your bibliography please?

A Yes, it is.

Q If you would turn to page 3.

THE COURT: Can you remind me of this exhibit number?

MR. FARRAR: 1753, Your Honor.

Q And if you would read the portion I have highlighted?

A "One of the major concerns that have been voiced recently about forced air devices is that they have the potential for increasing contaminants at the surgical site and an increase in infection rates around commonly performed procedures such has the hip replacements and would be a devastating complication.

The concern about increased infection risk is based on the fact that forced air devices have been shown to generate convection current in the vicinity of the surgical site. This convection current could disrupt a system designed to prevent infection.

One study looking at this issue in particular demonstrated that forced air devices disrupt ventilation air flows over the surgical site while conductive warming devices had no demonstrable effect in devices like a Hotdog."

Q Conductive devices as opposed to forced air warming devices?

Q This is basically the opinion I gave to the jury yesterday, right?

A Yes.

Q If you look at the front cover are these your conclusions on the first page?

A Yes.

Q Can you read the last sentence under "Conclusions."

A "Those involved in perioperative care should be familiar with conductive heating devices as a potential alternative to traditional forced air devices."

Q Conductive devices blow air?

A Yes.

Q I'm handing you Exhibit 1754 and ask you again to confirm. That article that I just had you read, what's the date?

A The date is 2018.

Q What's the journal that it was published in?

A Journal of Anesthesia and Surgery.

Q Is that a major journal in the medical world for anesthesiologists and surgeons?

A I would assume so. I don't know specifically.

Q I'm handing you Plaintiff's 1754. Another article in the Journal of Anesthesia and Surgery, correct?

A That is correct.

Q What is the date?

A 2018.

Q Now to be fair, this is the forced air warming but this is not a Bair Hugger. It's a different product from a

different company, correct?

A That is correct.

Q But it is forced air warming, correct?

A Yes.

Q Looking at page 3 there's a paragraph I put up on the screen. Could you read that for us?

A "There is another issue that underscores the importance of finding an effective alternative to forced air warming. Forced air warming systems have been shown to produce warm air with the consequence of disrupting operating room air flow and contaminating the surgical field. The clinical concern is especially severe and implant surgery where a single airborne-bacteria can cause an infection. The U.S. Centers for Disease Control and Prevention recently issued a warning: "Nothing that blows air …

MS. PRUITT: Objection, Your Honor. It has to be taken - given the Court's warning. He put it up there in violation of your ruling that that statement from the CDC nothing that blows air should be an operating theater if possible. You kept that out specifically. And for him to try to use it on back door to get that language in when it was ruled upon is improper and I object.

MR. FARRAR: He wrote that CDC, that document actually for the CDC. Your ruling was that document is a CDC and you said that the document is out. He's reading

the article.

THE COURT: A thought – was it an FDA letter or was it the CDC?

MR. FARRAR: So the 2017 letter has been a big issue. There was a motion so the CDC had a statement in a public comments of the document. It said nothing in the operating room should blow air if possible.

THE COURT: I don't have the details of the ruling to memory. I don't remember saying I thought it was the document.

MR. FARRAR: This is just an article that cited they found it authoritative.

MS. PRUITT: Your Honor, you ruled on the document. You ruled it’s hearsay and it's not admissible. You kept it out.

THE COURT: Can I see it?

MS. PRUITT: Yes.

THE COURT: So I took that and I believe I sustained that motion so I would ask that that portion of it not be displayed to the jury.

MR. FARRAR: I'll just take it down.

THE COURT: Okay thank you.

Q Doctor, you were asked questions about Parvizi – before that I want to do one more thing. I’d like to put on this next – Defendant's Exhibit 903. It's already been admitted

into evidence. If you could go to page 3, I marked the middle paragraph. If you'll orient the jury. This is in 2007 by Alvin Van Duren, correct?

A That is correct.

Q Where it says, "When performed correctly"?

A Yes.

Q Would you read that?

A "When performed correctly, prewarming alone is capable of permitting significant surgical hypothermia for up to three hours on suitable individuals."

Q Is it your understanding that if Ms. O'Haver hadn't been prewarmed for two hours of treatment she wouldn't have gotten hypothermia, correct?

A Correct.

Q Again, no benefit to the Bair Hugger for her?

A Correct.

Q I talked about a man named Mr. Parvizi. You read the conclusion of a white paper that he wrote, right?

A Yes.

Q Let's talk about that paper. Was it published?

A No.

Q Was there a date on it?

A I could not find one.

Q No date identification on it at all?

A No. I mean the author and the title but nothing more

than that.

Q Is it a study?

A It was a research review.

Q Is Mr. Parvizi a paid consultant?

A To my knowledge he is. It's at the end of the paper.

Q And did you see from his consulting agreement how much he gets paid by 3M?

A I'm aware that it's $5,000 a day.

Q You're aware that Mr. Parvizi emailed a draft of that to 3M and let them edit it at will?

A Yes, I am aware of that.

Q Are you aware that the lawyer drafted the email, I'm sorry, edited that paper before it went out?

A Yes, I'm aware of that.

Q Does that affect his credibility at all to you?

A Yes, it does.

Q Do you know how long Dr. Parvizi has been a consultant for 3M?

A I do not know that.

Q Are you aware of how much money he has been paid by 3M?

A I'm not aware.

Q Is that paper not honest?

A It was biased.

Q They didn't twist articles like Bernard's article

saying that it did something that it does not?

A I think the opinion that I read would not be the opinion that I concluded from the Bernard article such as botched science.

Q Did you know that Mr. Parvizi is no longer a consultant for 3M?

A No, I did not know that.

Q That Dr. Parvizi said nowadays he is no longer a paid consultant for 3M. I'm going to hand you Plaintiff's 1774. Did you find this authoritative?

A Yes and I've reviewed it and it's listed in my bibliography and my work report.

MR. FARRAR: Objection to me putting it up on the screen?

MS. PRUITT: No.

Q Do you see the date on it?

A The date is 2020.

Q Do you see where Dr. Pavizi one of the authors?

A I do.

Q Barnes?

A Yes.

Q He's a fellow from Arkansas. If you go to the third page of the chart, what does that warning say about forced air warming?

A "These devices should be used with caution as they may

increase the distribution of aerosolized particles during the case. Blankets may be more effective at decreasing particulate generation and distribution."

Q Blankets being like the Hotdog or just warmed blankets, right?

A Yes.

Q So that when we are looking at the emails where Dr. Parvizi was sending it to be edited by 3M employees and lawyers, the date was around 2008, right?

A That's correct.

Q So 12 years later when he is not a paid consultant anymore, Dr. Parvizi apparently changed his mind about what he said in that white paper?

A Yes, I think there's clearly more concern about the effects of the Bair Hugger and potential contamination.

Q Or is it just like getting paid $5,000 a day?

A Could be.

Q Last topic. You talked about the International Consensus. You have Defendant's Exhibit ____ up there?

A Yes.

Q So you testified that's 500 pages or 400 pages, something like that?

A It's my recollection.

Q Sure. The point is what was given to you is not the full copy, right?

A That's correct.

Q That's because there's stuff that doesn't relate to this?

A That's correct.

Q I wasn't trying to cast stones. There is one. There is one part. I'm going to hand you what I've marked as or what has been marked as 1696. Do you recognize that as the International Consensus?

A That is correct.

Q Who's the chairman?

A There's Thorson Gursky.

Q I'm going to have you flip in a couple of pages and there is sponsors. Who is a platinum sponsor?

A 3M.

Q I just put that up and showed the jury.

A Yes, sir.

Q Look at the Defendant's Exhibit 3501, question 5. Would you read the question and answer on Number 5?

A "Is there a relationship between levels of airborne microorganisms in the operating room and the risk of periprosthetic joint infections and PJIs?"

The answer is "Yes, high-quality evidence indicates that there is a proportional relationship between intraoperative levels of airborne microorganisms: Colony forming units and the incidents of PJIs."

Q That's consistent with your statement, correct?
A Yes.
Q I'm going to ask about question about the light handles. Are you aware of any studies that shows that increase of 380 percent chance of getting an infection because of light handles?
A No, not by that study.
Q You don't know it because it doesn't exist?
A Yes.
Q Who wrote the study that said there's a 380 percent increased chance of getting an infection from the use of this machine?
A Dr. Jarvis, he's the infectious disease doctor.
Q You've read that study and know what it says, right?
A Yes.
Q I'm going to go back a question or two. This states information this wasn't considered, right?
A That's correct.
Q It also states they don't appear to attribute that directly to the Bair Hugger?
A Yes.
Q The Bernard study perhaps?
A Yes.
Q Without getting into the details tell us what that conclusion was?

A That Bair Hugger contaminated and was contaminating and causing the infection directly.

Q Not mentioned here, correct?

A No.

Q You considered the International Consensus or the International Consensus of Orthopedic Surgeons?

A Yes.

Q Do you consider it evidence-based?

A It's opinion-based.

Q What you rely on that opinion or what did you base that opinion on?

A The fact that if you only select out a certain percentage or a certain number of articles in all or a few thousand and don't review articles that may have differing opinions and exclude those that don't talk about those, then I think it's more of an opinion.

If you really want to do it you need to do a full review of the applicable literature.

Q I'm handing you what is marked as 1749. This a document you reviewed to prepare for your opinion in this case, right?

A Correct.

Q And does this document support your position that the International Consensus did as opinion-based as opposed to evidence-based?

A Yes, it does.

MS. PRUITT: Your Honor, may we approach.

(BENCH CONFERENCE.)

MS. PRUITT: This document is an email to J.E. Sexton. It's hearsay and he is offering it for the truth of the matter asserted and I'm going to object. The Court has been ruling on the emails one by one. But this is talking about a draft document which the Court has already said draft documents don't make it in as business records. So it's hearsay and it should not be admitted.

MR. FARRAR: It's not a draft document. It's an email. It is not hearsay. It is a statement by a party opponent. I'm discussing the issue that was brought up in cross. It says that it caused - it says what is particulates. And keep in mind that it's evidence-based but it's his opinion.

THE COURT: Here's what I want to know. My response to hearsay is that it's a statement by the parties. So they get an email that was written by Michelle Hulse who was a medical director for the 3M infection prevention division all out, just that portion of the statement by a party opponent. Just because a portion of the email that's a statement of the party opponent does not allow the admission of the email and it in its entirety. So it's important that the jury only consider that portion

or those portions that are statements of a party opponent or admissions of a party opponent.

MR. FARRAR: I understand that, Your Honor. I believe the whole email - I don't know that there's anything in here that would be considered a statement or admission by 3M. But there's a major concern about direct personal knowledge of having witnesses talk to the folks that particles related to bacteria that's her knowledge.

She's right about it that the document is going to be sent to 3M to be reviewed before it's published is very important to the credibility of that. It's an admission by 3M. This document is not necessarily evidence-based but allows opinion to carry the weight and submission to the reliability of it.

MS. PRUITT: Your Honor, the rest of the document - but the rest of the document he said I talked about all these things. I didn't talk about any of this in my cross-examination. He wants to get up there and talk about what causes it. So for that using this witness to suggest what he's been doing and he's been using this witness to suggest 3M is somehow a bad actor which this is an orthopedic surgeon. That's not a proper use of the document. The Court has already ruled that these witnesses cannot comment on motive and intention.

MR. FARRAR: I can redact that part out.

THE COURT: So the part, the last sentence in the second paragraph, the objection is sustained as to the last sentence. Also, I don't think that goes to his admission. So I would say that the portions in the body of the email with the exception of the last sentence in the second paragraph will be allowed.

MR. FARRAR: Okay. I'll block it out and put it up on the screen if that's okay.

THE COURT: Counsel can you show the redacted copy to Ms. Pruitt before showing it to the jury.

(RETURN TO OPEN COURT.)

Q All right Doctor, I'm going to show you the email. You see it's from Michelle Hulse who is the medical director for 3M infection prevention division?

A I do.

Q Do you see the subject is FAW. Can you read the subject for me?

A *Forced Air Warming Air from Active International Consensus Meeting on Prevention of Prosthetic Joint Infection.*

Q This is from 2013, correct?

A Yes.

Q What does that say about the increasing of airborne particulates?

A "There's concern about any particulates in the air during joint replacement surgery and almost uniform comment that

forced air warming increases particulates in the air."

Q So Michelle Hulse Stevenson is saying active International Consensus there is uniform or almost uniform comments that forced air warming increases particulates?

A Yes.

Q What did they say about the connection between particulates of bacteria?

A They equate particulates with bacteria in the air and cite studies that says that but they do not have the citations that support this.

Q Read the next sentence with me. "A draft document will be sent to us sometime in the next few weeks so the consensus statement can be reviewed. Keep in mind the consensus document is not necessarily evidence-based, it allows opinion to carry weight."

So this is before it was published, the International Consensus document is sent to 3M for review?

A That's what it says.

Q 3M, that's the company that's a platinum sponsor, correct?

A That is true.

Q 3M that is paying a consultant who is the co-lead of the consensus?

A Same group.

Q They get an opportunity to review it before it's

actually published, correct?

A That's correct.

Q Have you seen evidence from three employers where 3M later contacted the consensus and asked them to make a change to the document?

A Yes, I have seen that.

Q Mr. Gordon right there, that's the one?

A Yes, that's correct.

Q He emailed somebody at the consensus and asked to actually change the document, right?

A Yes.

Q Who did he email?

A Michael Mont.

Q Dr. Bowling, he is one of the experts in this trial that will be testifying on their behalf?

A Yes.

Q Did you read in his deposition how much he's been paid?

A I think somewhere about $170,000.

Q Paid by 3M?

MS. PRUITT: Objection, Your Honor, motion in limine.

THE COURT: Sustained.

MR. FARRAR: Pass the witness.

THE COURT: Re-cross.

MS. PRUITT: Thank you, Your Honor.

RECROSS EXAMINATION BY MS. PRUITT

Q I want to talk to you, Dr. Bowling about what you told the jury about the Bernard study. You know that Bernard is not a study?

A It is.

Q You just got through telling Mr. Farrar that it is not reliable, that's it's something we can't be relying on. The Bernard study is a case report. To be frank, the testimony was that he was not relying on the literature which he totally did. Because the review of literature is just your opinion because your findings were different. It just happened to be an isolated event that they are different? Bernard's report is a case report, right, sir?

A Yes.

Q There are two different Bernard's reports, right, sir?

A I know the one. I don't know both of them. I haven't seen both of them.

Q Sir, tell the jury about the one you've seen. Don't tell about the other one that says you seem to imply that Bernard's report says that the Bair Hugger was causing infections but that other version doesn't say that, does it, Doctor? You don't know because you haven't seen it?

A If you could show me, I could give an opinion on it.

Q Let's look at Trial Exhibit 1753. *The Comparison of Forced Air and Conductive Heating Systems During Outpatient Orthopedic Surgeries*. If you'd turn to the conclusion of that study please. My finger is pointing to the last page where it says, "The surgical team should be aware … the surgical team should be aware of the importance of avoiding hypothermia and understand methods to prevent it from occurring including the use of both forced air devices and could do conductive warming systems." Did I read that correctly?

A You did.

Q Take a look at Trial Exhibit 1754 that was used by counsel with you. Just look at the results in the middle of this page, the last sentence. Can you see where it says, "There were no adverse events due to patient warming in either group." Did I read that correctly?

A Yes.

Q Now you said, again, in response to Mr. Farrar's questions that you didn't think smoking had anything to do with the wound not healing, do you recall that? You said it again?

A I did.

Q Let me show you medical records. You reviewed all the medical records, correct?

A Yes.

Q These are medical records 2637, page 19. Do you see a period – this is from CenterPoint Medical Center, correct, sir?

A That is correct.
Q The patient's name is Katherine O'Haver, right?
A Yes.
Q The date of admission is 11/29/16?
A That is correct.
Q That's when she had her surgery, right?
A That is correct.
Q She has a consultation with Nikolas Chitaia, Doctor, right?
A Yes.
Q And this is after surgery. Do you see that where it says social history that Ms. O'Haver smokes a half a pack a day?
A Yes.
Q It is taken by the doctor the day after the date of her surgery, correct?
A That's correct.
Q Can you put up Defense Exhibit 3639 please. Let's go to the first page, 110. Can you see this record dated 01/2?
A Yes, ma'am.
Q That's the date that Ms. O'Haver was having her DAIR procedure?
A That is correct.
Q Let's go to page 112 please, the same record. This is January 1, 2017. Look at number 1 please, the second sentence, third sentence. This medical record on January 1, 2017 says she

will obviously need to stop smoking to promote more reliable healing. Did I read that correctly?

A You read that correctly.

MS. PRUITT: I have no further questions.

THE COURT: Thank you, sir. You may step down. May this witness be excused by the plaintiff?

MR. FARRAR: Yes, sir.

THE COURT: You may call your next witness.

MS. ZIMMERMAN: At this time we would call Dr. Elghobashi.

SAAID ELGOBACHI

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MS. ZIMMERMAN

Q Good morning, doctor.

A Good morning.

Q Thank you for your patience. Could you take a minute to introduce yourself to ladies and gentlemen of the jury?

A Good morning.

Q What is your name?

A Saaid Elghobashi.

Q And you're a very soft-spoken gentleman. Sometimes it can be a little hard to hear. So if somebody has trouble

hearing if you just want to let us know and we'll all try to help our voices up. Doctor, were you born in the United States?

A No.

Q Where were you originally born?

A Egypt.

Q How long have you been in the United States?

A 54 years.

Q Are you a United States citizen?

A Yes, for 40 some years.

Q Where do you live now?

A Irvine, California.

Q What do you do professionally?

A I'm a Distinguished Professor at the University of California.

Q What kind of professor - what is your specialty?

A Aerospace mechanical engineer.

Q Did you go to school to learn that engineering?

A Yes. I went to USC to my get master's degree in 1971. Then I got the scholarship to - it's called Imperial College. And then I went to Caltech in California and got my PhD.

Q Is the Imperial College in London a prestigious university? I'll try not to talk over you.

A Yes, it is.

Q What degree did you get from the Imperial College, the PhD?

A Yes, PhD in 1974.
Q And what was that in?
A It's about turbo combustion inside the engine or gas turbine engine aircraft.
Q So you studied in the 1970s in London on turbulence and combustion?
A Yes.
Q You got your PhD?
A Yes.
Q So that’s one of the reasons we would call you doctor, right?
A Yes.
Q You have other degrees as well, correct?
A Correct. Doctorate in Science which is not related to the PhD so about turbine and particles and that.
Q Do you have a science degree as well?
A Yes, this is the one.
Q What year did you obtain that?
A 1999.
Q How's that different than the PhD that you got in 1974?
A In England I scored higher than a doctor of the PhD so you go to that level. You have to show applications in an area different from the PhD work. And it goes to the society to be examined and they give you a doctorate in science.

Q You are a member of the National Academy of Engineering?

A Correct.

Q Sometimes I get that wrong.

A Engineering, yeah.

Q That's one of the things, lawyers sometimes are not as precise with her words as engineers. So if I get something wrong please correct me.

A Okay.

Q It’s the National Academy of Engineering?

A It's the academy that was created but Abraham Lincoln in 1863 before the Civil War. He wanted an advisor or an expert not related to industry or financial interest, purely free of charge to advise the country and the government on how to solve problems.

Q All right. And did they have this problem solved?

A Yes.

Q What kind of problems with the national government?

A Military, National Academy - National Academy of Engineering. All three academies act as consultants to the government to solve all kinds of problems that the industry cannot do or the universities cannot do without financing.

Q How does somebody become a member of the National Academy of Engineering?

A An existing member of the academy will nominate a

person confidentially supported by three other members. And it goes to the National Academy. They examine your credentials and usually for sections like the power section you get about 65 nominations per year. You select only three applicants.

Q Is it a secret process?

A Absolutely, yes.

Q How many members are there right now at the National Academy of Engineers?

A About 2,000 in the country.

Q Do you know how many members they've have since President Lincoln established it in 1863?

A I don't know that number, small number.

Q If we could try not to interrupt each other because she's taking down everything we say. I'll do my best. You now are also a member of the peer committee for the National Academy of Engineering?

A Correct.

Q What does that mean?

A It means I go to Washington, DC in the National Academy and we decide on the members for the next year. So 10 of us will vote to select three out of those people and it will be announced in February, 2023.

Q How long do you serve on the peer committee?

A I started last year and only for three years.

Q So are you asked on that committee?

A It's an honor, yes.
Q A lot of work as well?
A Quite a bit, yes.
Q How many sections are there in the National Academy of Engineering?
A How many?
Q Yes. So you're a member of aerospace?
A And then the mechanical section. There are 12 sections so adding the mechanical section.
Q What are some examples of the different specialties?
A Aerospace, mechanical, chemical, biomedical, controls, civil engineering, all types of engineering. There's about 12 sections.
Q I think the jury has heard but they intend to bring a computational dynamic dynamics expert as well, John Abraham. Do you know if he's a member the National Academy of Engineering?
A I don't think so.
Q Dr. Elghobashi, have you received any awards?
A Yeah, over the years, 45 years so all kinds of things, yes.
Q Sometimes those are uncomfortable to talk about?
A Yeah.
Q Have you published papers?
A Yes.
Q Peer-reviewed publications?

A Yes.
Q What is a peer-reviewed publication?
A So if you submit papers to a journal the editor of the journal will send it to be reviewed by three different requesters and they will decide whether it's acceptable or not.
Q Is the peer-review process important?
A Correct, yes.
Q Why?
A It's to maintain the quality of publications.
Q Do you serve as a peer-reviewer for various publications?
A Yes.
Q Could you give us some examples of the publications that you serve as a peer-reviewer on?
A Well, journals on all fields, top level journals like Journal of Mechanics, Computational and there are many lower level journals.
Q Is that partially because you're a distinguished professor?
A I don't have time to review other people's lower journals.
Q As part of your work do you keep what some people call a curriculum vitae?
A Yes, CV, yes.
Q If you turn the back of the binder, the very first tab

is Plaintiff's Exhibit 704. Do you recognize that?

A It looks like a copy of my CV, yes.

MS. ZIMMERMAN: We would offer into evidence his CV.

THE COURT: Is there an objection?

MR. BLACKWELL: May we approach, Your Honor.

(BENCH CONFERENCE.)

MR. BLACKWELL: We'd object, Your Honor, that his CV comes into evidence. She's reviewed his background. It's not relevant to factual issues of the case. She's already highlighted what is relevant from his background as to the issues in the case but I don't think his CV should come in.

MS. ZIMMERMAN: The jurors can evaluate and use the appropriate credentials and qualifications and make a decision about that. CVs are typically introduced and received into evidence.

THE COURT: The objection is overruled. Exhibit 704 is received.

(RETURN TO OPEN COURT.)

Q So you have Exhibit 704, A copy of your most recent CV?

A yes.

Q Is that another way of saying resume?

A Yes, it is.

Q And it has many pages. But I like to have you talk with the jurors if you would just about a couple of the different projects that you've done. How about on page 8, J2. Can you turn to that?

A 24.

Q Page 8, Journal paper number J2.

A Yes.

Q What is that paper?

A A2.

Q J2.

A Yes.

Q What is that project?

A It was during the Reagan administration there were some. The work is classified at - I had at that time security clearance and I will only talk about the part that is known. I cannot go into the classified work.

So the idea was to have an Air Force jet flying carrying a strong laser beam. And the laser beam comes out through the window that hits the target far away. However, when the airplane carrying a laser beam moving at high speed the turbulence and the window outside heats the air, quickly heats the air.

Therefore, the air then becomes smaller and then you have different density around the window. So when you have a light beam going through a different density it will be refracted to a

different direction and not the target.

Like if you look at a light in a water tank you would see there is a fraction because dense air is different from the water.

So we had to compute how much change in the laser beam. That's all I can say at the moment.

Q I'm not asking you to provide any secret information to the jury. Just is that work continuing at the moment?

A Yes.

Q That's one example. Then in some of your education, training and experience you worked on Star Wars in the 1980s, is that right?

A During the Reagan administration.

Q Can you turn to page 12 of your CV. I'd like to talk about just a brief summary of J38. Do you see that one?

A So in this space station which is running all the time the question by NASA was what will happen if you have a fire on the station. For example, if you have a fire in this room here the flame will reach the ceiling and then the water will extinguish that.

In the space station the gravity is nonexistent, no gravity. Therefore, the flame would not rise. Therefore, you can have a fire in your pocket or your shoes and it doesn't rise. So you have to design a special extinguishing device to do that for us to put out the fire.

Q On the next page on 13. What is J46 about? It would be at the very top on page 46.

A Yes, okay. This was in the U.S. Navy and the idea is the aircraft carrier now the highest one, the General Gerald Ford it could travel at the maximum speed of 40 miles per hour approximately. But the Navy was to make Navy ships travel at 100 miles per hour in an emergency.

And the idea here was most of the friction around about the hull comes from the water. That's why it could go faster. There are torpedoes from 1960 that traveled at 250 miles per hour. The U.S. did that. So how can torpedoes go fast but the ships cannot go fast?

So the torpedoes that go so fast are directed with an air jacket that prevents the water from touching the body of the torpedo. This work here was supported by the Navy for a long time is to inject it around aircraft carrier. So inject the levels reduced the drag by 50 percent.

However, the experiment at MIP University of Michigan found that the bubbles rise so fast they can't stay down. So now they use injection air slots and that provides a very effective way to reduce the friction to make the ships go faster. So I would say within 10 years the Navy ships will come out faster.

Q That supports some of the research you did?

A Right, or supported by the Navy, yes.

Q The last one I will ask about from your CV is at the

bottom of that same page, J56 of the bottom of page 13. I think it might be back one page still. Was this an article you wrote?

A Yes, that's a company. It's a medical. So the chief surgeon he works in the throat airway of people and some people have sleep apnea. They cannot sleep. So NIH wanted to find a computation method to find the blockage in the airway mostly for children.

So we used to be with top surgeons in the country, Harvard, Johns Hopkins, every year they told us the surgeon told us the success rate with the apparatus was 50 percent because they don't ignore the blockages.

So in this work we took a real TCT in having an airway for a child and we did three dimensional simulation from the nose all the way to the trachea. And I found that method of finding with the blockage by looking at the pressure field.

So now around this if you give me the CT scan of the patient I could tell you were the blockage is before the operation. That would reduce the guessing process.

Q Some of your work has also been used to refine surgical procedures, is that right?

A Right.

Q Do you know what the success rate has been with the surgery situations?

A Eighty to 90 percent with a child from Sweden.

Q And as a distinguished professor, do you have students

that come to study under you?

A Yes.

Q How many people contact you every year to study under you?

A Well none now but in the past I always have 4 to 5, yes.

Q 4 to 5 students that you ...

A People already have a PhD somewhere and they come to get more learning so yes.

Q Would you be contacted by many more than just the 4 or 5 students?

A Yes because usually you need financial support. They have to continuous the process.

Q Do the students that ask to study under you, do they have degrees?

A Many of them are professors, University of Washington, San Diego, Canada, Switzerland, Egypt. Most of them were hired by banks in New York because banking is so common and they just to make more money so they did that.

Q And you testified in a courtroom one other time, right?

A Yes.

Q And it was on the same or similar subject matter?

A Yes.

Q Other than that you've never been an expert witness?

A Correct, only that case, yes.

Q Now we have sort of a big job and you've been great at this. But we're going to try and teach the jury about thermodynamics and engineering and how you apply your education and training to sort of understand the problems of the world and then what you did here with the Bair Hugger.

A Okay.

Q So you have a specialty in turbulence and the movement of particles in turbulent flow?

A Yes.

Q What is turbulence?

A Okay. Turbulence is a type of motion in which the fluid - this room has a turbulent flow. Once you have a ventilation system running with fans, so turbulent flow of - I'm supposed to get another video here to explain what turbulence is so it's gone down so I can't think of how to do it without that video.

Q Let me ask you this. Could you give the jury some examples of fluids, water fluids?

A Fluid can be liquid or gas. If you have a kitChan faucet, for example, you turn the faucet slowly the water looks very clear like glass. Once you increase the flow rate you will see the water becomes blurry and you cannot see behind it.

And the difference between the two of the same liquid has a high velocity, something called a Reynolds number. You have to

know that word because that's in the criteria of the distinguished turbulence.

Q For us to get there, could you use an example of like a garden hose? So a garden hose if it's just fully running, what does it look like?

A The same as a faucet. If you turn the valve for the garden hose slowly you will see water flowing smoothly and you can see through that. Once you increase it, it becomes oscillating the fluid velocity and everything will be oscillating you cannot see through that to the other side. You cannot see through the water from the other side so you could - so you could decrease the velocity of the hose.

A Probably, yes.

Q What relevance - what is laminar flow?

A Laminar flow is - it'd be nice if I had a board.

Q Yes, we do.

MS. ZIMMERMAN: Your Honor, can he step down?

THE COURT: Just keep your voice up.

A So the first person to study turbulence was a guy in 1500, Leonardo da Vinci. So what he did was he let water come from opening here, the water comes like this. He found out that went the flow is at high velocity it would have so many eddies. Eddies - a turbo flow must have eddies. That's the main distinction. That's 1500. But that's all he did. He looks at many water channels and he puts obstacles and that's how we

found that this it actually the first one which is here, da Vinci.

Q And qualitative, what does that mean?

A It's to go when the flow becomes turbulent.

Q You could see the results?

A I see it estimate how do you make that he would not say. Beautiful paintings and 300 years later England Manchester a person finds Reynolds in the 1819. He notified da Vinci and he wanted to have a criteria to tell people yes, this is turbulence. It's no secret or anything.

So what he did he put a glass pipe like that and connected to a tank full of water. And then he used a container of ink with the small pipe. This is full of ink, clear water and ink. And then he puts the pipe at the valve. So if he opened the valve slowly that was like straight line like this. He opened the valve some more that line becomes bigger. It further increases the flow rate and this becomes like this and this is turbulence that is left here. The experiment is still there.

There is no cameras in 1890 so he made drawings like that. In 1983 Manchester - they repeated with cameras in the same tank. And the idea is this that Mr. Manchester came up with something called Reynolds number.

It equals the velocity of the water times the diameter of the tank divided by the viscosity of the water. This formula immediately tells you if you increase the viscosity say and it's

small and it looks like that. If you increase the velocity that it becomes very high. This is the whole story. It's very complicated but that is the heart of it.

So if you look at the ventilation system here the Reynolds number is about 8,000. So this has a thermal flow in the operating room and around the world.

Q You studied the movement of particles in a turbulent flow?

A So turbulence - if you put things in it that is very difficult. So turbo by itself, everybody who's knows it's an unsolved problem. So if you do something to it, a chemical action, that unique complications.

Q Do water of particles make it more difficult?

A Because so if you have a flow like we said before the turbo shows at least eddies are different sizes because that's the nature. The higher they are the lower the Reynolds number. Turbulence has these eddies increasing the Reynolds number when you have different sizes.

So we can look at the particles and interpret what is the size of this particle. If it’s smaller than the small that could alter the nature of turbulence. So they are just complicated but.

Q The particles the smaller they are make the problem harder to solve?

A Absolutely.

Q Is that the type of fluid that the particles move against?

A Absolutely, yes.

Q The Reynolds number that equates to changes, can you explain for the jury a laminar sort of transitional turbulent flow?

A Okay, yeah. So I could do it on another one. So in 1991 I was asked by Westinghouse to visit a town in Washington state called Hanford. Hanford had the largest deposit of World War II, the tanks, etc. It has nuclear rice liquid and it's now leaking. So Westinghouse asked me about details of how to solve this problem. So I made a map because of how much I know about turbulence. So I made a map like this.

This is volume fraction at how many particles have many particles of liquid. This is a difficult one called the response time. If you put particles in the turbo how long will it take a responder to feel that liquid. I call it TP for tile particles.

These are the computations and I divided this. This is what's called a one-way coupling, two-way, four-way coupling.

One-way coupling, the turbulence has dispersed particles and the particles have no effect on it. The two-way coupling you will have the particles.

One-way coupling turbulence, the coupling has so many particles that collide. In addition to colliding it also - so

it's a fluid particles.

And this map now is used by many people around the world because before you do any experience or computation you have to do one of these otherwise you would be doing the wrong thing. So this map is useful for students and professors.

Q Does the map have a name? Is it called the combustion map?

A Correct.

Q Doctor, do you use the special kinds of computers to do these sorts of numerical equations?

A Supercomputers, yes.

Q What is a supercomputer?

A Supercomputers looks like if you meet somebody on the street you have not seen for 10 years, oh, this is Joe. How did you do that? Because the brave now is very slow because the brain of a human being works in parallel ways. The neurons interact in a very efficient way that allows you to recollect information. People discovered that in 1919.

And instead of having one processor and one machine you would have multiple processors interacting simultaneously, massively parallels computers, supercomputers. These are expensive like hundreds of millions of dollars and require a lot of air conditioning cooling, usually it's a $50 million a unit.

The supercomputers can solve problems and turbulence very fast otherwise one problem would take 300 years we can do it in

about 12 hours. And the supercomputers also have access because you have to be qualified. You have to show that your computer program can run efficiently on this issue.

Q And for the jury your work focuses on a specific kind of an equation, right?

A Okay. So the turbulence picture that you've seen there are equations that describe them perfectly. And these equations are called Navier Stokes who was a French engineer in 1833. He wrote this and derived these equations based. These are complex equations. In 1845 Professor Stokes derived this equation and it's called Navier-Stokes. So the Navier-Stokes equation describes the motion of any fluid as long as it's a continuing means between flow and 50 kilometers. After that it cannot do that because it's a vacuum.

MS. ZIMMERMAN: May I approach?

THE COURT: You may.

Q Could you write for me what that Navier equation look like or would the board be easier?

A Yes.

Q The board if that's easier for you.

A If you want I'll do it now.

Q It's a pop quiz.

A Navier is three-dimensional override which is something called means provided in compressed way. So three dimension meets XYZ. But I understand very many equations. It

would have many pages.

Q So to summarize it means 1 through 3 and also I and J are not different?

A So this is basically it came from - basically it came the mass times expiration. He put all the forces on pressure forces in the operating room. That becomes important because the difference between the hot air the cold air because you don't - in a chimney hot air rises because the density is lower.

Q And that's because Navier-Stokes' equation meant continuity and other equations?

A Yes. Stokes' questions could be solved numerically and exits the hard part. You cannot do it because - so the only way you could solve it, you would need a computer. This requires the space and solve it. Analytical means think if you asked +5 equals 6. I say one equals four therefore X equals 2. That's called an analytical solution. You cannot do that with this.

Q You have supercomputers to do this work properly and the supercomputer, that's for what you do for your work in your research?

A For a living, yes.

Q All kinds of different applications?

A Yes.

MS. ZIMMERMAN: We would offer Dr. Elghobashi as an expert in his field.

THE COURT: His testimony will be received in that manner.

Q The different kinds of computer programs that solve for turbulence, do they attempt to solve it in the Navier-Stokes equation?

A Different methods.

Q Yes?

A Right.

Q Can you tell the jury about that?

A If you solve these equations correctly there's a method called not approximation. We do that for some problems. And it's quite expensive. Only the supercomputers could do that.

Q Directing numerical simulation?

A Yes, that's what they do. If you cannot afford the work for the next step then the next step you're gonna resolve all the tiny eddies and just concentrate on the big eddies like in the Russian the big doll and the little ones.

Q It’s a perfectly good use ...

A DNS for problems. A mix of DNS is limited the U.S. where they have the largest fastest computer supercomputers in the world today. Japan was last year. China was three years before. So America now has the fastest. But that cannot solve, for example, the use of DNS to solve this room and the flow of this room or over a car or over a Boeing 747, you cannot do it.

The computer is not big enough. We have to wait until new chips are made.

So there is a limitation because with Navier-Stokes this is difficult and even the fastest computer cannot do it. So the cheaper way is if the case takes $10,000 DNS it has been $1,000 then you could do it on a supercomputer. If you go down like some companies or some places don't have the knowledge to do DNS or RNS so you could go do some averaging.

Reynolds averaged Navier-Stokes that you could do on a laptop cost a dollar something like that. So it depends on where you are, what you want to attempt. These are the main methods available now.

Q So the DNS ...

A It's a top level.

Q Top level? You shared with me that some high school students could use this program on their phones.

A Not on a cell phone. Not on a laptop because RANS would not go on a laptop.

Q Okay ...

A RANS was invented at Imperial College in 1971. That's fine. So that was 50 years ago. So that's actually Imperial College and New Mexico, those were the two places at the time.

Q You typically you do some work in LES and in DNS, right?

A Both LES and DNS. I do LES only if needed.

Q Do you have any idea but how many people in the world can do what you do, DNS?

A China has population and they have computers. I cannot count the number in China. But in the U.S. I can tell you the University of California, Stanford, Johns Hopkins, Princeton only those, Cornell also about five.

Q The jurors heard the lawyer say the words computational fluid dynamics?

A Yes.

Q Is that sometimes called CFD?

A Yes.

Q Can you explain to the jury what that means?

A So it's an umbrella word for somebody who is solving Navier-Stokes situations on a computer. That's called - it goes back to 1970. That's when it was invented.

But you have to be careful. If somebody does a CFD you have to be asking what kind. You can ask if it's DNS, LES or RANS. So you could do like a honey jar. You could do that very easily on a laptop.

Q And laminar might be limited. Does that mean something different?

A Yes.

Q On the LES agenda, the jury has heard talk about laminar air flow in operating rooms. What can you tell us about that?

A So if anybody tells you operating room has a laminar flow, that person is wrong. The reason is RANS is still working in an operating room. They are coming at about 9,000. You can do whatever you want and ask what is the Reynolds number.

Q What number is a crossover for a Reynolds number?

A 2,000, if you are at about 2,000.

Q And you know from working on this case that there are some non-engineers that talked about airflow and operating rooms meaning laminar and that's incorrect?

A Many medical journals, they talk about laminar flow. It doesn't make any sense, no sense.

Q It makes no sense to an engineer?

A To fact, fact, science. If my Reynolds number is 9,000 or 10,000 then there can be no laminar flow in an operating room, never.

Q You also know from reviewing the documents in this case that sometimes hospitals talk about airflow in an operating room being either laminar or unidirectional?

A I think unidirectional it's okay, acceptable if it's coming straight like this. But if you say laminar, the word laminar is bad. It’s not technically accurate from an engineering perspective, correct.

Q And you used computational fluid dynamics in a large simulation study impact of the Bair Hugger in an operating room?

A Correct.

THE COURT: If you're getting ready to switch topics now would be the place to break.

MS. ZIMMERMAN: Perfect.

THE COURT: Guys, we're going to go ahead and break for lunch. We're going to get started at 1:30.

(INSTRUCTION READ.)

Have a good lunch. We'll get started at 1:30.

(LUNCH BREAK AT 12:22 PM.)

THE COURT: We're outside the presence of the jury. Earlier this morning the court was given a portion of yesterday's opening of the plaintiff indicating they had a concern regarding the statements that were made and whether the request was that a curative instruction be read to the jury to cure what they believe was a misrepresentation and a violation of the stipulation. Is that correct, Mr. Emison?

MR. EMISON: It is, Your Honor.

THE COURT: Mr. Torline, the defendant’s response?

MR. TORLINE: I have a slightly different recollection. He went on in great detail about 3M's acquisition of Arizant and the legal effect of that and that there would be no dispute that 3M had acquired and was responsible for the Bair Hugger for Arizant. Mr. Blackwell never said a thing about that in his opening.

And this transcript that was provided certainly doesn't support that either. It's rough. It makes no sense and if you read it there's nothing in there that suggests that 3M is not responsible for the Bair Hugger and basically a chronology of the timeline of what happened. It doesn't make a lot of sense.

Since now the first model Mr. Emison said was created 1987. They weren't made by 3M at the time. 3M acquired the company itself and was making the Bair Hugger in 2010. That's when 3M arrived on the scene. This model 750 remains in use while still being used in service as late as 2016 in Ms. O'Haver surgery. They stopped making it in 2014. So I'm going to get to tell you more about that just a few minutes.

Judge, we can always come back and revisit this. If this transcript is cleaned up I don't think that was anything said that there's always a chance if we have to cure, we could cure.

Based upon different recollections of what was said number 1, and this is frankly a useless transcript here and now at the time.

THE COURT: So the Court will note that I have an independent recollection of the statements made by Mr. Blackwell in opening statement. I will tell you I do not feel that they rose to the level of giving the curative

instruction.

I will caution both sides in terms of drawing some type of inference between errors and that whichever it is for 3M in terms of closing argument because I definitely don't want to confuse the jury. And I think that we all want to remain compliant with the stipulation that 3M is the defendant on that and the fact that somehow they may have been the owner and it's imperative time does not absolve them of any responsibility.

So the curative instruction request will be denied at this time. Anything for the record, Mr. Emison, briefly?

MR. EMISON: Just a point of clarification. The stipulation also speaks to predecessor companies. I cannot get representation from 3M that it is not intending to suggest that Augustine Medical together with the prior entity was responsible for the design, marketing, testing sale, anything regarding the Bair Hugger that's not going to be an argument that it’s not a predecessor company under the stipulation.

THE COURT: Now in relation to Bair Hugger statements there's no agreement or there is an agreement?

MR. BLACKWELL: There is no disagreement.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

THE COURT: Ms. Zimmerman and Mr. Blackwell can

you guys come up. So Gail and I had a conversation over lunch about the jury having a complete understanding of Mr. Elgobachi. And so I would just - I know you don't necessarily want to repeat what the witnesses just said. In the event that you think that the jury isn't understanding especially in this terminology I would encourage you guys to make sure that between being soft-spoken and the accent I just want to make sure that the jury is understanding his testimony completely.

(JURY IS RESEATED AT 1:43 PM.)

THE COURT: You may be seated. Ladies and gentlemen, welcome back. I apologize for the delay. There was a scheduling miscalculation on my part. The fact of the matter is I'm the one driving this training so if at any point you guys are frustrated with the time you need to be frustrated with me, not the attorneys. So, again, I apologize. I'll do my best to take a better look at my docket before I recess next time.

Okay, we will continue with the direct examination. Sir, I'll remind you you remain under oath. Thank you. Counsel.

CONTINUED DIRECT EXAMINATION BY MS. ZIMMERMAN

Q Doctor Elghobashi, right before we left for lunch we had been talking about sort of the three different ways to approach solving. And so what's the highest most accurate

level?

A DNS.

Q The next one down?

A LES.

Q Below that?

A RANS.

Q Those are the different codes that are involved?

A Yes.

Q And I just learned that you wrote the codes to solve the LES?

A The DNS.

Q I'm sorry, you wrote the DNS codes. How many lines of code was that?

A 67,000.

Q How long did it takes you to do that?

A A year.

Q So there is a process when a code is validated?

A Yes.

Q Could explain to the jury what that means?

A So in order to make sure that your code produces physically the list of results, you have to compare your computation of results with good experiments that you have and experiments are very difficult. Not many are going to even be accomplished because very few laboratories in the world can be trusted to measure turbo.

Like it's very difficult for example to conduct measurements in an operating room to validate your results. The expert of measuring was at Caltech California sitting in California and he told me to measure the turbo inside an operating room will cost between 2 and $3 million. So we had to rent an operating room for two months to validate. That's why there were no experiments to validate the results so we have to do our best to do that.

The code has to be validated by other results, not in an operating room but other results. Some we go through many steps to validate the code for this case, these cases and eventually even consider the results in an operating room acceptable to validate the code – flop – I apologize if I'm trying to oversimplify but this is really important testimony I'm giving.

Q But just so the jury understands, the code that is written that you wrote, that is used to solve computational fluid dynamics test and is validated to make sure that the results coming from the supercomputers are correct?

A Correct, yes.

Q And you used a term that I hadn't heard before. What is a flop?

A Flop is floating client operation on a computer. It means when you add 1.5 + 2.5 and you get 4, that's a simple addition on a computer. And a supercomputer would do 10 to 15 flops per second. Ten with 10 zeros in front per second. No

human can do that. It would take a human to do that about 500 years and the supercomputer does it in one second.

Q So when computational fluid dynamics expert puts flops in a supercomputer is that one way to describe the capability of the supercomputer?

A Correct, how fast it is. Also you have to say how big this storage is. When you have - when you solve the problem in a room like this you have to divide the group into cells and 3D. And the larger the number of the cubes the more memory and storage in a computer you should have. So you need to think storage capability and the speed. Those are two essentials in order to solve complicated problems quickly. And quickly means in a day or two instead of two years.

Q How many supercomputers are there?

A I don't know the exact numbers and the best ones, that I only know about the best ones. Supercomputers usually would have a hundred thousand processors at least. See you have a big building no windows to cool down. They cost millions of dollars each year in maintenance.

So the latest computer in Oak Ridge, Tennessee would cost $50 million in maintenance running probably a hundred million a year and that would be the fastest. You need that in order to do complex problems.

Q Doctor, can anybody use a supercomputer?

A No, you have to be qualified. Which means you have to

have your program to be tested on that machine and a different number of processors. Scalability means if you run your computer and thousand processors it would take maybe a minute. If you run it a hundred thousand it should take a few seconds. If your computer cannot do that you will not be accepted. It's a scalability test.

Q So you're going to talk to the jury finally about the work that you did on the Bair Hugger?

A Yes.

Q Can you talk to the jury that how you approached the problem? What was your hypothesis?

A The firm in California asked me if I would be interested in doing this. I had no idea about the problem so I asked that first.

Q So you wanted to understand the problem?

A They told me there was an operating room and they wanted to know whether the blower can cause spreading germs that means problems in an operating room and I had to read about that. I told them before doing anything I need to be in an operating room for a day in a real operating room. They arranged it in an operating room for orthopedic surgery in Santa Monica, California.

I don't how much they paid but then we took a lawyer, a young lawyer and we put her on the operating table and we asked her specific nurse to do exactly what would happen if this was

an orthopedic operation for a knee or hip. And the nurse covered the lawyer properly with the blanket and then drape and everything and we connected the Hugger 750.

We asked the lawyer about where does she feel the heat on the arms and do you feel any warm air around her face. And she said no because I have contact lenses. And if there was warm air it would have bothered my eyes. So all the hot air from the blanket was coming around the arms under the drape to the woman.

We spent the day. We measured everything above the drape. We took a lot of measurements. We have photos here to show if you need to. Then I knew more about the problem and had to think more about it.

And then I used what I learned from the operation room to look at the equation I showed you in the morning but you cannot solve that unless you have boundary conditions.

Like you have to know many things about the boundaries of the room and patient and how many surgeons and the lamps, everything.

Q Did you have an idea in your mind before you started this project what you thought the impact of the Bair Hugger might be if anything?

A I told the lawyers it can cause hot air in the room. The temperature that comes from the ventilation is about 60 degrees centigrade. The hot air would go up. But, of course, I didn't know the detail until I do the computation.

Q And so you went to the hospital at the University in Santa Monica, is that right?

A Correct. It was orthopedic surgery. I don't know the hospital but we spent time, the whole day actually in an operating room.

Q Now did you take a lot of different measurements?

A A lot of measurements, a lot of photographs.

Q And you used those to do what?

A To send the boundary conditions in the computer program and to apply to an operating room, specific operating room that came from Syracuse, New York.

Q Who was with you if you remember in Santa Monica?

A Okay. And Andrews is a lawyer in California, John Clore and Tina, a lawyer in California and the young lawyer Layla but I don't know her last name. She's the one who was on the table.

Q There were nurses there?

A Yes, the nurse who works in the operating room all the time. Yes, two nurses actually. They were both there the day I was there taking measurements.

MS. ZIMMERMAN: I think what we will do we is have the PowerPoint as a demonstrative exhibit. Your Honor, 2203 which I believe counsel for 3M displayed to the jury with the Court's permission.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: 2203, is that correct, Counsel? Ms. Zimmerman, did you say 2203?

MS. ZIMMERMAN: I did.

THE COURT: 2203 may be published to the jury.

Q I asked to dim the lights please. Dr. Elghobashi, we're preparing to sort of explain to the jury what you did here and this is a PowerPoint that you prepared, is that right?

A Correct.

Q And we both have little remote-controlled clickers. And it also has a green button if you need to point something out to the jury that should be able to work.

A Is very weak but it's okay.

Q So you were explaining to the jury and I think you started with forming this CFD and what you need to know?

Q What are the boundary conditions?

A We will go through the presentation and we will reach the drape. I can show it. Otherwise, it would be the wrong explanation.

Q What are all events for the next part?

A Correct. So shall I speak now?

Q Yes, please.

A So the outline would be while I'm doing this introduction and the operating room details, then the description of a large eddy simulation. The boundary conditions in the sample show what it is. Then the simulation and the

results.

Q And this will help the jury I think understand what your work was in this case?

A The reason for doing this is to do a large eddy simulation study. That study the effects of forced air warming of the Bair Hugger and the dispersion of squames and I'll explain what squames mean very soon in a typical operating room OR.

Q Did anybody request of you that you reach a certain conclusion with respect to research before you started?

A Not really. I mean if the results were different from this one I would've said exactly what the results are. So this is the blanket which would be connected to the Bair Hugger blower. And the arms are stretched and they cover the arms and there is a tie on both sides and really if you don't tie it down it will fly.

Next, of you take that blanket in a cross-section with a knife you will see it has these tubes. And the hot air comes from the blower with the hose and it hugs these tubes. On the bottom you see little laterals. These - the blanket has 1,000 holes, really tiny holes, one millimeter diameter. One millimeter is smaller than 1/16th of an inch, small 1,000. If that heated air is about 43 degrees centigrade and it goes into the chest of the patient to keep her warm. That's about it.

Q Doctor, you said that the temperature is about 43

degrees. Do you remember where you got that number from?

A They gave it to me from the Bair Hugger catalog, I think.

Q The operators manual?

A Yes.

Q What is in this slide?

A This is a nice slide because it's showing the patient covered with the blanket and the right knee is lifted. I don't know if you can see this but I'll try to point to it. This part here - so in the Santa Monica operating room after you put the blanket on you cover with the drape. And the drape is the green part that you can see hanging through. And the edges drape another inch on both sides.

Q The first with the Bair Hugger...

A I think it was over the patient then on top and then a drape. I think I've seen it in many operating rooms since then. And now the heated air from the blanket comes out. It comes like these red arrows and then it comes also down.

Q Underneath the arms?

A Underneath arms. In Santa Monica, again, in the operating room I was there all day seeing where air was coming. Always at the edge of the drape down here, nothing else. So the idea of boundary conditions, now if you want to use computational flow dynamics you have to tell the computer what is the velocity coming out of here. What is the temperature?

Because this is important to fit into the code because the computer code does not think. They do what you tell it.

Q So when you say velocity, do you mean how fast?

A Velocity means how many meters per second or foot per second. So I started doing this analysis under the blanket and the drape. It took quite a bit of work. Knowing how many cubic feet per second and how many meters per second come from the blower, knowing the temperature of the blower.

I do heat calculation from the chest of the patient to see how much heat is transferred. Usually a patient's temperature if he is not ill or she's not ill is 37 degrees centigrade.

Q What temperature is that Farenheit?

A Ninety-eight. University now uses the metric system. We don't use Farenheit because as engineers we're using another meter per second. So now we teach everybody use meter per second. So knowing how many kilowatts - this is a one kilowatt blower.

Q Where did you get that information from?

A From the catalog. It's all written there.

Q So the information you got on temperature and velocity of the air?

A From the manual.

Q Operators manual?

A Yes, correct.

Q So I was able to compute the condition around the

edges and that would be input. Of course, we aren't given how much air is coming from the ceiling from the grilles, what the temperature is in addition to how many surgeons are standing there, what is the forehead temperature, lamps and everything. We have to do all these boundary conditions.

Q Are you talking about air coming into the operating room?

A It's crucial so we know how to do that. So we were given for that operating room how many times you change the air per hour. This is called ACH. Every hospital room has an ACH amount. The one we did was 25 times. In one hour, the whole volume of air was replaced 25 times.

And then you know if you know the volume of the room that you know how many meters per second. Those grilles are on the ceiling about 10 of them or 12. You divide the total per hour or per second over the area and you will get the velocity, how fast air is coming from the grilles. That's crucial. From that we can compute Reynolds number.

I collected in the morning at the grilles, each grill. So we did that and there is now the Reynolds number for that case and here it was 9,200. We did that for other operating rooms and they always go from 9,000 to 10,000.

That's a picture in the operating room. You can see the drape covering but you don't see the face of the patient and that's the patient. And you can see some red line dimensions on

that front. Santa Monica Hospital want to know the details where they put the boundary conditions.

Q So what do the letters on the slide represent?

A This is E,F, A,B,C,D how many meters everywhere, yes.

Q These are a different part of the boundary conditions you put into the computer?

A Correct, yes. Okay so the first step in making the geometry and putting it in your computer is to do something called CAD computer area design. That gives you the details where we see the grilles in the ceilings. There's 10 of them. And I don't know if you can see the details of the operating room. So the air comes in the ceiling from the grille and it leaves the room. And for this case it leaves the room through outlets 1, 2, 3, 4.

Q On the four corners of the room?

A Yes. Some operating rooms – other operating rooms have two pairs. It depends on how they're designed. But the main thing this is the input to the room which makes it turbulent and then exits are here.

And you can see that medical staff standing there. So we create from that – we take that geometry before we divide that volume into the latest cubes, three cubes to focus on the areas of interest like the piece in the knee. We call it a final message and you see the message.

Q We'll go back to the message in just a minute. I

think the next slide shows certain areas of the operating room that remodeled?

A Okay.

Q So what are the yellow squares? What do those represent?

A It shows the table with the tools are.

Q This is the knee of the patient?

A Yes.

Q This shows the four surgeons and the nurses and make this - it is these yellow - this is for the Bair Hugger that would be at the head of the patient? Is that green the upper body blanket?

A Yes. The blanket is in the green. This picture is when you go to the ceiling and look down it's called plan. It's a projection. This is not 3D. This is a 2D where from the top and you look down.

Q Just looking down from the ceiling in that?

A Yes. So we get the boundary conditions. So I could see now - and so this is where I do my analysis. I put the velocity of the air at half past and that hot air is coming to the drape to the operating room. We've seen this before but now I'm going into detail.

Q So that's not just a velocity in the room. That's the blanket itself?

A So with the heated air from the blower, it comes out

at 41 degrees centigrade and it warms the body of the patient which normally would be 37 centigrade. That means heat transfer from the heat into the body of the patient that's how the patient feels warm, comfortable.

So what they have to do then is a separate calculation, not in the big simulation. They have to do that manually. It means I do it with the computer but locally.

In order to get the boundary conditions to put it in the big computer, there are many steps before I make a big case computation.

Q Doctor, boundary conditions are a starting set of assumptions?

A Not assumptions. The have to be accurately calculated because if you change these, like if instead of say I don't remember that temperature. Let’s say the temperature coming out here is 40 degrees centigrade for my calculations. If you change that to make it 37, then you get different results. So it is crucial to have everything as authentic as possible so you could you take the measurements yourself and recommend the calculation.

There are no measurements, no experiment omitted measurements because it costs $3 million.

Q I apologize. Sometimes I get my words wrong. Third, there are calculations on velocity?

A Yes. The ventilation air flow so we know how many

eddies and it's crucial to know that in any operating room and the grilles give you a number of 10,000.

Any turbulent flow has a spectrum. So that means if you look at the population in the town and you will say, can you make a spectrum of that so it would be a graph of some people and a result so how many 50-year-olds and so on. And you would make a graph like this the population versus age and that's called a spectrum.

For turbulence on the bottom axis it would be eddies but the Russian doll big eddies, medium eddies, tinier and very tiny eddies. And this is called - it would be the kinetic energy. And how fast these eddies are moving, how much energy. That's called a spectrum of turbo.

It took science from probably from 1915 up until now to find a spectrum on turbulence. It's a process. This is without any heating, without anything. So the higher the Reynolds number - we know what the Reynolds number is now.

MR. BLACKWELL: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Whatever this is it's very narrative and it needs to be broken up or some question-and-answer.

MS. ZIMMERMAN: I'll have to try to do that.

THE COURT: Now if you could.

(RETURN TO OPEN COURT.)

Q The higher the Reynolds number the wider the spectrum?

A Correct, the higher the number, the ratio between the big eddy and smallest eddy becomes very large.

Q I think you prepared sort of visual record rotation?

A A reminder of Reynolds number from the morning. The Reynolds number is the viscosity times the channel divided by the velocity.

Q Easy to move through like your honey?

A Absolutely because the honey cannot. That's the water and all water flows much faster than honey. This is a nice experiment we did at Cal Tech many years ago.

Q What was that?

A You have a pipe and have a liquid coming down. And in order for this experiment at Cal Tech to see what is happening, they dump the liquid and then they put some florescent. Then you put the laser sheets and the laser sheet interacts with this dye. That's how you make it. And what you see is many eddies like da Vinci showed in 1500.

The one on the left is only 2,500. The one on the right is 10,000. This is that same that comes from or in any operating room. What you see, you see the big doll with still tighter eddies inside. It means the Russian doll on the left if you increase from the number you have with some tinier eddies. That means if you want to do a computer program correctly you have

the mesh very small to capture everything. That's what the computer wants.

Q This is a way to visualize?

A Very nice for the students to see what the difference in lowering the number, higher number. You could - of course this turbulence is all around us all the time.

All the time. Everywhere. So this is schematic I did have for a meeting once. If you increase you get smaller and smaller. If you keep increasing, the higher number you have so many tiny eddies and that is why it's so difficult for the computer to capture them. You count on the computer to solve the equation for large eddies to the small.

You need the storage. You need the storage. So here the spectrum help moves acreage for the population of a town or city. So in this one population the axis tells you on the far left the eddies on the far right, the tiny eddies and this vertical axis since it’s kinetic energy.

Q So do you have a model like this for LES results?

A No.

Q So DNS is the one?

A Ever single time. That's right. It’s so expensive. LES is saying it’s too expensive so the blue triangle instead of compute, I modeled. I made an approximation. The reason for this the blue triangle the DNS cost $10,000. The blue triangle cost $8,000. That little triangle cost $8,000 because it

captures all the tiny eddies. That's what people – in LES you see I modeled this.

In the RANS there's no spectrum or anything. That's 1970s stuff. You could get a laptop for one dollar, far left one thousand dollars and $10,000 of the far right.

Q This a scale of what it costs? The RANS is roughly 1/6th the cost of the DNS, is that right?

A One dollar compared to 10,000.

Q And did you use LES to study that?

A Yes. And why we did LES and not DNS is DNS isn't accurate because no computer could do it. Not even Oak Ridge looked at in China and looking in Japan. The operating room has so much information that needs to be programmed that it would be very expensive. And I think on the slide they will tell you how much it would cost. It would show that. That number will tell you we need the cubes.

In order to compute this room, I have to fill it with little virtual cubes. So in order to compute this operating room we would need 11 zero cubes to capture DNS. We cannot do that because no big computer could do it.

We went to the next one and it's called LES. That's why we do the cheaper one is because LES is still a reliable way to study.

The best way to do an operating room in the year 2022 today is this. If you go around the world and you do DNS nobody can

do it.

Q Tell the jury what you mean when talk about the mesh?

A The mesh that's a tough one. That's a tough one. So you want to capture everything, everything in the room. That means you will solve this in the little cube. So since the contents of the operating room is eyes and ears you cannot make them squares. The people are not squares. So we have to do nine cubic mesh.

There are many people and all their lives they've been taught how to create mesh, mini conferences. So creating the proper mesh is crucial for this kind of work.

Q So I think the next slide I'll show the kind of issues there are in this case.

A So this is the whole room, the different measures. I think now you're seeing different measures, the grille. Other grilles you could see but I cannot see much detail. But the grilles would be more of a fine mesh than outside the grill for example.

Q So smaller and smaller and smaller like the Russian dolls?

A Exactly, yeah, yeah. And there are things in the ceiling of that operating room. They use when you see that very fine mesh to capture the nose, the ears, the knee. So if you get an answer - if you have computer in front of you will see the details of how the mesh is.

So at least they are not squares or cubes. These are triangles pyramids for 3D into dimensional. Where the three-dimensional part of the drape is you see that the drape is crucial because that's where the heated air from the blanket comes around the edges. That's very fine mesh around the drape. So anywhere things are critical we focus mesh.

To create the mesh, it took six months to create. It's not trivial. It's not trivial. Here the patient and the doctor are standing there and you can see the mesh. Navier-Stokes is each of these meshes.

Q Each of the small parts of mesh?

A Yes. I told you that's if you remember the blue triangle costs $8,000. Then you take after the filter the equations for a low-pass filter. But if you work electronics means you capture the biggest scale and not the blue triangle. This again is many years of work.

Q So we now know how to ...

A So here in the operating room you can see the people, the surgeon, the lamps, everything that has to do with the squames. Squames are the skin flakes that come from moving your hand. I think it shows the squames in this slide.

Q Can you explain that to us in your model?

A Well okay. Each person - I wish I had the information. Each person every day emits hundreds of millions of squames for 24 hours. So if you have five people in the

operating room per hour they would produce - I don't have the exact number but like tens of millions. But to do this to follow each squames trajectory would be very expensive. So we set it at only 3 million for economy to give the idea.

Squames are like little pancakes. The pancake is about 50 microns. This thickness about three microns, very tiny pancakes. I micron, your hair, the diameter of your hair is 100 microns. But I said 10 microns is 1/10 of your hair. So the flakes would be 15 microns flat, three microns.

So they have the volume and the density of the squames is like water. Our bodies are 75 percent water. So the density of squames is 1,000 kilograms that's water. So we know the dimension. However, in order to see that we're going to follow each squame. So you have to know an equation for that. What do you do? You go to Newton's second rules nexus and see if squames equal all the forces.

So if you play golf and the golf ball goes away it will be acted upon by the drag. There is pressure back. There's gravity pulling it down. So that's anything that flies would be acted on.

So here we take this squame and want to make it a sphere because all equation exists for a particle is for a spherical particle. So you have a pancake of 15 microns and three microns thickness. How do you convert it to a sphere? So let's see if we make a sphere both the squames and their sphere settle down

at the same time. From that we get the diameter of the sphere that is present as a squame is 10 micrograms is the density of the water. We can get 3 million of them.

It would take a lot of time. More important, do you remember the morning I showed you those two coupling, three coupling, four coupling. There's a vertical that's called response time RP. What does it mean?

If they put a little sphere in moving water the question is how long would it take the sphere to have the same velocity of the water? That time is called response time. So in order to solve that equation we have to know the response time. And why is that?

If you want to accurately track sphere you have to accomplish computation and you have two problems. That mesh I told you how big the flow is to capture the dolls and the eddies. There's also how fast do you compute in order to capture this?

So the time it takes the particle, this squame to follow the flow. Then in order to capture that you have to make the tiny step on your computer much smaller than the response time to capture everything so a microsecond. You know a microsecond, take one second divided by a thousand. That's a microsecond.

Q Then go to the next slide so we can show the jury that additional simulation set up.

A This is the tables, everything in the room dimensions.

Seven meters by seven meters, 10 feet. So let's say 20 feet by 20 feet or 22 feet by 22 feet by 10 feet. That's it. And the volume center is 50 meters.

Q So you know the volume?

A Twenty-four times changing the air in the operating room. The income of the air was 15 degrees centigrade.

Q Knowing all of these inputs, all of these boundary positions is necessary for somebody else to be able to understand why you did these tests?

A They could duplicate if there was an ethic of duplicative.

Q They need that for a person to be able to do your work?

A The number 9,000 I put the Cal Tech experiment of what the air in the operating room would look like that. This experiment that Cal Tech did was very similar to that. It tells you how many eddies you've got.

Another Bair Hugger 021. The temperature of air emitted along the drag is 41 centigrade. Did I miss anything? The patient's temp was 37 degrees centigrade. The surgical lab is 34 degrees somewhere at the head of the surgeons. That's normal because subject to the air conditioning.

Q Okay. Now we start to see what you did here?

A We have to be very accurate about the grille. So we know how much air is coming, how many cubic feet per minute or

per second. They need to know this to see how does the velocity change the incoming from the grilles, each grill has a tunnel. You have to know what is the shape of the velocity profile. So have to do separate simulations. This is not DNS because DNS you could easily do. It would tell us the velocity changes within the rectangle. So that was it.

You cannot just say oh, and divide the one meter per second. You cannot do that. You have to show profile because each match the grille has many meshes. They need the correct velocity.

Q So when you're setting up the test you did on the Bair Hugger you used DNS?

A Inlet condition. This is called inlet condition. Then we have to do carefully - you currently have the calculations and you did a mix of average velocity .27, that's my calculation. Then you sit down to write equations, heat, sphere flowing, everything, how the conductivity of the skin and everything. It takes a lot of time but we need those two numbers to find the temperature and the velocity.

Q The next part you did to six simulations?

A Blower off. If you have the blower off, no heating, the Bair Hugger was blowing no air in the operating room. We did that and then we turned the blower on. We compared apples with apples.

So sort of sides comparing one thing with the other?

That's a standard technique.

Q So when you did work in that area you only changed one variable, right?

A Yes.

Q That's a Bair Hugger turned onto warm?

A Yeah.

Q What are these dots?

A And these would be velocity.

Q They come from?

A Over the room looking like this. We make a slice of the room after we do the computation to visualize what's happening. So this is just a slice - after due to the 3 dimension computation it's difficult for anybody to look at 3D velocity. You would not know anything.

So one blower on the right and one blower on the left. These are contours of velocity. You see five from the ceiling. That means five grilles because we took that section in the middle between the 10 grilles. We can just see incoming but if you want to see everything you have to look at 3D.

Q The dark space at the top of these?

A Air velocity coming. You can see when it hits an obstacle that it goes around like a natural thing.

Q You can see the people at the tables?

A The main thing you want to catch here is when the blowers and the heated air would allow this velocity to go up to

the grille direction. With this one the velocity goes to the floor. As I showed you earlier, there are outlets in the room. You see the difference because the Bair Hugger with the heated air allows it to reverse direction. Okay.

Q There's a temperature?

A I think if you go to the next one you'll see a better picture because this is very dark and takes time to do it. This is the edge of the drape to show the temperature. The brown colored, orange color is 2 degrees centigrade, the greatest is on 15 centigrade. So that shows how the heat is rising vertical as you can see.

Q Now you can - you can see some of the twirling you're describing to the jury?

A Many of these have the big eddies I cannot capture at the time. It's very expensive to do it.

Q Along with that model do you know how long it took? Yes, how much time did represent?

A Twenty-five seconds or something like that. In order to do this computation, you have to go back a little bit. In order to do this computation, you have to without using the blower or anything and allow the air from the grille to pass these outlets four times to make sure that we have a solution without a steady-state solution without a disturbing because ...

Q What does steady-state mean?

A Steady-state means variable that goes flat. In turbo

flow we see as the quantities are not changing. Then we say okay, now that squames are now up with the blower off.

Q That's what you did here?

A Correct. So only when we see the results. Okay so this is good. So we see a person. I wanted 1,790 squames per hour. So that's not bad. I said 100 million per day. Multiply that by 24.

The medical staff sheds 85 million per hour. So we could do it. We could do that but that would take a lot of money. Remember I'm using a supercomputer and the manager of the supercomputer knows what were doing so so we cannot exceed something.

Q You have to justify the request you make?

A Exactly, exactly. Everything is computerized. So we placed only 3 million - went to 3 million. We put them near the ground. In this room here, I'm sure if somebody has a device to see squames in this room they would be all over the place, right, because people are moving, they're rubbing their arms.

I wanted to make sure that the heat in the air lifts squames from the ground up. As a tester it would be easier if I put squames everywhere.

They said no, let's have the bare minimum. Put them on the floor and see if they could go. If it does - and they wanted to I wanted to know where each side there went. Later on, I wanted to see where the little yellow squares go. They are also

squames. I want to know the fluid too because the color of these particles are not significant.

It's for me to look to see where they go. I want to see - the one near the floor this way or that way. I just want to learn. I want to learn.

Q So now I think we're up to side-by-side videos. You have the blower off on the left and the blower on on the right. This was the 3D modeling that was introduced by the fluid computer?

A Yes. You see the four outlets in the floor. Each time you have to look at it for a long time to make sure you understand what. I think the next slide is enlarged. Can you enlarge that anywhere?

Q When you prepared to do your work in this case did you come to learn that hospital operating rooms are designed with an intentional inner flow from the ceiling intended to clear particles from it?

A Yes. I had to read many papers about HVAC for these things that are decided. I read that. This was all new to me. I didn't know anything about this. You can see now in the blower on the yellow and the red rising higher when the blower off, squames are scattering going toward the outlet, the four outlets.

Q The important thing that's different is the model of this Bair Hugger?

A Absolutely. I wanted to know about the red going to the yellow. I just wanted to learn. I'm very curious about these things.

These are slightly different angles and make everything the same. You can see from the side.

Q And just to be clear completely and so the record is clear, in both of these videos the Bair Hugger was turned on to work?

A Yes, blower on.

Q Do you know about how much real time has elapsed in these videos?

A Real-time?

Q Yes.

A About 23 seconds or something. It's very expensive to go more than that, very expensive so we decided to stop and not go beyond 22 seconds and I can see the results in front of me. Just a waste of money because we have limited CPU errors in our supercomputer.

Q So it appears to say that when you - and to understand and to me it's very obvious that you didn't calculate for example through this model for an entire two hour long surgery?

A It's useless. It's a waste. A computer plan is very expensive.

Above the knee this is difficult to see but on the knee that shows if you have good vision - my vision is not very good.

But if you have a good vision you can see yellow and red particles close to it. We also counted - let the computer count how many squames reached that high and that will be shown later on how many.

Q It's a little bit hard to see that there are colored dots coming down?

A You have to have good eyes. I can see them on my computer from close to me but on this one it's far away.

Q They're yellow and red?

A I haven't actually counted them. It's telling how many reached that place. Also, there are tables in the operating room with instruments. If the particles reach the instruments it doesn't have to reach that high for the scissors that the squames can be transmitted to.

Q I think the next slide shows a model of the squames at least the ones that reached the table?

A Right. Also, this has counted how many particles are there at the given time. The bottom scale would be time of the vertical scale and how many of them were at a given location. You can see after 20 some you have so many on the surgical table. You have the patient's knee. That's a counter after count each one.

Q The supercomputer it's tracking each and every one of the particles?

A Three million all the time.

Q Count's every one at each spot?

A The computer counts these 3 million, which ones are right at the table which is how you have the equation.

Q That's what you get here?

A Yes.

Q This ...

A Side table on the left. I think it says conclusions. Let's read it.

MR. BLACKWELL: Your Honor, may I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: We agreed that the conclusion slide would be taken out.

MS. ZIMMERMAN: I'm happy to do that. If you say that. I'd be happy to. Your Honor, for the record we have a number of exhibits that were displayed as part of the video that we would ask you put into evidence.

MR. BLACKWELL: No objection.

MS. ZIMMERMAN: So they are Plaintiff's Exhibit 1441, 1442, 1443, 1444, 1440 1446 1447, 1449 1450 1451 1452 1453, 1454 1455, 1456 1457 1458, 1459 1560 1460.

THE COURT: Any objection?

MR. BLACKWELL: May I briefly confer with counsel, Your Honor?

THE COURT: Any objection, Mr. Blackwell?

MR. BLACKWELL: No, Your Honor.

THE COURT: 1441, 1442, 1443, 1444, 1445, 1446, 1447, 1448, 1449, 1450, 1451, 1452, 1453 through and including 1459, 1460 and 1461 will be received into evidence.

(RETURN TO OPEN COURT.)

Q Dr. Elghobashi, you were asked to evaluate the effects of the Bair Hugger on movement of particles in an operating room, right?

A Yes.

Q You were asked to test and evaluate how particles move in and operating room when the Bair Hugger is on and off, right?

A Yes.

Q That's what you did and that's what you've been explaining to the jury today?

A Yes.

Q Do you have an opinion to a reasonable degree of professional certainty about the effect that the Bair Hugger has regarding distributing particles?

A So you've seen with the blower off, no heating, the squames. That's at one kilowatt. They spread squames, yes, that's what they have.

Q Right. It was your opinion. What does the Bair Hugger do?

A It will increase the dispersion as of squames that can

reach higher level and reach the table, the patient, yeah.

Q The surgical site as well?

A Definitely, yeah.

Q Did you submit the work that you did regarding the Bair Hugger for peer-reviewed publication?

A Yes.

Q Was it accepted?

A Yes.

Q So the work you told the ladies and gentlemen of the jury about was a peer-reviewed study?

A Yes.

Q What's the name of the journal that the article is published in?

A International Journal of - I forgot because I usually don't publish in that journal. I work in other journals. The International Journal of Biomedical Computation or something.

Q I think it's in the binder.

A Okay.

Q It's Plaintiff's Exhibit 1419?

A It relates to biomedical.

Q There will be some testimony to the jury I think later in this trial about whether or not they are suggesting any ways that are appropriate to track your streams rather than particle movement and turbulent flow. Did you use the right way to study this problem?

A Could you repeat the question again?

Q I'll try to do better. When you - when you studied the impact of the Bair Hugger in the operating room, you studied the movement of particles and turbulent flow?

A Yes, that's what they wanted, yes, exactly.

Q Do particles follow air streams?

A Never.

Q Why?

A Unless the particle is one micron or less that means that response time is so fast it wouldn't capture. These are heavy in my opinion, 10 microns spheres with density of water and the density of water is 1,000 kilograms from a cube. This like a small golf ball.

We also followed the notes on here and it will tell you it will not follow again. I've been doing this since 1980 so I know which batch and what it tells you and which one would follow and which one will not follow.

Q Particles don't follow streams ...

A If it's something else smaller and it's a name that's in the spectrum, when I say these are tiny entities, they are tiny. These particles are far away. They're not following.

Q They have to have it for it to follow a streamline?

A Yeah, it cannot. The question is the diameter for this flow and what is around for people who work in this, they know that. They know you cannot just follow it. It doesn't make any

sense. If we knew that was correct, why would I go to the trouble? Why would go through 3 million if I don't have to do that?

Q Right. Are you aware of whether 3M did computational fluid dynamics tests on the Bair Hugger in 2015?

A Say that again please.

Q Do know whether or not 3M – let me ask it a different way. We've been provided notes to show that some engineers at 3M performed some computational fluid dynamics in 2015.

A I never heard that.

Q You haven't been provided those results?

A No. I'd like to look at it but I didn't see that, no.

MS. ZIMMERMAN: That's all I have for now for him.

THE COURT: Cross-examination.

MR. BLACKWELL: Your Honor, if I could have just a moment.

THE COURT: You bet.

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

CROSS EXAMINATION BY MR. BLACKWELL

Q Good afternoon, Dr. Elghobashi.

A Good afternoon.

Q It's good to see you again.

A Thank you.
Q It's been a few years?
A It has.
Q I want to start at the top. Other than that, I'd like to start with the discussion that you had with counsel about laminar flow and some of the other basic concepts you're educating us about. I'm not an engineer like yourself.
A That doesn't matter.
Q It if we could just understand this a lot better if you could just imagine that what we've got here is the space in an operating room?
A Yes.
Q This is the operating room table right here. And we've got a vent right there?
A Yes, because it's blowing air down this way.
Q Now the air that's coming down this way you said it would be accurate to call that unidirectional?
A Yes.
Q Because it's blowing in my direction?
A Correct.
Q But if anyone called the airflow laminar flow or warm air force field?
A What's that?
Q A force field?
A Force field?

Q It repels everything, force field?
A That's first time I've heard the word.
Q Now if it's called that by me or any of the other lawyers in the courtroom that would be inaccurate, wouldn't it?
A I would be very careful so I would say laminar is wrong. Force field, I don't know what that means.
Q So, in fact, we've discussed this before and you said that in an operating room no one talks about what laminar flow is?
A It's like that in England but I would say the same, yeah.
Q In fact, you told me it was absolute rubbish to say that?
A I would do that so British. It's so good.
Q It doesn't matter who said it if it was an engineer or a lawyer or anyone?
A Yes, it's rubbish.
Q Let me try to understand further that this is let's say an operating room and this is the table again. We've got other equipment in the operating room. You're certainly not a medical doctor, are you?
A I am not.
Q You've never gone to medical school, have you?
A Never. I tried.
Q Your experience and background was in engineering?

A Yes.
Q But let's say because you know that there's other equipment in an operating room other than a Bair Hugger, don't you?
A Right.
Q So let's say we have here an anesthesia machine?
A Yes.
Q Because in the operating room you were in there was an anesthesia machine, wasn't there?
A Yes.
Q And if we wanted to know, let's say it's 3:07 in the afternoon. We want to know what particles are in my hand right here right now in this room at 3:07 in the afternoon. That would be the sort of thing with time and with the right amount of money invested you could do an analysis of, couldn't you?
A Sure.
Q If we wanted to know because right now you said that we as humans may be shedding 17 billion dead skin cells an hour, right?
A Yes.
Q With all of us sitting in here that means hundreds of millions of pieces of us are floating around, right, squames, right?
A Correct.
Q Right here, right there may be squames here?

A Yes.
Q So if I wanted to know where squalms are hidden in my hand then we would have to know something about all of the forces in the area that might be impacting my hand was squames?
A You'd want to see that trajectory and you have to know the origin where they came from.
Q Right. So for example we want to find out what the anesthesia machine does. Let's say that it blows air in the operating room.
A It's not.
Q Blows air in the operating room?
A Okay.
Q That's the sort of thing that you are able to calculate if asked to do it?
A Yes.
Q In this case with respect to the Bair Hugger were you asked to calculate the velocity of air from any equipment other than the Bair Hugger?
A Are you asking me?
Q Yes, sir.
A So I can do that. The difference is this is 43 centigrade. In a computer equipment in an operating room or an anesthesia machine is only cooling the chips of the machine. It never reaches that and how many cubic feet per second come from the machine. This is more than a hairdryer. It's a different

thing. So the idea is yes we could compute everything. We could compute everything on every machine, yes.

Q And I'll come to that in just a moment because we're looking all the different trajectories. There is certainly a possible trajectory from an anesthesia machine, right?

A Yes.

Q That's something that could have been calculated had you been asked to do it?

A Yes.

Q But it's not something they asked you, right?

A Correct.

Q You know in the operating room there are people in there that move a lot. One of the best ways to spread particles is staff and people moving around?

A Correct.

Q You had in your CFD you had four people?

A Yes.

Q Then you told the jury that for your simulation you had all of the persons who were simply standing still. There weren't moving?

A Correct.

Q So you simulated a movement to see how it might affect squalms?

A Correct.

Q You know that in the operating room there are lights

overhead the surgical table here?

A Yes.

Q And that surgeons and others are moving those lights in the surgery?

A Right.

Q That would affect movement of squames too?

A They would, yes, sir.

Q Yes, sir, movement of people?

A Yes. But the bottom line – and do you want me to get to the bottom line or do you want to give more examples?

Q Let's get to the bottom line first.

A So the bottom line is moving hands and you're moving the handles create a vortex like I showed earlier in the day – I did not show the video. So if you move your hand or put your hand out the window of the car you would have a vortex behind you, right.

Moving nurses, moving doctors, operating, anesthesia machine, computer, all this will increase this dispersion of squames more than what I showed, what I showed you.

If you want to add opening the door for 18 seconds it will create a vortex. If the operation takes about one hour, moving the doctor's head, yes, all of those graphs I showed about how many squames are at head of the table, there would be double.

Q But let me ask another question. You said that would be double. If we open the door to the operating room – you

don't know how many times or if the doors opened in your research from this?

A Once.

Q Have you met Ms. O'Haver?

A I don't know Ms. O'Haver.

Q Have you read her deposition at all?

A No, sir. I'm a technical guy. I don't read anything.

Q If an operating room door is open, is that positive or negative pressure in that operating room?

A It depends on the design of the operating room. Some have positive pressure and some negative. If you're going to keep the door open, this is not an operating room ...

Q I want you to finish your answer but I want to be able to ask a question. If you don't know if the pressure was positive or negative in Ms. O'Haver's operating, that's fine.

A I don't.

Q But in any event, the opening and closing of doors also affects the flow of air in the room and the movement of squames, doesn't it?

A Absolutely.

Q Now air vents. You talked about examining the grilles and air vents on the floor. The air vents are critically important to understand the trajectory of air and the movement of squames in the room, aren't they?

A Correct.

Q And those are the events that bring the air in anr are important in the fact that they take the air out of the room. Now in the model that you used for the CFD you had what I'll call exit vents for the air that goes out of the room. You called them something different?

A Outlets.

Q Outlet vents. In your model the outlet vents are not powered, is that true?

A They were not.

Q They didn't have power to them?

A No fans.

Q Yes?

A No, we did not do that.

Q We call that passive outlets?

A Yes.

Q So the air just goes through that as it does?

A Yes.

Q Do you know whether or not the outlets in Ms. O'Haver's operating room had powered vents?

A No idea.

Q It does make a big difference whether that outlet vents have power actively sucking air out rather than passive? That makes a big difference in velocity and turbulence density?

A Absolutely.

Q Would that impact how this squames developed in a CFD

depending on what kind of outlets you have?

A Correct.

Q Into this case have you – now you realize in a typical operating room you're in an orthopedic operating room. And that you were just about to talk about the heat from the Bair Hugger. Now you've never used or had a Bair Hugger blanket on you, have you?

A Likely, yes, I did not.

Q You don't haven't any replacement, hip replacement, do you?

A No.

Q Now there are other pieces of equipment in an operating room that generate heat and lots of heat, aren't there?

A Relatively, it depends on if you're heating involves a ventilating chip, computer chip.

Q Do you know what a cautery is?

A Yes.

Q Does a cautery machine generate lots of heat?

A It could be. I'd have to compare.

Q In any event, to the extent you have a cautery machine or saws or reverse saws that generate heat and air, you could have also assessed the contribution of those things had you been asked to?

A Correct.

Q But in this case, you were asked to focus on the Bair Hugger, correct?

A Typical operating room, yes.

Q Now when you say typical operating room, you accepted that as it was typical as it was set up in a typical way essentially because the lawyers took you there and said it was?

A They didn't say anything. I wanted to see it and went there and looked by myself.

Q And you have no particular experience as to what is or isn’t the typical operating room, true?

A I’ve looked at pictures of many operating rooms. Yeah, they have computers. They have anesthesia machines. To me, my interest was what the Bair Hugger does. It's nothing additional.

Q So when you're telling about squames and you were talking about the size of this squames, and in the real world squames can be of various sizes, can't they?

A Yes. There are statistical studies about what that looks like. You can always have smaller and bigger, yes.

Q But in your experiments, you used a uniform sized squame, didn’t you?

A Correct.

Q I think I told the jury 25,400 microns in an inch, really tight?

A Now that's a mistake. The 25.4 millimeter is an inch.

The micron is 1 millionth of a meter.

Q How many microns is in an inch?

A I'd have to compute. You know it's 4 o'clock now. One inch equals .20254 of a meter. And the meter has 1 million microns.

Q Dr. Elghobashi, it's all right. I just thought you might know.

A Quite a large number. A meter has 1 million microns.

Q So let's go back and talk about the supercomputer and boundary conditions.

A Yes.

Q But because you can have an absolutely perfect supercomputer, but even if it was the perfect supercomputer if you have the wrong boundary conditions you get a misleading conclusion, right?

A If you have different boundary conditions you get a different solution.

Q Well if you make a proper assumption, if, for example, your model goes into the supercomputer. Let me strike that and let me ask it this way. Weather forecasting - weather models use a kind of a computational or dynamics, don't they?

A Lowest level.

Q Lowest level. If you put the wrong inputs into a computer model predicting the weather depending what you put in you could have a hurricane make landfall in Missouri?

A Yes.

Q That would be inaccurate. The boundary conditions matter tremendously, don't they?

A Absolutely. The weather conditions are never perfect because they don't have measurements numerous enough to solve equations 50-50 and they cannot use LES or DNS. They use RANS which is very low. They will never be perfect.

Q So they are sometimes helpful but never perfect?

A It's guesswork.

Q I don't know if you were asked but I think it's fair to make sure the jury understands just how you get compensated for your time and what you've done so far in this case. Do you bill - well, you tell us how you were compensated for time, by the hour, by the project?

A May can I ask a question?

Q Certainly.

A Isn’t it irrelevant to how much I make per day or per hour? I don't understand that.

Q Well unfortunately it is relevant and helpful to understand to put those things into context. The witnesses were all asked to come in?

A So yeah, if you have a PhD and a doctor of science at the National Academy you work a lot. Okay.

Q So does it have like four digits are like six?

A I wish it had six digits. I'm a poor guy.

Q As a poor guy you still make $1,500 an hour for your time?

A Only for court appearances.

Q Okay. So $1,500 per hour for court appearances?

A Yes, for this session.

Q And you don't have a separate fee then for appearing at trial, just the same $1,500 an hour?

A I think I've been to only one court case in Minnesota and this is the second one.

Q So the work that you did on the CFD, if you recall, did that total - that was over $250,000?

A So seven PhD students. Not for me. I did take $200,000. It's a misleading question because I didn't get that money. We paid seven students working for three years to pay them their tuition fees and for their advisor.

Q Sure but what was the overall cost of the CFD? Was it over $250,000?

A Something like that, yes. Actually, I accepted this because I had time. I asked the company to compensate Stanford University and they said it cost $700,000. That's the reason.

Q Thank you, sir.

THE COURT: We're going to take a recess.

(INSTRUCTION READ.)

We’re IN recess. We’ll get started at 3:45.

(BREAK AT 3:24 PM.)

(RETURN AT 3:49 PM.)

THE COURT: You may be seated. We'll continue with the cross-examination. Sir, I'll remind you that you remain under oath. Thank you.

CONTINUED CROSS EXAMINATION BY MR. BLACKWELL

Q So Doctor, let's go back to the measurement you had taking when you were getting your boundary limits. So we have a person on the table with the Bair Hugger on and they're draped. We turned the Bair Hugger on. The air is coming up from the bottom of the drapes?

A Correct.

Q Dr. Elghobashi, is it true you didn't actually take a measurement of the heat that was coming out from under the drapes?

A That's correct.

Q Is it true also that you didn't take any measurement of the velocity of air that was coming out from underneath the drapes?

A And I explained that many times.

Q I'm just trying to confirm whether you did it or not?

A Correct.

Q To the extent you talked about the actual heat, the actual velocity of the air that's coming out from under the drapes with the Bair Hugger is on, that's not actually something

you used for the CFD, that's fair, isn't it?

A Correct.

Q And I just want to clarify this just for the jury. The CFD that you did you did what you might consider a model operating room, true?

A Correct.

Q You worked in it. You aren't saying that these are the configurations in operating room number eight where Ms. O'Haver was, aren't you?

A I did not say that.

Q Because, in fact, the boundary conditions in your model weren't necessarily the boundary conditions for the operating room where Ms. O'Haver was, isn't that true?

A It may be. I cannot say but it may not be.

Q So, for example, Ms. O'Haver's operating room didn't have the same number of vents in it as the operating room that you used in your model, did it?

A Do you want me to answer?

Q Just yes or no?

A Twelve grilles in room number eight and there were 10 grilles in the previous one.

Q In addition, if we're talking about the exits where there are exits in the operating room, the operating room number eight had targets and in your model, you didn't have targets, correct?

A Correct.
Q Operating room number eight had just a different shape to it than the operating room that you used, didn't it?
A It was a different shape.
Q Well it wasn't operating room number eight, that room was not a uniform rectangle?
A I know the details very well about room number eight. I can tell you what corners. I know all this.
Q Is it true that it was not uniformly square or rectangle that it had cutout in it, didn't it?
A Correct.
Q The operating room that you used for your model wasn't either square or rectangle, was it?
A Correct.
Q Then I just want to make sure I'm clear about your answers. I think counsel was asking you this at the end. That the CFD you did was modeling the dispersion of particles, right?
A Correct.
Q It wasn't necessarily simulated bacteria, true?
A Correct.
Q In terms of the particles that were in the real operating room number eight - well I'll ask you this. Do you know if there are certain particle sizes that might be associated with carrying bacteria and certain particle sizes that are not typically associated with carrying bacteria?

A All particles may or may not carry bacteria but for the numbers you have to statistics. Some of that would have bacteria but I'm not an expert on bacteriology.

Q Or microbiology?

A Or microbiology, definitely not.

Q You'd simply agree that the CFD doesn't tell us exactly when or how Ms. O'Haver's wound might have been infected, does it?

A I cannot say that.

Q By the same token, you can't tell the ladies and gentlemen of the jury that if the Bair Hugger is turned on and the blanket is attached – you can't tell them if any particles come out of the Bair Hugger that contain living bacteria, can you?

A I cannot.

Q You can't tell the ladies and gentlemen of the jury if the Bair Hugger's turned on and the blanket is attached if anybody would be able to grow any bacteria from anything that comes out of the Bair Hugger blanket, isn't that true?

A Could you repeat again the question?

Q If the Bair Hugger is turned on in and there are particles coming out, you can't tell the jury whether anyone has ever been able to grow any bacteria from any particles coming from the Bair Hugger, can you?

A I don't understand the question but I cannot say

anything about growing bacteria. It's not my area.

Q Understood. Was this the first and only CFD you've done in an operating room?

A Correct.

Q Are you currently familiar with Dr. Memarzadeh?

A Yes, I know his papers.

Q M-E-M-A-R-Z-A-D-E-H?

A Yes.

Q He has been a researcher for the National Institutes of Health?

A Correct.

Q You're familiar with the computation fluid dynamics study that he did of the Bair Hugger?

A Yes.

Q So you have obviously read his paper and the results?

A I do.

Q I'd like to talk with you about that. If we could talk about Dr. Memarzadeh?

MS. ZIMMERMAN: Your Honor, may we approach.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. ZIMMERMAN: We've had an issue in the past with this. I think if he asked the critical questions and gets an agreement that Dr. Memarzadeh does work with computational fluid dynamics, that's one thing but I don't

think he has established that foundation at this point.

MR. BLACKWELL: Your Honor, it's impeachment. It's a CFD he's read. He is aware of it.

THE COURT: So I don't think that any foundation has been laid as of yet here it so at this point the objection is overruled. Renew your objection based on the answers and just object again and we'll take it up at that time. At this point it's overruled.

MS. ZIMMERMAN: Can we get sort of that foundational right before that something is put on the screen to impeach the witness with?

MR. BLACKWELL: Well just to be clear since the objection was overruled.

THE COURT: Before anything is displayed I think it needs to be shown to the witness. The questions can be asked and an objection can be made in terms of lack of foundation.

MR. BLACKWELL: Okay.

(RETURN TO OPEN COURT.)

Q So the CFD was done by Dr. Memarzadeh and that was done in 2010 and he had a paper that you said that you've read, correct?

A I recall, yes.

Q And you read Dr. Memarzadeh's CFD before you did any of the testing with respect to the Bair Hugger?

A Slow down. Did he do his before me?
Q When did you first become aware of Dr. Memarzadeh?
A I don't know, after I started this project. Somebody - I don't know the details. It was like four or five years ago.
Q But you know what Dr. Memarzadeh had done as part of his CFD?
A Okay. I will just use the British explanation again about the work he did. When I see people that use RANS on something like this, I don't read it. I just looked at the expert and what he did.
Q But you read the substance of what he did.
A I didn't. When people do like this I throw them away.
Q So you don't know what Dr. Memarzadeh completed, do you? You don't know whether he agrees or disagrees with you?
A I don't know what he said. If somebody uses RANS then it's useless as I explained before. It's a difficult job.
Q So you don't know what Dr. Memarzadeh concluded?
A I do not.
Q You did a study and you saw that he used RANS?
A I threw it away, yes.
Q At the end of your examination with counsel, she was showing the CFD and one of the last images involved the showing of the knee and particles?
A Yes.
Q When you did your boundary conditions you actually had

a boundary condition for the temperature of the person's body with the blanket on, didn't you?

A Correct.

Q It was a normal body temperature?

A Right.

Q And that same temperature, let's say 90.6 in your simulation was coming from the knee that was being operated on in the simulation, wasn't it?

A Okay.

Q Here's my question. We saw the different particles in that image. Then can you tell the ladies and gentlemen of the jury whether any of those particles or that every one of them was counted and accounted for? Can you tell them whether a single particle actually landed in that wound?

A In the graph that shows after 23 seconds so many particles landed on the wound, yes.

Q Let's look at it together and make sure, please?

A Sure, please.

MR. BLACKWELL: If we may, Your Honor?

THE COURT: You may.

Q The squames are starting with the red ones. Can you see okay?

A Not - my eyes are not as good as yours. Okay, okay.

Q When you see one land on the wound, tell me to stop, okay? Thank you. I don't have a question yet but here's the

question. We saw the whole length of it again so that you can see it too. This is just a yes or no question. Did you see a single one of the simulated squames in microns in size actually fall into the wound, yes or no?

A I did not see it.

Q And then there are certain things, a concept known as a thermal plume or heat rises also from a wound in the body. That rising heat also deflects tiny squames that might otherwise land in the wound?

A Is that a yes or no you or do you want me to explain?

Q I'm asking if you've heard of the thermal plume first?

A That's my job, yes.

Q Did you know that's something that Dr. Memarzadeh talked about but you do not see that in his study either?

A I've not read his work but it's on my video, so thermal plumes due to the heat everywhere. I explained that many times. I didn't call it thermal plumes but that's what I meant.

Q Doctor, thank you very much.

THE COURT: Redirect.

REDIRECT EXAMINATION BY MS. ZIMMERMAN

Q Doctor, you were asked questions from counsel about the operating room that was used for Ms. O'Haver's operating room eight.

A Yes.

Q You said you're very familiar with that?

A Yes, yes.

Q You testified you know lots about that particular operating room, is that right? And you explained about the video of the knee in the graph. And we'll come back to it. Let's do that. Is there some difference between the model that you've testified about that was shown to the ladies and gentlemen of the jury and the specifications from the operating room, operating room number eight that was used for Ms. O'Haver's case that changes the opinions you shared with the ladies and gentlemen of the jury about the impact of the Bair Hugger and movement of squames in an operating room?

A Both rooms have the square area, 530 square feet which is 15 square meters in both rooms. The variations are very minor. Both rooms have the same height. The corners Mr. Blackwell mentioned - the corner has an indentation in the room and the closet but they have no impact on the flow from the grille down. So they have 12 grilles.

The Reynolds number in each of the 12 is 8,800 which is little bit smaller than the 9,000 in the previous one. That's what matters. The ingredients in a computation for this operating room are the following. The location of the operating table relative to the grilles. The eight per second per hour from the grille. The number of surgeons, the number of medical

assistants. These quantities control everything. Possibly a computer fan. You added an anesthesia machine. Nothing will impact the results shown.

So look at the room with the same volume. The same nearly identical but a different shape. The corners we don't care about that or if there's a closet in the corner or a closed-door. They're not identical but the volume is identical. The square area of the floor is the same. The main difference was the operating table was at an angle compared to the grilles. It's parallel to the grilles. That's it.

Yeah, I mean to me based on what I've seen over the past five years the results should be nearly the same, identical.

Q You had some questions to you about the personnel in the model that you did to that extent. Do you see that there?

A Yes.

Q How would movement and squames in an operating room be impacted by movement of people?

A Definitely. The surgeon versus moving in the room with your hands. One doctor told me some of the nurses have to be standing still like a statue. You cannot move because they know movement creates more squames.

So we date the Vanilla case. Vanilla case means this is the best case for 3M. Anything added it will make it much worse, much worse. I can prove mathematically but if they don't believe it, that's it.

So we did the Vanilla case which means if you have these, the best position with the blower you will get this with the same number 10,000 or 9,000.

Q When you say would be much worse, what do you mean?

A More mixing. Instead of squames rising like that they would also mix horizontally. If you move your arm like this you create a vortex. A vortex can circulate and make it worse.

Q And the impact of the Bair Hugger in the operating room can also be amplified?

A Right, right. You really have to know physics accurately to say what I'm saying. Motion in addition to the Bair Hugger will make it worse.

Q You had some questions posed to you about the cost associated with doing the work here. How much was the cost of accessing the supercomputer, do you know?

A For the supercomputer it has to be accepted to get access to the computer. If you want to give a value to it, each CPU - each error on that machine is $10,000. I don't know how many hours I spent.

Q In your paper do you remember how many CPU hours you used and we can read it if you haven't?

It says, "The calculations included additional transient case was blower often the case with the Bair Hugger on including particle trajectories for both cases took about 2 million CPU hours," is that right?

A Right, 2 million CPU hours.
Q That's on page 11?
A Whatever is written is correct.
Q Would it be possible to solve this problem on a laptop computer?
A No, you never can.
Q Mr. Blackwell just asked questions about the thermal plume and the cost of the thermal plume. Is a thermal plume going to counteract all potential particles coming in?
A I don't know exactly what he meant by thermal plumes in that situation. The thermal plume in your fireplace in your house when you turn the fireplace on, you would have a thermal plume. Basically, it's when the air becomes less dense because gravity pulls the heavy things down. So if you go up the chimney at the top you'll see hot air coming out. That's a thermal plume. Our simulation shows many thermal plumes. I don't know if that's what we have all the time.
Q Did your model include a thermal plume or temperature over the knee?
A Absolutely, yes, absolutely.
Q If you could just give you an example and explain to a person sitting like me or members of the jury, you said it's 1 kilowatt.
A So each person sitting in this room is like 100 watts. Therefore, if you switch off the air conditioning that room will

boil at a hundred watts. So the knee is only a tiny small thing of the person. It does not at a hundred watts, maybe one watt or something. But the Bair Hugger gives kilowatts. Think of that.

Q Did you include all of the major sources of heat that you knew about in the operating room in your model?

A Absolutely, we did not miss anything. The forehead of the surgeon is lower than the patient. You accounted for all of this?

Q Mr. Blackwell just asked you to watch the video to see if any of those red and green and yellow landed in the wound?

A Yeah.

Q That's hard to see. Is that why you asked the computer to find it?

A The knee is called X,Y,Z 3D. We asked the computer to count the parts that landed on that thing. We did not see them in this portion of the video. So when the computer says I counted 25 if any, that's it.

Q Did you testify to the late dissension, tell the jury the computer results with the graph number of particles?

A Yes, you could read how many went into the knee but I don't remember the number.

Q So the squames number density chart that you showed a mix of what it is for the knee?

A Variant. The maximum is 250. This is four years ago

and I don't remember. The patient knee box. The patient knee box 250. So I counted. So we have a small box just around the knee that has 250 after 23 seconds.

Q Just so the ladies and gentlemen of the jury can see, this is what you're talking about here?

A That's 250 that's on the patient.

Q That's on a patient's knee area?

A Yes.

Q That's the time on the bottom?

A Yes. You're not as good as a computer. The computer we tell them how many and what the count is.

Q And the same is true for the surgical table, right?

A For the table, that's correct. It takes 15 seconds. I have nothing in there but they arrived later on because the force carries these - this is 23 seconds.

Q And your ...

A The operation for a knee is about one hour and 16 minutes. That would be 3,600 seconds, much more than this. This is only 23 seconds.

Q And yet the computer counts even if we couldn't see the particles. It counted certainly over a thousand, close to 1,500 squames for the red region?

A Yes.

Q On the surgical table, right?

A Yes.

Q Then it also did the side table. What was inside table 2?

A The table has nothing.

Q Also potential because of protected unidirectional airflow?

A Or a surgeon is in the operating room or something. I don't recall the geometry but this is accurate because the computer counting like a bank. I cannot know exactly by just looking at the video.

Q Then I think maybe one last question here. Mr. Blackwell told the ladies and gentlemen of the jury yesterday that because the airflow from the ceiling is essentially stronger, I'm paraphrasing, stronger than the air that comes out from the Bair Hugger blanket that the Bair Hugger can't interfere with that airflow, is that true?

A Absolutely not. For fluid particles, not squames - if you make a circle around one cubic centimeter of air for that centimeter to move you need to know - Navier-Stokes tells you exactly what will happen to that. I cannot see with my vision but just look, this is bigger. This is not something else.

Turbos have to be capable, three-dimensional, time-dependent, viscosity, pressure gradient. Look at the equation. You cannot say by looking. You have to compute.

MS. ZIMMERMAN: Thank you, Doctor.

A Thanks.

THE COURT: Re-cross.

MR. BLACKWELL: Yes, Your Honor.

RECROSS EXAMINATION BY MR. BLACKWELL

Q Doctor, as a scientist you've obviously embraced the scientific research, correct?

A I hope so.

Q So when you're talking about any influence of Bair Hugger may have had the airflow in operating room number eight, science would say we would have to know something about the velocity and trajectory of the air coming through the vents?

A Yes.

Q We also have to know something about the heat, the velocity and trajectory coming from the Bair Hugger blanket?

A Correct.

Q Do you know anybody in the world who evaluated either one of those for the Bair Hugger or the vent in operating room number eight applicable to Ms. O'Haver's surgery?

A I did compute - you're asking me a question and I'm answering. I computed the airflow of the 12 grilles in room number eight and we know the velocity, exactly what comes out and upon which I computed the Reynolds number which is 8,800 for each of the 12 grilles. I did that. The Bair Hugger is still the 750, the same as the old one. There's no change I know exactly. What else should I know about it?

Q Here something you should know. It would be helpful also to know what is the impact of having powered air vents on the movement of air squames in that operating room? Would that be helpful to know when counsel's talking about squames that either land in the wound and that the computer calculated or whether we consider not and we don't know what the computer was calculating had you within your CFD model used power instead of non-powered? We don't know that scientifically, do we?

A I agree partially with you because I want to know the details. You have to tell me how many meters per second at the lower. If you can tell me that then I can answer, but otherwise I would say it has an effect. That's it.

Q Yes because the answer - really to answer you would need to know that, correct?

A If I was told they were powered, I would've asked that question. I did not.

Q Thank you. No further questions.

THE COURT: Thank you, sir. You may step down. May this witness be excused?

MS. ZIMMERMAN: Yes, Your Honor.

MR. EMISON: Plaintiff would play the videotaped deposition of Mr. Issa on February 3rd.

THE COURT: Made this witness be excused?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: Your answer didn't go to that

question, did it?

MR. EMISON: No.

THE COURT: I just wanted to make sure the witness could still be excused. Can counsel approach.

(BENCH CONFERENCE.)

THE COURT: I just want to make sure that your answer suggested that he could leave.

MR. EMISON: Sorry.

THE COURT: So I have to ask so the jurors have an idea of the length of the depo you're playing so they can kind of understand the time. We'll recess at five. I don't want to do that if you guys don't want me to. I think it's just kinda good so that jurors have an expectation of exactly how long we're looking at. What are your thoughts, Mr. Emison?

MR. EMISON: I think that's fine.

THE COURT: Very good. Will it be done prior to 5 o'clock?

MR. EMISON: It will not.

THE COURT: So what we'll do is this deposition is going to take us up until we recess close to five. The video, how long it's is in its entirety?

MR. EMISON: I believe it's 56 minutes.

THE COURT: You're okay with me telling the jury that?

MR. EMISON: Yes.

THE COURT: Are you guys okay with that as well?

MR. BLACKWELL: Yes.

THE COURT: I'm not keeping track of the time in terms of this with the depos. So if you guys want we don't have to have it down by the second but if you guys just want to kind of ballpark it for me so if we get into that later we'll know exactly who's responsible for what. Fifty-six minutes.

MR. EMISON: I believe so.

(RETURN TO OPEN COURT.)

THE COURT: So folks, we are now going to hear some previously videotaped testimony. Mr. Emison, is that correct?

MR. EMISON: From February 3rd for Mr. Issa.

THE COURT: I will tell you that although the deposition is around 56 minutes long, we're going to recess right around 5 o'clock so I don't know, Mr. Emison and Counsel when a good breaking point might be. When there is a good breaking point might be the could you just call it.

MR. EMISON: That's fine. Thank you.

THE COURT: Does that make sense?

MR. EMISON: Yes.

(VIDEOTAPED DEPOSITION OF JAY ISSA WAS PLAYED FOR THE JURY.)

THE COURT: Thank you for your attention and

promptness today. Lunch will be provided for you tomorrow. We'll also make arrangements for you guys to eat in the jury assembly room so you guys won't be on top of each other eating lunch tomorrow. So we'll get that figured out in the morning. But just you guys know you'll be eating in the jury assembly room if you so choose. I will ask you to be back tomorrow at 8:30.

(INSTRUCTION READ.)

Have a good evening. Hope you enjoy the weather. We'll see you tomorrow.

(COURT IS IN RECESS AT 4:56 PM.)

PROCEEDINGS

September 30, 2022

THE COURT: We are outside the presence of the jury. It's my understanding, Mr. Blackwell, that you had some issues that you wanted to bring to the Court's attention.

MR. BLACKWELL: Yes, Your Honor. Could I ask for just a moment if Dr. Jarvis could step out.

THE COURT: Sure.

MR. BLACKWELL: So Your Honor, let me just be clear. First, we received last night a video that is an airflow visualization that Mr. Emison would like to use with Dr. Jarvis. It was done by a Dr. McGovern. It has not been disclosed at all in this litigation or in other prior litigation with respect to Dr. Jarvis.

We received it for the first time yesterday. He was not deposed about the airflow visualization. He's a medical doctor with no expertise in airflow visualization at all. It's a narrated video to boot, Your Honor, that I have here in my hand on the camera.

THE COURT: I just want to ask, has this video been disclosed prior to last night?

MR. EMISON: It has and that Dr. Jarvis has relied on the McGovern report. The video is referenced and talked about in the McGovern report. Whether we sent the

actual MP4 or video file to them before yesterday, I don't know to be honest and I apologize that I don't know.

But it is clearly part of the McGovern report. It's referenced in the McGovern report. They've had access to the McGovern report for the entire time. They've known that Dr. Jarvis has relied on the McGovern report the entire time.

And what it something that he relied on in his expert opinions as to whether or not the Bair Hugger increases the risk of surgical site infection and it's part of that report that shows it.

And the McGovern report to remind the Court is the one that found the very strong association between the Bair Hugger and infection risk, an increased risk of infection 3.8 fold or 380 percent.

THE COURT: Okay. So the Court does not believe that that's proper disclosure in terms of then using that in trial, a video and publishing that before the jury so the objection will be sustained and the Court's not going to allow use of the video.

MR. EMISON: Will you allow him to discuss the video and how it's important to his opinions?

THE COURT: I think that would be, in essence, the same thing. I mean if there are portions of it - if it falls within the McGovern report and you're aware that he

had relied on that report.

MR. BLACKWELL: And, Judge, I hate to – but there is a duty to be forthcoming with the Court, Your Honor. And if the Judge were to see the McGovern study, Your Honor would see there is no airflow visualization in that study. It's not a report. It's a study. It's a published study.

The visualization is a completely a separate thing. It just really is. He's been deposed four times. Never has he had an opinion about this airflow visualization. To bring it up on the stand would be the first time we've ever heard him do it.

THE COURT: So the Court's not going to allow any testimony regarding the video. We can only have one person talking at a time so if you want to talk with Mr. Emison at this point, you can.

MR. EMISON: Again, it's attached to the report.

THE COURT: I'm aware.

MR. EMISON: And our expert on Monday, Mr. David has also relied on the report. He also intends to rely on that video that has been disclosed to counsel.

THE COURT: Having the report is one thing. What I'm addressing now is the video. And the Court is not going to allow the video to be displayed nor any testimony regarding the video be to be presented before the jury.

MR. EMISON: Understood.

MR. BLACKWELL: If I may, Your Honor. This is with respect to a designation for Mr. Albrecht that they may play today. We have one completeness addition to it.

MR. EMISON: I'm not gonna play anything for Mr. Albrecht.

MR. BLACKWELL: All right.

THE COURT: Is Albrecht the one that I needed you guys to revisit?

MR. EMISON: It is.

MR. BLACKWELL: Yes, Your Honor.

MR. EMISON: And I think we will be prepared at some point from the plaintiff's side to speak to that today.

MR. BLACKWELL: Sorry, Judge. The last thing relates to the depo clips which we talk about just about every day.

THE COURT: Yes.

MR. BLACKWELL: So we have our general objection to them. We've heard Your Honor with respect to specific instances of when they do and don't apply. What we specifically object to is the repetitive playing of the same clips. And we noticed that with respect to Dr. Jarvis, we had a list here of five of the plaintiff's depo clips that were already played but they intend to play again and we object to that as cumulative, repetitive and

as a witness taking the stand couldn't do that.

THE COURT: Okay. That objection is noted and overruled. Any further record you'd like to make in that regard, Mr. Blackwell?

MR. BLACKWELL: No. Some of it we may make for the record as we come up.

THE COURT: Sure. And I get it. I'm not here to get in the way of you and making the record that you think is proper for your client. So however, you think is best to do that, I'll be good with that.

MR. BLACKWELL: Thank you.

THE COURT: Any further record before we get started this morning from plaintiff?

MR. EMISON: No, Your Honor. Thank you.

THE COURT: From defendant?

MR. BLACKWELL: No, Your Honor.

MS. PRUITT: I need to tell you one thing, Judge. You're expressing your frustration rightfully so on the Augustine exhibits and the questions and answers. And we've prepared an index to the exhibits for the Court. And I just want to hand it to you to the extent it will help. And then I've brought all the exhibits over as well so I can give you the Court copies. But I just wanted you to have it ahead of time. And I've got a copy for the other side as well.

THE COURT: Okay. So I don't think I have anything over lunch. I've got a couple of phone conferences. Are they ready to go?

LAW CLERK: They are.

THE COURT: Okay so I don't think I have anything over lunch today, do I?

LAW CLERK: I don't think so.

THE COURT: So why don't we plan on doing that over lunch, just maybe if we take an hour lunch take 30 minutes of it where you guys can help me navigate this and answer any, briefly answer any questions that I have because I'd really like to knock that out this weekend so you guys can have those back and can get started on the editing piece of it next week.

MS. PRUITT: Your Honor, I have someone preparing the notebook of just the ones that are in the designations. We've pared the designations down. And I know the Court said they didn't want them pared down but it will save you from having to frustrate over every single exhibit.

So it's just about 20 and we're in the process of preparing you a notebook that should be ready by noon so you can take it this weekend and use it as well.

THE COURT: I tried to go through and kind of, you know, figuring out what exhibit is what and making note of it but I just got lost.

MS. PRUITT: I understand.

THE COURT: All right, let's go off the record.

(OFF THE RECORD.)

(JURY SEATED AT 8:54 AM.)

THE COURT: You may be seated. Welcome back. I hope you guys had a good evening. We're going to continue with the presentation of the plaintiff's case. I believe when we recessed yesterday that we we were playing the deposition of Mr. Issa. Is it the plaintiff's intention to continue that at this time?

MR. EMISON: It is, Your Honor. Thank you.

THE COURT: You may proceed.

(DEPOSITION OF JAY ISSA IS PLAYED FOR THE JURY.)

MR. TORLNE: Your Honor, I'm tracking this and what they just went into is not a part of what was excerpted to be played.

MR. EMISON: If it wasn't, I don't have an explanation. We're going to need to look at something as far as what was supposed to be played.

THE COURT: So what do you guys propose at this point?

MR. TORLINE: I think somebody's got to fact check. We've got to go back and check these things. The last thing where it stopped, that was approved. It's the

business about what he did to prepare and then whatever the counsel would have informed him. That was the last thing that we agreed - that you ruled upon.

THE COURT: Are able to go back in ...

MR. EMISON: I could see if we have a clip report and compare it real quick.

THE COURT: Mr. Torline, do you mind comparing?

MR. TORLINE: Yeah.

THE COURT: Guys, we've got to do a little fixing of some stuff and so we're going to take a brief recess.

(RETURN TO OPEN COURT.)

THE COURT: We're going to shoot to be out for a 15-minute recess. Carly will keep you posted if we need a little bit more time. You guys can leave the jury deliberation room.

(INSTRUCTION WAS READ.)

We'll be in recess. Thank you.

(BREAK AT 9:15 AM.)

THE COURT: We're outside of the presence of the jury. We took a recess because there has been some issues with the deposition, tracking the designations and the Court's ruling. Mr. Emison.

MR. EMISON: Plaintiff and defendant have conferred and compared the agreed transcript cuts. What has been played is correct, Your Honor. And because it's

correct, at some point in some of the trials the Court has given kind of an explanatory instruction about these, that the videos are edited based upon agreements of the parties and rulings of the Court. It may be proper for the Court to do that here given the objection and the delay and to confirm that everything that has been played is what the parties have agreed to and consistent with rulings of the Court.

THE COURT: I think that's referred to in one of the opening statements but yeah, I can come up with something. Any objection to that, Mr. Torline?

MR. TORLINE: No, Judge. But it's played because of your rulings obviously. And so however you want to phrase it, I guess I'll leave it to you. There's been a lot of these drafts going back and forth. I think we've got the issue under control now.

MR. EMISON: And for the record, I'm not upset with him. It happens. I just want to confirm that everything that has been played was what was agreed on and per the Court's rulings.

THE COURT: Are you okay about this? How about the videos played by the Court - the video as played by the parties have been edited for purposes of trial and the result of the Court's rulings? No inference should be drawn from the editing. Anything else?

MR. EMISON: I would like clarification that what has been played is what has been played according to your rulings.

THE COURT: I don't think that that's necessary cause I just said there was a technical difficulty. So I'm going to not give that instruction. Any objection to this instruction by defendants?

MR. TORLINE: No.

MR. EMISON: Thank you, Your Honor.

THE COURT: Sure.

(JURY IS RESEATED AT 9:31 AM.)

THE COURT: You may be seated. Okay, guys, we're going to resume the deposition of Mr. Issa. The Court will make the following statement as it relates to all the videos that you are going to see during the presentation of evidence.

The video as played by the parties have been edited for purposes of trial and as a result of the Court's ruling. No inference should be drawn from those edits. Counsel.

MR. EMISON: Thank you. We'll continue.

(THE DEPOSITION OF JAY ISSA CONTINUED TO BE PLAYED.)

THE COURT: Counsel, you may call your next witness.

MR. EMISON: Judge, we'd first like to offer

two exhibits. We'd offer Exhibits 1668 and 1669 into evidence.

(BENCH CONFERENCE.)

MR. TORLINE: These supposed documents, we've been down this road multiple times. They're hearsay unless there's - they've been authenticated and fall within an exception. They haven't done that and there's no foundation. This witness did not have knowledge about them. And, frankly, 1669 is most of it is subject to the motion in limine on the 2015 CFD.

MR. EMISON: Your Honor, this witness is 3M. 3M has absolute knowledge about this. If you'll recall the testimony of Mr. Issa who was testifying as 3M was asked if it was part of Mr. Van Duren's job to create Exhibit 34, to create those kinds of studies to the best of his knowledge. Mr. Issa testified as 3M and testified that it was.

It was Mr. Van Duren's job to create the health economics tool that was marked as Exhibit 34 and he does that for a purpose. That is what Mr. Issa's testimony has been is what 3M expects Mr. Van Duren to do.

This is an authenticated document. It's 3M's document. It was Mr. Issa in the course and scope of his employment for the corporation.

With respect to the internal CFD report, again, whether Mr. Issa personally was unaware of the report, he

was testifying on behalf of the corporation. He was 3M's voice in this deposition. He had 3M's knowledge of that deposition. He confirmed that he trusted what his colleagues did in creating that report. And the fact that 3M failed to prepare their corporate designee to testify about the document does not prejudice the plaintiff in being able to admit the document. That's on 3M. He was testifying as the corporation, not as himself.

THE COURT: The objection as to 1668 and 1669 will be overruled. They will be received.

(RETURN TO OPEN COURT.)

THE COURT: 1668 and 1669 will be received into evidence. Counsel, call your next witness.

MR. EMISON: We'd call Dr. William Jarvis.

THE COURT: Dr. Jarvis, if you could step up to the witness stand please.

DR. WILLIAM JARVIS,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MR. EMISON

Q Good morning, Dr. Jarvis. Would you introduce yourself to the jury please.

A Hi.

Q Would you tell them your name?

A I'm Dr. William Jarvis.

Q Dr. Jarvis, what you do for living?

A I practice epidemiology and infection control, infectious disease prevention.

Q What does that mean in general?

A I do epidemiological studies. I do a lot of teaching and education on the prevention - particularly focused on healthcare associated infections or infections that occur as a result of healthcare exposures.

Q I always have trouble saying this word but what is an epidemiological study? There's lots of syllables in there.

A I'm sure we'll talk about it a number of times today. There's case control, cohort studies, kind of the difference between doing epidemiology and doing say clinical infectious diseases is as a clinical infectious disease doctor which I've done, I would look at each of you individually and look at your signs and symptoms and treat it.

Whereas, with epidemiology we look at a population and what is happening in the population. For example, if you look at the data that would come out on smoking and cancer, it's from population studies, not looking at one individual. You can't reach that conclusion by looking at a single patient.

Q Are you a medical doctor?

A Yes.

Q Would you tell us briefly about your training to become a medical doctor.

A I went to medical school at University of Texas Houston. Then I did internship in pediatrics in Houston and I moved to Children's Hospital Los Angeles for a pediatric residency which was two years. Then I did a pediatric infectious disease and microbiology fellowship at the Hospital for Sick Children in Toronto, Canada. Then I did a Yale infectious disease and virology research fellowship at Yale University School of Medicine in Connecticut.

Q Would you talk to us more about the two infectious disease fellowships that you did. Just generally what was involved with that?

A Well the fellowship for one year in Toronto was with the largest Children's Hospital in all of Canada and I was the pediatric infectious disease fellow. So I saw literally all the infectious disease patients at that hospital. And so it was really focused primarily on clinical training with a little bit of emphasis on microbiology.

Q And one of those fellowships, was that at Yale University?

A After Toronto I went to Yale and that was a combination of doing clinical pediatric infectious diseases, taking courses at the School of Public Health and Epidemiology and my focus was on virology research.

Q After you finished up your fellowship at Yale, what did you do next?

A Then I went to Atlanta to the Centers for Disease Control and Prevention or CDC.

Q And you were located in Atlanta. Is that where the CDC headquarters are?

A Correct.

Q When did you start at CDC? What year was that?

A 1980.

Q And what did you do when you started working at the CDC?

A I was initially accepted into what's called the Epidemic Intelligence Service. That sounds like CIA but it's not. It's a two-year training program in epidemiology. So I did that for my first two years.

Then my third year I did it what was called a preventive medicine residency and the I stayed on there as staff.

Q What does preventative medicine mean?

A It's focusing on how to prevent things from happening rather than on diagnosing and treating.

Q With respect to figuring out how infections happen, how does your background and training in preventive medicine help you to do that?

A Well I focused my first two years on learning the guidelines, helping and developing guidelines for the prevention

of those infections, working in the surveillance system which is a reporting system that exists today. Every U.S. hospital reports data to the division that I was in at the CDC on selected healthcare associated infections such as surgical site infections. And I worked on doing epidemiologic studies.

Q And you told us about epidemiological studies and what they are. How does that come into play in your work in a case like this one?

A I think that epidemiologic training, part of the focus is on study design and statistics. And it's very helpful when you're reviewing articles to see what the weaknesses and strengths of those papers are.

Q While you were working at CDC, did you design and conduct epidemiological studies?

A Many.

Q What was your title while you were at CDC?

A I had a number of them. First, I was an EIS officer. Then I was a medical epidemiologist. I was assistant chief of the surveillance program, the National U.S. Surveillance Program. Then I was the branch chief responsible for 17 years for all the outbreak investigations that we did in healthcare facilities throughout the world; the development of guidelines for the prevention of healthcare associated infections and the development and publication of epidemiologic studies.

Q And did I hear that one of your titles will assistant

chief of the surveillance program?

A Yes.

Q Now when I think of a surveillance program, I think of the movies with a couple of guys eating cheeseburgers in a van with microphones and things. Is that what you did?

A Not quite.

Q What did you do?

A Well what we did is sit in a federal office which is pretty sterile and developed definitions for healthcare associated infections because we want - this is a paperclip. Everybody would call it a paperclip. So we want, for instance, a surgical site infection to have definitions that are so precise that when one of you calls it a surgical site infection, I would agree. It's the same thing because we have ever everybody throughout the United States reporting on the state of the CDC.

So developing the methodologies for how they go about looking for these infections; what sources like microbiology records they would look at; then developing definitions for what the infections are and then collecting that data back to the CDC; analyzing that data; feeding it back to the hospitals.

One of the things we do is calculate rates, bloodstream infection rates or say surgical site infection rates and then feed those data back to hospitals so they can look at where does their hospital fit with other hospitals that are like them. Are

they doing a good job or are they not doing a good job.

Q In this case are you in what involved a surgical site infection?

A Yes.

Q And in your role at the CDC, did you have any role in developing the CDC guidelines or definitions as to what the different kinds of surgical infections are?

A We developed the definitions for how do you define a surgical site infection. Then I was involved before I left CDC in 1997 with the development of the last, not the most current but the last surgical site infection guideline.

Q And how long did you work at the CDC?

A Twenty-three years.

Q Did you say you left in 1997?

A 2003.

Q Sorry, 2003. So you were there from approximately 1980 until 2003?

A Correct.

Q As part of your work with the CDC and as part of the work that you've done over your career, have you become familiar with peer-reviewed journals?

A Yes.

Q Tell us your understanding of what a peer-reviewed journal is please.

A A peer-reviewed journal is a journal where articles

are submitted and then they're sent out to experts in the area, usually two, sometimes three who then review that paper and send back a narrative of their assessment of should the paper be published or not; what are the strengths of the paper; what are the weaknesses of the paper.

And, in fact, I was the editor of a journal called Infection Control and the Healthcare of Epidemiology which is the Journal for the Society of Healthcare Epidemiology of America which is the worldwide society for physicians primarily but some nurses who practice healthcare epidemiology and infectious diseases for two years.

Q Have you also authored peer-reviewed journals or peer-reviewed articles?

A Over 400.

Q And in addition to scientific papers that you may have had published in peer-reviewed journals, have you also authored any books?

A I've edited approximately seven books. In fact, just last week we sent the seventh edition of what's called Hospital Infections to the publisher printing it.

Q What does it mean to edit a book?

A It's a bit like herding cats. You go out - first of all you decide what are going to be the topics that are going to be in the book. What are each of the chapters going to cover. Then you go out and recruit experts in those areas that have

published a lot of articles and have a lot of experience in the areas so they know the subject well and they're good writers and they'll finish what they start to write those chapters. And then you harass them in this case during COVID for over three years to get those chapters in.

And then you review all those chapters and find are they great, are they not so great and you have to push them to put things in or take things out. And then, ultimately, in this case after three and half years send it to the publisher to print.

Q As you're editing a book like that, how do you go about determining whether what has been submitted is in fact reliable?

A I do several things. One, I have experience in training so have a pretty good idea of what should be in it and what's reliable. And then I usually look at their references. I pull the papers that they're referencing. Some of the chapters have 500 references. I pull those references and look at them and make sure that the statement that's being made is supported by the documentation or a reference that they used.

Q And what kind of work have you done outside of CDC?

A Well in 2003 I started a company called Jason and Jarvis Associates and we consult in infectious disease, anti-microbiotic resistance, healthcare epidemiology and epidemiology throughout the world.

So I do a huge amount of teaching, flying all over the world to give lectures on how clinicians can prevent these healthcare associated infections from occurring or anti-microbiotic resistance.

Q And can you give us just a couple examples about some of the things that you've taught on?

A Sure. Surgical site infection prevention, central line associated bloodstream infection prevention, catheter associated urinary tract infection prevention, ventilator associated pneumonia prevention. So those are kind of the big four that account for probably over 90 percent of all healthcare associated infections.

Q Now circling back to the time with CDC and the time that it crosses over to your time with Jason and Jarvis Associates, that's fine too. But have you been involved in any professional organizations or societies?

A I've been involved with the Physicians Society. Primary the Physicians Society which I mentioned but the Society of Healthcare Epidemiology of America or SHEA. I was president of that. I was on the board for four years, Board of Directors. And I was the editor for their journal for two years and assistant editor for two other years. I've been involved with the nursing primarily the Nursing Infection Control Society called the Association of Professionals Infection Control.

I was president of their research foundation which was part

of their organization that gave money out to members to do epidemiologic studies and access those studies. I've been involved with the Food and Drug Administration. I'm chairman of the Food and Drug Administration Hospital and Personal Use Committee.

I guess one other thing I would mention was while I was at CDC I was also on the faculty at Emery University's School of Medicine in the Department of Pediatric Infectious Disease and Immunology.

Q And while you were at CDC did you receive any awards?

A Yes.

Q What awards did you receive?

A I've received about - I forget, probably 17 to 20 U.S. Public Health Service awards. I received CDC award in Africa - I forget what the name of that was actually but it's an award that's given for the best scientific work and it's given to one individual a year. I received that award.

Q Is that the CDC Lifetime Achievement Award?

A Right, correct. And then I received that CDC Lifetime Achievement Award in epidemiology. That's an award that is given to one person every 10 years.

And then with the Society of Healthcare and Epidemiology of America, I have both an award and a lecture that's given annually at their annual meeting named after me.

Q Now as part of your work in the present time with

Jason and Jarvis Associates we've asked to do some work regarding this case, is that correct?

A Yes.

Q Like most people in the world do you get paid for your work, Dr. Jarvis?

A Yes.

Q What do you charge per hour for the work that you're doing in this case?

A For review of materials it was $700 an hour.

Q And does it change whether you're giving deposition testimony or court testimony like today?

A Yes.

Q What are you charging for your time today?

A $900 an hour.

Q The have you done a lot of work in this case?

A Yes.

Q When you do consulting work like this, do you work for both plaintiff like Kathy O'Haver and defendants like the 3M Company?

A Yes.

Q Do your charges differ whether you're working for a plaintiff or a defendant?

A No.

Q Does the way you do your work differ whether you're working for a plaintiff or a defendant?

A No.

Q What percentage of your work is for plaintiff versus the defendant?

A Things really changed with COVID just to give an example. Before COVID I probably traveled 300,000 miles a year in terms of travel mostly for attending meetings and giving lectures in education. That virtually stopped with COVID. So before COVID it was probably 60 percent plaintiff, 40 percent defense. After COVID it's probably 80/20.

Q What were you asked to do in this case, Dr. Jarvis?

A Did you review Ms. O'Haver's medical records and make an assessment of what you thought the cause of her infection was due to?

Q As we go through your work in this case, can we have an agreement that whatever conclusions that you offer during your testimony will be made to a reasonable degree of professional and medical certainty?

A Yes.

Q Dr. Jarvis, have you prepared a report that summarizes the work that you did in this case and the conclusions that you reached?

A Yes.

Q Is that report in front of you as Exhibit 1679?

A Yes.

Q I'm not going to offer it at this time but as we go

through your testimony today if you need to refer to it to refresh your recollection about something, just let me know, is that okay?

A Yes.

Q Dr. Jarvis, do you understand that Kathy O'Haver was diagnosed with an infection related to her knee replacement that occurred in November of 2016? Is that a fair summary?

A Yes.

Q Are there different types of classifications for surgical infections?

A Yes.

Q Is there a demonstrative exhibit that will help the jury understand those different category categorizations?

A Yes.

Q And, Dr. Jarvis, is Exhibit 2205 that exhibit that will help the jury understand your testimony about this?

A Yes.

MR. EMISON: Your Honor, may we publish Exhibit 2205?

MR. BLACKWELL: No objection, Your Honor.

THE COURT: You may publish Exhibit 2205.

Q And, Dr. Jarvis, I have here a pointer if that helps you. Do you have one also?

A Yes.

Q Very good. Tell us what we're looking at and how that

affects the different classifications of surgical site infections.

A This is actually a figure out of a 1997 Surgical Site Infection Prevention Guideline that I supervised. If you look at literature during this trial you're going to hear a number of terms one of which is surgical site infection.

While that is true, a surgical site infection involves all of these. So to be more precise, if you have a superficial incisional SSI or surgical site infection and that involves just the very top layer of the skin.

Then there's a deep incisional SSI which involves the fascia and muscle layer. Then you have organ space or SSI which down here would be a prosthetic joint infection.

And these categorizations are important because the treatment of this is usually oral antibiotics for maybe five to seven days whereas the treatment of this gets into multiple weeks and oftentimes multiply antibiotics.

In our surveillance system at CDC they don't report just SSI. They have to report what kind of SSI. And this will become increasingly important because the mechanism for how these infections occur for superficial SSI versus organ space SSI are different.

Q So does that mean there's different causes for each of the three different types of surgical site infection?

A Yes.

Q Would you explain that to us please?

A So for instance for superficial SSI all of us have lots of bugs on our skin and those organisms can cause infections. And that is most commonly the source of the superficial SSI. Whereas, organ space, this area down here is sterile or there are no organisms down there. So you're endogenous organisms play a much more minor role in those infections and airborne particles with bacteria on them play a much bigger role.

In fact, these are usually implanted at the time of surgery, whereas this can be either at surgery or after surgery.

Q And with respect to the different levels of SSI, does it take a different number of bacteria, for example, to cause a superficial skin surface type surgical infection versus an organ space deep joint infection?

A Well actually by these different categories the answer to that would be no. What makes a huge difference is whether you have something artificial like an implant or not. For instance, in animal studies if you just try to do a superficial SSI you would need usually millions of bugs to cause that infection to occur. Whereas, if you put a suture in it reduces the number of bugs that you need or if you have an implant in.

Some have argued that in fact that a small a number as one to 100 organisms will cause an infection if you have an implant, whereas you'd need literally millions of bugs to cause an

infection if you don't have an implant. So that makes a big difference.

Q So if I heard you right, for a superficial implant near the skin up here, did I hear you say that takes potentially millions of bacteria to cause an infection?

A Well any of those - any of those categories if there's not an implant takes millions.

Q So for a non-implant equals millions of bacteria to cause infection, does that accurately reflect your testimony?

A Yes.

Q And if there is an implant, for example, a knee replacement, how many bacteria would it take potentially to cause that kind of deep joint or PJI-type infection?

A In animal studies it's been as small as one to 100 so I would say less than 100 will cause an infection in an implant.

Q Less than 100. Is what I've written a fair summary of your testimony?

A Yes.

Q Thank you, Doctor. Now if the patient who has an implant gets up to 100 bacteria or organisms on that implant in their body, how long might it take for that infection to show symptoms where it can be diagnosed?

A It ranges fairly broadly. In fact, the surveillance requirement by CDC for looking for these superficial SSIs is 30 days. Their definition is that infection will occur within 30

days so they tend to be short.

Whereas for these organ space SSIs it used to be in the 1997 guideline that I supervised, we actually followed those for a year and the belief still is that those infections can occur in a year.

In fact, within the last several years there's been a worldwide outbreak of a very unusual infection associated with a different medical device than we're talking about here. Some of those patients haven't presented for five to seven years after their surgery and yet it was implanted at the time of their surgery.

But right now, the CDC has made their surveillance because nurses have to voluntarily collect this data and it's time-consuming. They've now made it whereas three months, 90 days. So these organ space infections can occur early but they also can occur late.

Q Dr. Jarvis, I'm going to hand you Exhibit 2208. Is this an illustration that could help the jury understand your testimony as to why it may take weeks or months or even years for this type of infection to present itself?

A Yes.

MR. EMISON: Your Honor, I would offer demonstrative Exhibit 2208.

MR. BLACKWELL: No objection.

THE COURT: Counsel, can you come up.

(BENCH CONFERENCE.)

THE COURT: I have 2205 on your exhibit list. What is 2205? The title that came up and it went down.

MR. BLACKWELL: It's also 1607 on their list.

MR. EMISON: Actually, it's not. That's an incorrect number. That's the *Garris* one.

MR. BLACKWELL: Oh, this is CDC Classification of SSI.

THE COURT: And 2208?

MR. EMISON: Will be biofilm.

THE COURT: And the plaintiff's request for 2208 was just to display, correct?

MR. EMISON: Yes.

THE COURT: There was no objection?

MR. BLACKWELL: For demonstrative purposes.

(RETURN TO OPEN COURT.)

THE COURT: 2208 may be displayed to the jury.

Q Dr. Jarvis, how is it that a surgical patient is infected with bacteria or other organism during surgery that it it might take days or weeks or months or even years for that infection to actually show symptoms?

A I think several reasons. This is an electron micrograph of an implant. So if I held this implant up for you and said is it infected or not, we can all look at it and we would have no idea. We can't tell.

But if you put it under very high electron microscope magnification you can see that this implant is not smooth. In fact, all of that debris that you see in there if we were to go to an even higher level of magnification we would see the little dots, the little round beads. And those are actually gram-positive cocci.

I believe this is from the CDC and it's a picture of an implant that is colonizer contaminated with coagulus negative staphylococci which is a gram-positive organism that we all have on our bodies that can cause these prosthetic joint infections.

What happens is when you put this prosthetic joint into a person's body the first thing that happens is their own natural proteins coat that implant. And then if you're in the operative procedure and organisms have contaminated that implant, they will begin to proliferate and grow.

And what they do when they grow is they produce what's called exopolysaccharide, a big long fancy name. So they produce a material that can cover them up and protect them. Because the one thing that the bacteria want to do is they want to grow, produce and basically cause trouble.

And if they produce this expolysaccharide it's like me putting a cover over myself. So now your immune cells, your white cells that would try to kill me can't get to me. Your antibiotics that I give you that are in your blood can't get to them.

And they communicate with one another. They exchange genetic material with one another. And the other thing they do is they down regulate their growth because they know if they grow slower they can survive longer and the antibiotics that might get to them have less opportunity to kill them because antibiotics kill when the organism is growing.

So it allows them to grow very slowly, some say insidiously for periods of time. As I mentioned with this other outbreak that's been worldwide it's five to seven years and they show up. So it can be very long time.

This biofilm is one of the characteristic features of implant infections of why they are so difficult for patients. They're very hard to treat. Often times you have to remove an implant which is really terrible for the patient and they require prolonged antibiotics, in some cases lifelong antibiotics.

Q And with these types of infections, does the bacteria have to float through the air and just miraculously land deep inside the incision while the surgery is going on or can these actually contaminate the prosthetic before it's even implanted into a patient?

A They can do both. We have particles in the air. Some of those particles can carry bacteria. If you have an implant sitting on a table, they're exposed to the air and can become contaminated before insertion. So both of those mechanisms are

true.

Q And generally speaking, for any particular patient does the strength or weakness of the patient's immune system all by itself cause an infection?

A No.

Q Generally speaking, can an infection occur without the transmission of a bacteria or organism into the patient?

A No.

Q Are there any factors other than the introduction of an infectious agent like a bacteria that all by itself can cause an infection?

A No.

Q Are you familiar with the concept of the chain of infection?

A Yes.

Q And do you kind of have a diagram that will help the jury understand that concept?

A Yes.

MR. EMISON: Your Honor, may I ask Dr. Jarvis to illustrate that for us on our whiteboard?

THE COURT: Any objection?

MR. BLACKWELL: No, Your Honor.

THE COURT: You may.

Q Dr. Jarvis, if you could step down a draw that for us. Is it okay if I label this chain of infection?

A Sure.

THE COURT: Sir, just keep your voice up so that we can take down everything that's being said. Thank you.

A First, let me apologize that I am not an artist. This will not be pretty.

Q Dr. Jarvis, they've seen me write.

A So first is the patient and my handwriting is terrible. My wife will attest to it. So the patient is critically important. All of us are different. We have different genetics. So this includes the genetics of the patient; if you have an immune deficiency or not; if you have other underlying diseases that might either contribute to or not in getting an infection.

But that alone, just all of us sitting here without a bug there's no infection. You can't have an infection. So next is the bug as they say. So I'll just say "organism." So this includes the organism that's genetic. Some organisms have virolous factors, others not. Some are very prevalent, others are very rare.

And then the third group we're going to do is the environment. And this area here is what we really want to focus on because it's really the junction of all three, the overlap of all three of those things that are important.

For the characteristics, is the patient male, female, old, young, debilitated, not debilitated. What's the organism? Gram-

positive, gram-negative, commonly causes pneumonia, causes a surgical site infection.

Environment. How are they transmitted? Is it just on the table, in the air? How do they get to the patient?

You have to have this combination of three factors, really three large I'd say buckets of factors because there are lots of factors in each one of these that are important that lead to infection. And it's only that group there that gets an infection.

Q Dr. Jarvis, in this center section, if I understand this correctly, is this where all three of these factors combine to contribute to cause the ultimate infection?

A Yes. So some patients can have a bug and they never get an infection. They fight it off themselves and it goes away. Other bugs are in environment but have no way to get to an individual or get to the right side of an individual. So it's really a combination of all three there.

Q Thank you. In your work as a medical doctor and physician and specialist in infectious diseases, are you familiar with the concept of the sterile field in an operating room?

A Yes.

Q What is that?

A The sterile field is where the patient that's having the surgery is going to be and the surrounding area where the

surgeon and surgical assistants are going to help and the table where the instruments and different things the surgeon is going to need during that procedure would be.

And then you go out from there and say this is the table where the patient is, outside of that area is the nonsterile field. And the surgeon wants to make sure that nothing contaminates that sterile field.

Q And the jury has heard from Dr. Bowling who's an orthopedic surgeon that has kind of described that. And ...

MR. BLACKWELL: Your Honor, objection. May we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I think it's improper for Counsel to characterize the testimony of witnesses that have been on the stand. That's for the jury to recall that testimony without Counsel characterizing.

MR. EMISON: I was trying to set up a question to ask him about the layout of an operating room.

THE COURT: So I think the objection is sustained. Why don't you just rephrase it.

(RETURN TO OPEN COURT.)

Q Dr. Jarvis, in an operating room is it fair to say that generally the operating table is kind of laid out in the middle of that room?

A Usually.
Q And how far around the table generally is that sterile field?
A It varies from type of procedure to type of procedure but I would say probably five to six feet maybe, more from head to toe than sideways so probably 10 feet by four feet, something like that.
Q And does the sterile field extend above the operating table, below the operating table or both?
A From the operating table up, not below.
Q Why is that?
A Because below the table you have the floor which everyone knows is dirty. You have the healthcare workers that are releasing between one million and 999 million squames per hour in that operating field. So it is just a practice of surgeons that anything below the operating table is contaminated.
Q How are operating rooms designed to prevent contamination of the sterile field?
Q Well a number of things and they're really related to primarily to ventilation. So the ventilation in a room like this probably has maybe five to seven air exchanges per hour. Whereas, in an operating room it's 20 and above usually.
Q What's an air exchange?
A Complete change of air in the room, so how frequently

is all the air in the room basically changed. it goes through a filter system.

So the operating room has what's called HEPA, high-efficiency particulate air filtration. All operating rooms have that and this room probably doesn't have that. Which that filter is a very fine filter and removes 99.9 percent of particles that are .2 microns or greater. So it really filters out a huge number of organisms. And they have a series of filters but usually the HEPA filter being the last one. So that's one way. They have filtration that reduces the organisms.

Second is that the operating room is under positive pressure. So, for instance, if this were an operating room we're under positive pressure. So that door gets opened over there the air goes out. It does not come in. It's not a negative pressure room. It's a positive pressure room.

And both of those features together with the case of Mrs. O'Haver's surgery are what many people call, other than Dr. Elghobashi a laminar airflow.

But what I would say is it's called unidirectional air where the air is coming down and it's basically a curtain that pushes everything down to the floor and prevents air from the sides from outside that sterile field from getting in. And it's often considered a curtain around the operative field, the sterile field.

Q And, generally speaking, are there two general sources of bacteria? What I'm getting at is based on the person versus off the person?

A Yes.

Q And I've had to learn some medical terms as I've been working on this case. Is that endogenous and exdogenous?

A Right.

Q I'm trying to write these down. What is endogenous bacteria?

A Endogenous is the bugs that we have we have. All of us have coagulus negative staphylococcal. Thirty percent of us in this room will have staph aureus, gram-positive organisms. We have GI flora.

So if you look at like colon surgery where you are cutting the colon there's huge, tens of millions of organism particularly gram-negative organisms there. So it's called basically our normal flora. Everyone has their own normal flora.

Q What is exdogenous?

A Exdogenous is outside of our bodies. So if you came and shook my hand and obviously you have your endogenous organisms and I have mine. We're going to exchange some endogenous organisms but for each of us it's exdogenous. Or if I touch this table and contaminate my hand that's an exdogenous organism or if there's organisms in the air.

Q So if I write on here in very simplified terms endogenous organisms are on me?

A Right.

Q Exdogenous organisms are on you?

A Not on you.

Q Or not on me?

A That's right.

Q And, Chris, if we can see Exhibit 2205 again. Can everybody see the screen okay with the board there? Not that one Chris, 2205.

So going back to the different classifications of surgical site infections, how does the concept of endogenous bacteria and exdogenous bacteria interact with the different kind of surgical site infections?

A So endogenous organisms are going to be up here. These layers down here are sterile. There are no organisms there. So the most common cause of the superficial incisional is kind of like if you cut yourself. You'll get an infection. It could come from dirt if you were out gardening, but it may be just from the organism that's on your own skin.

Whereas, for the infections down here, the deeper you go you don't have any organisms there so they've got a come from somewhere else. They tend to be exdogenous.

Q Again, how is it that organisms get down into the deep joint space?

A Well the most common is through airborne transmission or contact during a surgical procedure.

Q And that can be contact directly into the wound itself during surgery or onto an implant that is later implanted?

A Correct.

Q As part of your work in this case, were you able to review Kathy O'Haver's medical records?

A Yes.

Q Did you find anything in Kathy's medical records that suggested that she had any kind of ongoing infection at the time of her surgery?

A In November of 2016 surgery, no.

Q Correct, the initial implant surgery?

A No.

Q Why is that important?

A Well for two reasons. The first is the CDC and surgical societies recommend that you not do an elective procedure particularly an elective implant procedure if you have an infection at another site. The reason for that is that you can get either hematogous through bloodstream contamination or contact contamination between that infected site and the surgical site.

Q Any evidence of that kind of contamination or infection in Ms. O'Haver's medical records?

A No.

Q In reviewing Ms. O'Haver's medical records and talking about the endogenous organisms, the organisms that would have been on her before her surgery, how do surgeons and healthcare providers generally try to prevent that type of infection during surgery?

A Well they do a number of things starting even before surgery. So she had a screening about a week before surgery where they do a swab in your nose and look for what's called MRSA because MRSA is a very - it's a not an uncommon cause of surgical site infection and it's more difficult to treat than a staph aureus would be. So that's first.

Second was she had Hibiclen baths or showers for a couple of days before the surgical procedure so that's an attempt to get the bio burden or the number of bugs that you have on external part of your skin lower.

And then during the surgical procedure or immediately before the surgical procedure she actually had what's called skin antisepsis. She had two different applications of Povidone-iodine or Betadine which is an antiseptic agent that kills both gram-negative and gram-positive organisms. She had both a scrub and a soap applied to her skin.

Q It we'll get to - you've conducted a differential diagnosis as part of your work in this case?

A Yes.

Q And I don't want to get into the details of that yet.

But generally speaking, did you identify anything about Kathy's - the work that Kathy's medical team did in preparing her skin that would have contributed to cause the infection in her case?

A No.

Q And then as far - were you able to review Dr. Ballard's deposition and his medical records in this case?

A Yes.

Q And generally speaking, did you identify any of the conduct or procedurals or adherence to sterile procedure that the surgical team violated that would have contributed to cause Ms. O'Haver's infection in this case?

A No.

Q Dr. Jarvis, have you formed a conclusion based on a reasonable degree of medical and professional certainty as to the amount of bacteria it takes to cause a deep joint infection in a knee replacement surgery?

A Yes.

Q What is that?

A As we indicated there, less than 100 organisms, a relatively small number of organisms.

Q And what have you relied on in forming that conclusion or reaching that conclusion?

A Probably the best data are animal studies were they've actually tried to cause an infection using different numbers of organisms and either with an implant or not.

Q Have you also reviewed 3M documents and testimony about that?

A Yes.

MR. EMISON: Your Honor, may we play Clip 105?

MR. BLACKWELL: Objection, Judge.

THE COURT: Objection is noted and overruled.

You may.

(CLIP 105 WAS PLAYED.)

Q Dr. Jarvis, initially the question was asked about a PJI. What is a PJI?

A A PJI is prosthetic joint implant or infection.

Q Is that the kind of infection that Ms. O'Haver had?

A Yes.

Q And is that testimony something that you relied on in forming your conclusion about the amount of bacteria it takes to cause a deep joint infection in a knee replacement surgery?

A Yes.

Q How serious of a complication is a PJI?

A It's very serious.

Q What did you base that conclusion on?

A A review of the medical literature on the subject. It's a very serious infection. As they say, it can occur early and it can occur late. They are not easy to diagnose and they are very difficult to treat. Often times they can lead to removal of the implant and in some patients - well if you had

one infection of an implant that increases your risk for a second infection with another implant because you have a lot of scar tissue. And in some cases patients end up with the amputations. It can be very serious.

Q In reaching that conclusion did you also rely on 3M documents and testimony?

A Yes.

MR. EMISON: Your Honor, may we pay Clip Number 4?

THE COURT: Same objection?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: The objection is noted and overruled. You may.

(CLIP NUMBER 4 WAS PLAYED.)

Q Dr. Jarvis, did you rely on that testimony in reaching your conclusion?

A Yes.

Q Have you formed a conclusion as to whether or not one of the purposes of an operating room is to reduce the number of particulates over the sterile field?

A Yes.

Q What's your conclusion?

A That as we described with the ventilation system and the other things that the surgical team does their highest priority is to try to reduce particles and bacteria over the

surgical field.

Q And what have you based that conclusion on?

A Again, review of the medical literature, various studies done as well as 3M testimony.

MR. EMISON: Your Honor, may we play Clip 72?

MR. BLACKWELL: Same objection.

THE COURT: The objection is noted and overruled. You may.

(CLIP NO. 72 WAS PLAYED.)

Q Dr. Jarvis, did you rely on that testimony in reaching your conclusion?

A Yes.

THE COURT: Counsel, we're going to take our morning recess. So we will resume at 11:10.

(INSTRUCTION WAS READ.)

We'll get going at 11:10. Thanks so much.

(BREAK AT 10:51 AM.)

THE COURT: We're outside the presence of the jury and the plaintiff has requested to make an offer of proof regarding a previous ruling of the Court.

MR. BLACKWELL: May we excuse Dr. Jarvis for just a moment?

THE COURT: I think the offer of proof involves questioning him if I had to guess.

MR. EMISON: It does, yes.

OFFER OF PROOF OF DR. JARVIS

MR. EMISON: Dr. Jarvis, I'm handing you Exhibit 93. Do you recognize that as what we've been referring to an abbreviated form as the McGovern study?

A Yes.

Q Have you viewed that study as part of the work that you have performed in this case?

A Many times.

Q I'm going to hand you a copy of the report that you prepared that was marked and identified as Exhibit 1679. If you'd turn to page 12 of that, does that talk about the McGovern study?

A Yes.

Q And if you turn to the back page of the McGovern study that's Exhibit 93 is there a listing about supplemental material?

A Yes.

Q Would you read what that says please?

A "A video demonstrating forced-air warming is available with the electronic version of this article on our website at www.JBJS.org.uk."

Q And so as someone who has edited peer-reviewed journals would you consider that supplemental material to be part of the study itself that was published?

A Yes.
Q As a former editor of a peer-reviewed journal, is it possible to publish something like a demonstrative video in a hardcopy published document?
A No.
Q As an editor of a peer-reviewed journal, what you do with there are supplemental materials that cannot be included in the print version of the study?
A Yes.
Q What do you do with that?
A Put them online for people to get to them.
Q Did you review and rely on this video as part of your work in this case?
A Yes.
Q Would this video help the jury understand your opinions in this case as a demonstrative exhibit?
A I think so.
MR. EMISON: That's all I have, Your Honor.
THE COURT: Any questions, Mr. Blackwell as it relates to the offer proof?
MR. BLACKWELL: No, Your Honor, same objections.
THE COURT: Okay, thank you. Sir, would you mind stepping out the hallway just for second. Thank you. Any further argument, Counsel?
MR. EMISON: I would only state that my

understanding of our agreement is that we were exchanging demonstrative exhibits a day before that we produced the witnesses. This is simply a demonstrative exhibit to help that jury understand his testimony.

MR. BLACKWELL: Your Honor, it's not simply demonstrative which would be a graphic and image, but it's a video that's narrated by someone. It's a separate thing. It is not part and parcel of the McGovern study that we've discussed with him in multiple depositions. He's never said that that's reliance material that he needed to either help the jury explain anything or to explain his testimony.

It came up for the first time yesterday afternoon when Mr. Emison brought it to us. It's simply an attempt to bolster it through Dr. Jarvis on the stand.

THE COURT: The Court's ruling will remain the same.

MR. EMISON: Remain or will, I'm sorry.

THE COURT: Will remain the same.

(RETURN AT 11:13 AM.)

THE COURT: You may be seated.

MR. EMISON: May it please the Court.

THE COURT: Okay, we will continue with the direct examination of Dr. Jarvis. You still remain under oath.

MR. EMISON: Sorry, Your Honor.

CONTINUED DIRECT EXAMINATION BY MR. EMISON

Q Dr. Jarvis, when you were talking about your background and your training and your experience, I neglected to show you Exhibit 705. Is that a copy of your CV or resume?

A Yes.

Q And does it accurately and fairly reflect a summary of your background, training, education and the additional work with societies and journals that we talked about earlier this morning?

A Yes.

MR. EMISON: Your Honor, I would offer Exhibit 703, I'm sorry 705.

MR. BLACKWELL: Objection, Your Honor. It's cumulative. He's already covered his background.

THE COURT: Same objection as you made with Dr. Elghobashi. That objection is noted and overruled. 705 is received.

Q Dr. Jarvis, we've been talking about some of the conclusions that you've reached as part of the work that you have done in this case. I want to continue with that. Have you formed a conclusion as to whether or not a medical device that increases the number of particles over the sterile field increases the risk of infection and orthopedics surgery?

A Yes.

Q What's your conclusion?
A That it does.
Q What did you base that on?
A My experience and reviewing the medical literature and 3M's documentation.
MR. EMISON: Your Honor, may we play Clip 89?
THE COURT: Same objection?
MR. BLACKWELL: Yes, Your Honor.
THE COURT: The objection is noted and overruled. You may play Clip 89.
(CLIP NO. 89 IS PLAYED.)
Q Again, that's part of the 3M testimony that you reviewed as the basis of that conclusion, correct?
A Yes.
Q Dr. Jarvis, have you reached a conclusion as to whether or not the Bair Hugger increases - strike that. My last question asked about medical device. Have you reached a conclusion as to whether or not the Bair Hugger increases the number of particles over the sterile field when it's used in an orthopedic surgery?
MR. BLACKWELL: Objection, Your Honor. May we approach?
THE COURT: You may.
(BENCH CONFERENCE.)
MR. BLACKWELL: Your Honor, this opinion is

outside the scope of this expert witness's proffer. He is an epidemiologist, a medical doctor, not an industrial hygienist, not a product manufacturer. It's got no basis for answering this. As an expert he's simply read some documents, the same as the jury can read.

THE COURT: Can you read the question to me?

MR. EMISON: Yes. The question was "Have you reached a conclusion as to whether or not the Bair Hugger increases the number particles over the sterile field when it's used in orthopedic surgery?"

THE COURT: And your response?

MR. EMISON: Dr. Jarvis has been identified as a infectious disease doctor to offer opinions about the general and specific causation related to generally can the Bair Hugger cause infection and also specifically as to whether it was - if it directly contributed to cause Ms. O'Haver's surgical infection.

He's done a differential diagnosis. He's reviewed 3M's documents and testimony. And as part of his work he has determined in ruling out potential causes and ruling in likely cause that the Bair Hugger is the likely cause of her infection. One of the things he bases that on is the fact that the Bair Hugger does increase the risk of infection and he has relied on 3M's testimony to do that.

THE COURT: The objection is overruled. The

Court will allow the testimony.

Q So Dr, Jarvis, my question to you was have you reached a conclusion as to whether or not the Bair Hugger increases the number of particles over the sterile field when it's used in orthopedic surgery?

A Yes.

Q What's that conclusion?

A That it does.

Q And what do you base that on?

A Medical peer-reviews, published literature as well as 3M testimony.

MR. EMISON: May we play Clip 66, Your Honor?

THE COURT: Same objection?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: The objection is overruled. You may.

(CLIP NO. 66 WAS PLAYED.)

Q And Dr. Jarvis, why is this testimony significant to your conclusions in this case?

A Because I believe that the particulates which we know a percentage of them will carry bacteria on them getting into the surgical field is a critical element for what we saw. It's a requirement for the deposition of organisms onto the prosthetic device.

Q And have you reviewed some of the studies that show that the Bair Hugger increases the number of particles over the

sterile field?

A Yes.

Q Approximately how many of the studies have you seen?

A I believe about nine.

Q Is there any of those studies that are particularly relevant or significant to your conclusion?

A And think Stokes and Legg are two of the studies that are probably most impactful.

Q Dr. Jarvis, let me hand you what's been marked as Exhibit 2210. Can you identify that without talking about it yet, can you identify that as a table that was contained in the Legg study that you referenced?

A Yes.

Q Will this table help you to explain the Legg study's importance and significance to your opinions so the jury can understand that?

A Yes.

MR. EMISON: Plaintiffs would offer 2210 for demonstrative purposes.

MR. BLACKWELL: No objection.

THE COURT: 2210. Counsel, can I get a title for that?

MR. EMISON: Table 2 Legg study, L-E-G-G.

THE COURT: 2210 may be published to the jury.

Q Dr. Jarvis, what are we looking at here?

A So this is a table from the Legg study where they're looking at the number of particles over the surgical site and then measuring the three different size of particles. So .3 microns, .5 microns and 5 microns.

And in this study they had forced air with the Bair Hugger with it on, with it off, and then radiant, a different type of conductive warming.

And as you can see, if you look at particles like particles in this room and we looked at them by various sizes, the smallest particles are going to be the most numerous. And then as they get bigger and bigger they get smaller.

So you can see the .3 particles you have 1,038 compared to no warming with the Bair Hugger 274 and radiant is 274 to 275 so almost a five-fold increase. And in some stuff, it's been a thousand-fold or two thousand-fold higher.

If you look at 0.5 it goes from single digits up to about -1. And if you look at the larger particles .8 to about 3.6. So these two have a much higher increases in numbers than the larger ones.

Q Why's that important to you?

A Well I think it illustrates that if you use a different type of warming device that's conductive or doesn't have a blowing device or heat associated with it, that you don't get a large increase in particles over the surgical site. Whereas, with the forced-air warming you do.

Q And at the top of here it talks about mean number of particles and then there's something here that says 95 percent CI. What do you understand that to mean?

A That's a 95 percent confidence interval. So you look at that to see if it's statistically significant or you can look at the P-values over here. P-values are a statistical method for looking at significant statistical significance. And we usually use as a breakpoint for is it significant or is it not .05. 0.05 means that 95 out of 100 times you're right.

In this case all the P-values here are much below .05 showing this is highly statistically significant. So in each one of these cases where you have a much higher mean particle count over the surgical site than you do with radiant heat, this is showing that it does not due to chance, that there's a reason for that.

Q Thank you, Doctor. Dr. Jarvis, in your review of the literature and your review of 3M's documents and testimony in this case, have you identified a couple of different ways that the Bair Hugger can contaminate the sterile field in the operating room?

A Yes.

Q What are those two ways?

A Two ways. One is disrupting the air circulation. And if you look at the Bair Hugger there the blue unit produces a lot of heat because it's trying to warm up the air that's going

to be blown through those tubes. And that heat can escape into the operating room. And as we know, cooler air drops and hotter air rises.

So as you have all that excess heat the air rises and particles that are on the ground can be moved up particularly over the operating field. So that is air disruption as number one.

Number two is a number of studies have looked at culturing the inside of that white tubing. Because if you think about it the blue unit is where the air is being sucked up. And it's either on an IV pole. It's not usually very high like here or on the floor. So in either case they're pretty close to the floor and it's pulling up air. And that air then goes through a .2-micron filter and it actually can escape around that filter as well. Some studies show that the .2-micron filter doesn't even filter a .2 micro.

But either way the filter is there and then the air goes into that tube that goes up to the patient then goes into the blanket. There have been a number of studies both internal to the blue unit has let pass the filter and in the tubing itself that have shown that it's very commonly culture-positive contaminant.

If you think about it, everything past that filter theoretically can become contaminated. And when it does that tube is not sterilized between the use on me and the use on you.

So if there are bacteria there that air can blow them out.

Q Dr. Jarvis, breaking down some things on here. So we talked about Bair Hugger contamination. I shouldn't have done that cause I wrote the same thing twice.

I'm going to put in "Operating room contamination." And what I heard you say is one way it does that is by disrupting airflow, is that fair?

A Of the heat, yeah.

Q And then the other way is that the Bair Hugger itself inside the warming unit and the hose can become contaminated itself?

A Yes.

Q That's fair also?

A Yes.

Q Thank you. I want to talk about the first way that the Bair Hugger can cause contamination in the operating room by the disruption of the airflow. Are you familiar with the paper that is sometimes referred to as the McGovern study?

A Yes.

Q When was that study published?

A I think it was 1995.

Q Does 2011 sound right?

A Maybe 2011. We had it a minute ago.

Q Generally speaking, what is the McGovern study?

A It's a study that was done in England and it had two

parts to it. The first part was trying to determine whether the air was being disrupted by the Bair – by the use of the Bair Hugger and it would what I call an invitro study. So it was using a mannequin in an operating room.

They used what's called buoyant bubbles with helium. And this device that they used would shoot the bubbles out. And very small bubbles would go immediately to the ground or eliminated. And the ones that are very big were eliminated. So it was a certain size that was released.

And then they looked at whether you had the Bair Hugger sitting there not on versus warming, did that make any difference in where the bubbles went. It showed that the bubbles because of the heat that we're talking about would rise and go over the operative field. That was the first part of the study.

The second part of the study was since they had seen that they thought well, why don't we do a study retrospectively looking at a knee and hip replacement procedures. So they pulled the data on those patients retrospectively and looked at those when they used the Bair Hugger forced-air warmer versus when they used radiant or conductive heat that we talked about before so one that produces excess heat and one that does not.

Then they looked at the infection rate particularly and it's significantly again from that SSI figure they looked at prosthetic joint infections. They didn't look at all SSIs. They looked at prosthetic joint infections and found that when

the Bair Hugger was used there was an increased risk of prosthetic joint infections.

Q And, Dr. Jarvis, just so I don't make this a memory test I'm going to hand you what's been marked as Exhibit 93. What is that?

A The McGovern study.

Q Was this study peer-reviewed and published?

A Yes.

Q And, again, you described to us earlier this morning what it means to be peer-reviewed, correct?

A Correct.

Q And what journal was this published in?

A The Journal of Bone and Joint Surgery.

Q Without reading the article, generally speaking, does the article itself describe the experiment with the bubbles to see where the flow went?

A Yes.

Q What's your understanding of that?

A That when the Bair Hugger wasn't being used that the bubbles didn't go over the operating field. When the Bair Hugger was on and warming the bubbles went over the operating field.

Q Did McGovern find a correlation between using the Bair Hugger and actual deep joint infections like Ms. O'Haver had?

A In a retrospective study, yes.

Q And have you reached a conclusion as to whether the Bair Hugger actually increases the risk of infection in orthopedic surgery?

A Yes.

Q What did you base that on?

A Published literature as well as 3M documentation.

MR. EMISON: Can we play Clip 80, Your Honor?

THE COURT: Same objection?

MR. BLACKWELL: Same objection, Your Honor.

THE COURT: The objection is noted and overruled.

You may play 80.

(CLIP NO. 80 WAS PLAYED.)

Q And Dr. Jarvis --

MR. EMISON: First, let me go ahead and offer Exhibit 93.

MR. BLACKWELL: May we approach, Your Honor?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, this is a study we think can be shown to the jury but they don't come into evidence or go back.

MR. EMISON: I'm okay with that.

THE COURT: Okay.

MR. BLACKWELL: The goose v gander, the case of Goose v Gander.

THE COURT: Fair. So if you just want to show that motion to admit has been withdrawn?

MR. EMISON: Yes.

THE COURT: Noted.

(RETURN TO OPEN COURT.)

MR. EMISON: Your Honor, may I publish portions of Exhibit 93 with Dr. Jarvis?

MR. BLACKWELL: No objection.

THE COURT: You may.

Q Forgive me, let me find my spot, Doctor. Dr. Jarvis, can you tell the jury what conclusion you reached regarding whether the Bair Hugger increases the risk of surgical site infections?

A Based on the published literature and 3M documentation I concluded that the Bair Hugger does increase the risk for surgical site infection particularly in this study they looked specifically at prosthetic joint infections.

Q And in this case under the results here, are you talking about the bubble count experiment that you were describing for us?

A Yes.

Q Could you read that to the jury and then tell us why that's important to you.

A So in the setup that was similar to doing a hip replacement on a patient, they found that the bubble counts per

the photographs show that the forced air warming immobilized under drape air so that it passed over the anesthesia/surgery drape and into the surgical site, but when they did conductive warming they did not have a mobilizing effect.

Further, the position of the drape, the drape that goes between the surgical field and the anesthesiologist can be kind of half up so it's kind of like at this level. So the anesthesiologist can see over to the surgical field or they could have it up much higher where the anesthesiologist can see and they did that as well. They said further, that the position of the drape had a large effect on the under-drape air mobilization for forced-air warming.

Q So when we talk about forced-air warming, is that the kind of warming the Bair Hugger does?

A Yes.

Q And when it talks about conductive fabric, what is that?

A Basically, it's a device that you can place on the skin. It's almost like an electric blanket. An electric blanket would be conductive warming.

Q So kind of like electric blanket, is that a fair summary?

A There's number of different type of devices. Some use water. Some could use just one warming towels or blankets and putting them on patients.

Q And this talks about drapes. You talked about a drape that essentially separates the anesthesia doctors or nurses at the head of the patient. Is there other draping that's involved in an orthopedic procedure?

A Oh, yeah.

Q Where do those drapes generally go?

A Over the patient from literately head to foot.

Q So that draping effect may not just happen at the head of the patient but also other areas?

A Correct.

Q If you turn to page 5 of the McGovern report, does it also talk about a correlation or data as to the risk of developing deep infection from forced-air warming like the Bair Hugger versus conductive warming with something like an electric blanket?

A Yes.

Q What was that increased risk?

A In their analysis, again, comparing all the patients that had hip replacement procedures, they found that the odds of having specifically a prosthetic joint infection was not an all class surgical but specifically a deep prosthetic joint, a prosthetic joint infection was 3.8. So it meant that the odds were 3.8 times as much as with a conductive blanket.

Q So do I understand that their data showed that if you were warmed with forced-air warming during your surgery you were

3.8 times more likely to get the kind of infection that Kathy got than if forced-air warming wasn't used or at least versus conductive warming?

A Correct.

Q And so if I put 3.8 times here, that would be consistent with what McGovern found?

A Right. And the mean value on that was .024. So if you remember back when I told you the cutoff between not significant and significant was .05, this is .024 which is literally half of that so this was higher statistics.

Q So if you're putting it odds out of 100, this association they found to be - I'm doing my math on the fly which is dangerous, 97.5 percent competence in these numbers?

A Right.

Q So if I put 97.5 percent confidence, that is consistent with McGovern?

A Right.

Q All right McGovern down here. Another way to say 3.8 times is 380 percent increase, is that fair?

A Yes.

Q Does that fairly reflect that?

A Yes.

Q Thank you, Doctor. Now is the McGovern study a perfect study?

A No.

Q Are any studies a perfect study?

A No.

Q What criticisms do some people have with the McGovern study?

A I think several. One, is it's a retrospective study. The data were already collected and then they analyzed them. Some people prefer prospective randomized controlled studies instead.

Second was that the study was done over about a two-and-a half year period of time. And some infection control practices may have changed during that time although none of the operating room practices have changed.

In then two other things that changed. One was the antibiotic they gave is prophylactic antibiotics. So you give an antibiotic before the incision and then you theoretically stop after the patient leaves the operating room. That's to help reduce the risk of surgical site infections.

And then patients that have joint arthroplasty procedures receive a drug for thinning their blood so they won't have a blood clot like a pulmonary embolism. And the drug that they used for that changed during this procedure or during the study.

Q And at some point, the authors also wrote in this study that the study does not establish a causal basis for this association talking about the 97 and half percent confidence in the association between forced-air warming and increased

surgical site infections, is that fair?

A Correct.

Q What does that mean to you?

A I think it represents I think a couple of things. The first is what we've seen with peer-reviewed papers is editors like I was have requested that authors have a paragraph in their paper that lists their limitations. So they themselves point out what some of the weaknesses, potential weaknesses are in the paper.

And I think more importantly what it means is if you look at something like I'm walking outside in the wintertime and I fall down and I hurt myself. There may be many factors that led to that. Maybe my age, maybe the shoes I was wearing. It may be that there was ice on the cement, a lot of different factors. And that's true of most things that we're looking at in life.

And it's led to the publication many, many, many years ago by Hill of a variety of factors that are used to prove causality. And the fact is whenever we're trying to prove causality it's putting a number of factors in. It's looking at a variety of things.

So there's no one study like smoking when I mentioned to you earlier, smoking and cancer risks. That was not one study. It was not one patient. It was a population. It was many large studies and it was looking at a variety of different things.

And it includes biologic plausibility. It doesn't make

sense. Is it reproducible? Is there a dose-response? A lot of different factors.

So I think what they were saying was we have not looked at everything under the sun that could possibly cause a prosthetic joint infection but we have looked at the most important things.

And between the conductive heat and the forced-air warming time periods the things that we did in the operating room largely were the same.

Q And talk to me a little bit about a prospective study versus a retrospective study?

A A prospective study is you design a study, say this is the data I'm going to collect and then you do it prospectively and analyze it. Whereas, retrospectively all the data has already been collected you say well, why don't I do a study and compare X to Y with the data that's already been collected.

Q Again, what kind of study was McGovern?

A A retrospective study.

Q So if you're designing a prospective study looking forward, you have better control over what variables are considered and can screen out variables or explain that for us.

A If it's a prospective study you could define what are the things you are going to try to collect. Now that doesn't necessarily mean they're always going to be but you know ahead of time they probably are going to be there most of the time. want to look at they collected. But there were some things such

as weight of all the patients. They didn't have the weight of all the patients. That wasn't collected in the surveillance system that they had at that time. So there were some things that you might like to collect that weren't collected.

Q And so in the retrospective study if I understand that right and looking at McGovern, there were other variables that were not the Bair Hugger like I think you mentioned a change in the kind of prophylactic preventative antibiotics that the hospital was using that changed during the time that they were comparing this data, is that fair?

A Right.

Q And so even though - so there were other potential variables, is that a way to describe that?

A Yes. For instance, with the antibiotics, one part of the study they used just gentamicin so one antiobiotic. And in another part of the study they used gentamicin plus hypoplan so two antibiotics.

Q Did that make a difference?

A I think probably not but we don't have any data for that.

Q So there were some other variables. But what was the common variable in every single piece of that data that they looked at?

A It was either the use of the Bair Hugger or use of the conductive warming. They had other patient demographic

information and they knew whether they had a prosthetic joint infection or not.

Q So the common variable was forced-air warming or conductive, is that fair?

A Right.

Q And so even accounting for other potential variables, McGovern in that study found a 97 and half percent competence in the association between forced-air warming and surgical infection?

A Yes.

Q And based upon that, does that tell you whether it's more likely than not that forced-air warming causes or increases the risk of surgical infection?

A Yes.

Q It does increase?

A Yes.

Q And, Dr, Jarvis, you've talked to us about retrospective epidemiological studies and you even mentioned studies at the Association of Smoking and Cancer. Are you aware of any retrospective epidemiological studies that find definitive causation between smoking and cancer?

A I think it's similar to the McGovern study. It can show either an odds ratio or a relative risk. So they can show a statistical association. But, again, when we're looking at is it causal, no.

Q Right. And so why do you still rely on the McGovern study as a basis for your conclusions that the Bair Hugger increases the risk of forced air warming?

A Because I think it is a well-designed study and it showed a significant risk. And the biologic plausibility, reproducibility, etc. the Hill criteria for causality many of them are met by this study and other studies that have looked at other pieces of this puzzle.

Q And Dr. Jarvis, as part of your work in this case have you also reviewed the computational fluid dynamics modeling that Dr. Elghobashi conducted?

A Yes.

Q And did you rely on Dr. Elghobashi's work as part of the bases for your conclusions in this case?

A Yes.

Q And, Dr. Elghobashi's work and the videos and images and other information that he created, is that helpful to you in explaining how and why that was important to work in your work and your findings in this case?

A Yes.

MR. EMISON: Your Honor, we would show Exhibit 1446 and 1448 which are short videos that I believe have already been admitted and publish to the jury.

MR. BLACKWELL: Objection, Your Honor. May we approach?

THE COURT: You may.

(BENCH CONFERENCE.)

MR. BLACKWELL: I want to clarify what those were. I don't recognize those numbers.

THE COURT: 1446, what is that?

MR. EMISON: 1446 and 1448.

THE COURT: So 1448 I have as statistics and 1449 looks like it's 4306.

MR. BLACKWELL: So these are Elghobashi's videos?

MR. EMISON: Yes.

MR. BLACKWELL: I'd object to those as being cumulative. The jury can remember those. He can say he saw them but there's no reason to play them again.

THE COURT: The objection is overruled.

MR. EMISON: Thank you.

(RETURN TO OPEN COURT.)

THE COURT: 1446 and 1448 may be published to the jury.

Q And, Dr. Jarvis, I'll represent to you that these are two videos from doctor Elghobashi's work. It's looking at the operating room from different angles but both with the Bair Hugger on. And as the video plays if you can just tell why this was significant to your opinion or conclusions in this case?

A I think the nice thing about computation of fluid dynamics studies or CFDs is that you can control very precisely

many things. How many skin squames are in the room, what the temperature is going to be, the air circulation. So you can mimic very nicely what's happening in an operating room.

And I think you could do things or control things that you might not be able to control as well in a real operating room.

And I think it was very nice in that it put together the pieces of the puzzle related to the Bair Hugger and the fact that it clearly demonstrates and documented it that when you have the Bair Hugger on and heat being produced that it does what we know physics should happen and that is cold air drops, hot air rises. And as that hot air rises off of the floor it's pulling up those skins squames that the healthcare workers and the patient might be dropping down to the floor and bring those up and over the operative field.

And given that approximately 40 percent of those skin squames or particles can carry bacteria that could end up being a significant problem for the patient.

MR. EMISON: Chris, can you pause the video.

Q Dr. Jarvis, we just were talking about the McGovern paper and the description in the McGovern paper of the experiment they did using neutrally buoyant bubbles and how the airflow with the Bair Hugger on versus off affected that flow. Do you recall that?

A Yes.

Q Is that description in the McGovern paper of what they

observed in their experiment consistent are inconsistent with the modeling that Dr. Elghobashi performed?

A It's very similar and there's probably three or four other studies that have done the same type of buoyant bubble testing that has shown the same thing.

Q We talked about the Bair Hugger's risk of airborne contamination. And earlier this morning we talked about the different layers and how that happens and how a bacteria actually can get inside the joint to do that. Do you recall that?

A Yes.

Q One of the ways is maybe just directly falling in perhaps. But another way is to actually contaminate the implant device before it's implanted. Do I have that correct?

A Yes.

Q So looking at this, there's a table back there, right?

A Correct.

Q And there's a table over here, right?

A Correct.

Q And there's table back here, right?

A Right.

Q Generally speaking, what would be on these tables?

A I can't make them all out but at least one of those tables would have the surgical instruments and sometimes the implant is on a different table. Sometimes it's on the same

table. It's one of the reasons why the recommendation is that - the implant is usually in a sterile packaging and not to open that two hours before you're going to implant it and have it sitting there.

A Or if you do do that, to cover it with a sterile cloth or a blanket, a towel.

Q But at some point, that implant has to be opened up and transported unprotected through this area and implanted into the knee?

A And often times it's left open to the air for a period of time before it's implanted.

Q And this is just 20 seconds of contamination with three million squames on the floor. If one of these squames was carrying bacteria and that bacteria attached itself to the implant between one and a hundred bacteria, what could happen?

A It can lead to an infection.

Q And, again, we see the difference squames of material here. Is this over the surgical site?

A It doesn't look like it.

Q This is the operating table and this is the knee?

A Yes, there it is, yes.

Q This is directly over the surgical site?

A Yes, the knee would be that kind of aqua color.

Q And not just surgical site. I apologize, I'm using the wrong word. Sterile field?

A Right.

Q And, again, the sterile field you are describing to us would surround the operating table starting at the head of the patient here?

A Yes.

Q And it would go beyond where the surgeon and medical personnel would be so that they would be standing inside the sterile field, correct?

A Right. Their backs would be considered kind of the end of the sterile field if not outside the sterile field.

Q And if sterile instruments were being stored on one of these tables that would also be within the sterile field?

MR. BLACKWELL: Objection, leading, Your Honor.

THE COURT: Sustained.

Q Would you describe for us and if you can use your pointer, describe for us the sterile field.

A Certainly. The sterile field would be where this division here between the operating room table and the anesthesiologist would be back here. Where the healthcare workers are standing there behind them would be the non-sterile field and in front would be the sterile field. Usually at the end of the table, the operating room table there is usually a table back here that would have the various instruments. And this would be the sterile field and often times would be where the implants would be.

Q Thank you, Doctor. And, again, if surgical instruments like the scalpel or even a bone saw or something like that was within this sterile field and contaminated with bacteria, what could happen?

A It can cause an infection.

Q And if the prosthetic is open and being transported through what's supposed to be the sterile field but it's contaminated with particles that are carrying bacteria, what can happen?

A It can cause an infection.

Q And how does Dr. Elghobashi's work and these illustrations affect your conclusions about whether or not the Bair Hugger increases the risk of surgical infection?

A I think it just adds further data. The published papers showing an increased particle count over the sterile field when the Bair Hugger is used increased bacteria over the sterile field.

And now you have computational fluids dynamics as well as the McGovern study showing that you have an increased risk of infection. So they all are pieces of the puzzle.

Q In addition to disrupting the airflow, what was the other way that the Bair Hugger can cause infection?

A Through blowing contaminated air out of the hose.

Q And are there studies that show the Bair Hugger can directly contaminate the sterile field that way?

A Most of the studies have made cultures of the tubing showing that the tubing as well as the blue part there are culture positive with a variety of common skin contaminants usually, even fungi.

Q And why is that important?

A Because if you're blowing that into the sterile field it can cause an infection.

Q And do you understand that 3M contends that there are studies that say the Bair Hugger does not increase the risk of infection?

A Right.

Q Have you looked at the studies that 3M relies on for that position?

A I don't know all that they may have relied on but the ones that they've told me they relied on, yes, I looked at.

Q And do those studies convince you or do they not convince you?

A They don't convince me.

Q Why is that?

A A number of reasons. At least two of them are not even in joint procedures. They're in vascular abdominal procedures which would be different. All of them have very low number of patients. The McGovern study where it's talking about I believe it's over 300 or 400 patients. And most of those studies they're less than 50, some are eight, some are done just

in volunteers and they're not in surgical procedures at all.

So a variety of different reasons including where the culturing was done. Most of the studies that I've talked to you about like the Legg study that we showed actually look at particle counts and did particle counting. Most of the studies that 3M has focused their attention on have been using cell plates where they just put a culture plate out. And when you look at where they put the cell plates, they're over there. They're not where the surgical incision is actually occurring.

So they really I don't think very accurately reflect what's going on in the surgical field. And I think air sampling is a more sensitive measure.

Q Dr. Jarvis, in addition to looking at studies, have you also looked at and relied on internal 3M documents that support your opinions?

A Yes.

Q Dr. Jarvis, I'm showing you Plaintiff's Exhibit 225. Is this one of the documents that you have reviewed and relied on in forming your opinions in this case?

A Yes.

MR. EMISON: Your Honor, Plaintiffs would offer Exhibit 225.

MR. BLACKWELL: No objection, Your Honor.

MR. EMISON: Chris, could you put up 225 on the screen please?

THE COURT: Did you move to admit it or just to publish it?

MR. EMISON: Admit it, Your Honor.

THE COURT: And there was no objection?

MR. BLACKWELL: I didn't object to publishing it.

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: You're moving to admit this?

MR. EMISON: I am.

MR. BLACKWELL: I'm sorry, Your Honor, I didn't hear what the Court said.

THE COURT: I just confirmed he was moving to admit it. Can I see it?

MR. BLACKWELL: This is one we talked about previously. There's no foundation laid for it at all at this point. It is an internal communication. It's akin to an email communication between different persons. We want to point out a comment from AVD1. There's no way this witness can establish foundation for who that is. There's no foundation for it. I didn't mind him showing it but to move it into evidence I think is improper.

MR. EMISON: This is going to be the subject of testimony and has been designated and ruled on. That establishes who AVD1. It comes in with Michelle Hulse Stevens who was the medical director who relied on Al Van

Duren and said that was Al Van Duren but she didn't know of any other AVD that would be writing that.

We heard from 3M's corporate designee this morning that Al Van Duren is the person most knowledgeable in the company about forced-air warming; that his job was to create documents like this. This is an internal 3M document identified on its face. This is not hearsay. It's a statement from 3M. It's their document. It doesn't need a business record. It's a statement against interest showing the Bair Hugger increases risk.

THE COURT: The objection is overruled. It's going to be admitted to the jury.

(RETURN TO OPEN COURT.)

THE COURT: 225 is received into evidence.

Q So talking generally, Dr. Jarvis, about how the Bair Hugger increases risk of infection. And so far, we've talked about McGovern, is that fair?

A Yes.

Q We've talked about Elghobashi?

A Yes.

Q And we've also seen 3M's testimony about McGovern that you relied on, correct?

A Yes.

Q And now Chris, can we see Exhibit 225. If you can blow up the part including "Our position" and including the

comments to the side please. This is a confidential 3M document talking about the risk of infection also?

A Yes.

Q Would you read the first sentence under "Our position" please?

A "There is no evidence that forced-air warming (FAW) increases the risk of surgical site infections (SSIs), and considerable evidence that it does not most recently from the U.S. National Institutes of Health.

Q Dr. Jarvis, I'm handing you what is marked is Exhibit 1735. Is this another 3M document that you have reviewed and relied on in support of your opinion?

A Yes.

MR. EMISON: I'd offer Exhibit 1735.

MR. BLACKWELL: Objection. May we approach?

THE COURT: You may.

(BENCH CONFERENCE.)

MR. BLACKWELL: Can I see which version he gave you? Your Honor, this is an email that contains multiple levels of hearsay. There's no way that this witness can establish a foundation for it at all. If the Court would be inclined to allow it under the rules of completeness we're going to ask that the whole thing be read and not just the part that Mr. Emison wants to call out.

It's important that the jury understand the basis for

that letter, what it's responding to and then get to the substance of what it says. We have gotten a version from Mr. Emison earlier where he wanted to simply call out the parts that were helpful to the plaintiff and leave the rest of it on the floor.

It's an email. We talked about emails extensively before we got started. This is another one of those, not a business record, foundation not established for it.

THE COURT: Counsel, explain to me how an expert relies on an email to form their opinion. I understand but just an email that said that it seems to me he's not relying on it. It's just bolstering his opinion.

MR. EMISON: He's relying on it, Your Honor. And, again, as for the admissibility, this is an email from Al Van Duren as part of his work at 3M, statements of an employee during the course and scope about the course and scope are statements of the principal. It's an admission. It doesn't need to be a business record.

The relevant portion of this and I object to Mr. Blackwell's characterization of the purpose of my redaction which I'll explain. But The important part of this is 3M's knowledge of the issue. And what this document establishes from Al Van Duren is that when he got to the company in 1994 the company was already aware that some clinicians were concerned about particulates as a source of wound

infection and 3M took that so seriously it developed non-forced-air warming methods to be used in sterile procedures.

THE COURT: My question is how is this relevant to this witness in forming his opinion? I'm not saying this doesn't come in another way but I don't understand how this comes in because we're talking about how this witness formed their opinion.

MR. EMISON: Yeah. It goes to general causation and 3M's knowledge that the Bair Hugger can cause concerns before 1994 with the company that the Bair Hugger was causing surgical infections by disrupting the airflow.

THE COURT: The Court will allow 1735 to be used with this witness and I will admit it into evidence. I'm not going to have him go through the whole thing if there are portions that you would highlight in your cross-examination. I don't think that - I'm not going to direct Mr. Emison what to do in his direct.

MR. BLACKWELL: I made my objection based on the rule of completeness Your Honor; that he is reading portions where others need to be weighed in for purposes of properly providing the context for what he's going to read.

MR. EMISON: My concern there, Your Honor, is that this gets into a motion in limine about Dr. Augustine. This was in response to something that Dr. Augustine did

and I don't want to get into that.

THE COURT: Hold on, you can't have your cake and eat it too. Either this thing comes in its entirety or it doesn't come in.

MR. EMISON: I don't want to be seen as opening the door the rest of this stuff because why? The only relevant part here doesn't have anything to do with why it's written. It is simply that the company was aware by 1994 that clinicians had raised the issue.

The point of this is this wasn't invented by Dr. Augustine when he left the company. The company had been getting these concerns in 1994.

THE COURT: So here's what I will say, guys. We've been up here for a few minutes now. And, unfortunately, lunch isn't here yet so I can't break and I don't want to break yet. Are you able to switch gears and go to a different topic and we'll simple table this and make a record on it because I am telling you my thought now is that if this comes in, it comes in its entirety and the potential of opening the door regarding Augustine.

MR. EMISON: Okay.

THE COURT: We'll take that up at lunch. Can I look at this?

MR. EMISON: You can.

(RETURN TO OPEN COURT.)

Q Dr. Jarvis, put that aside for now. We may come back to that after lunch. Based upon your work in this case, your background, training and experience as a medical doctor in infectious diseases with the CDC data and your other professional work and relying on things like the McGovern study, 3M's testimony about the study, Dr. Elghobashi's work, confidential 3M documents, have you reached a conclusion within a reasonable degree of medical and scientific certainty about whether the Bair Hugger increased Kathy O'Haver's risk of surgical infection during her November, 2016 knee replacement surgery?

A Yes.

Q What's that opinion or what's that conclusion?

A That the Bair Hugger caused her infection.

Q One of the terms that the jury has heard during the trial is normothermia. Are you familiar with that term?

A Yes.

Q What is that?

A Normothermia is our normal body temperature.

Q And have you reached conclusions as to what the Bair Hugger's purpose is?

A Yes.

Q What's the Bair Hugger meant to do?

A Simply warm a patient.

Q And what did you rely on in reaching that conclusion?

A The published literature and 3M documentation.

MR. EMISON: Can we play Clip 27, Your Honor?

THE COURT: Same objection?

MR. BLACKWELL: Same, Your Honor.

THE COURT: That objection is overruled. Twenty-seven may be played.

(CLIP NO. 27 WAS PLAYED.)

Q And before I move on to talking about warming patients, I want to go back to Exhibit 225 real quick. Chris, can you pull up the comment on Exhibit 225 please. I get so involved with this, I realize I know what some of the words mean but maybe nobody else does. And on the comment, it refers to AVD1. Do you see that there?

A Yes.

Q Do you have an understanding of who that is?

A I think that's Mr. Van Duren who is from 3M.

Q Al Van Duren?

A Yes.

Q Going back to the purpose of the Bair Hugger, to warm a patient, have you reached a conclusion about whether or not warming patients during surgery is effective or ineffective during the first hour of surgery?

A Yes.

Q What is your opinion?

A Not effective.

Q What do you base that on?
A Again, public literature and 3M documentation.
MR. EMISON: Can we see Clip 18 please? May we play Clip 18, Your Honor?
MR. BLACKWELL: Same one and cumulative, Your Honor.
THE COURT: The objection is noted and overruled. Eighteen may be played.
(CLIP NO. 18 WAS PLAYED.)
Q Dr. Jarvis, is it difficult to prove any possible benefits of forced air warming in surgeries with low complication rates?
A It is difficult.
Q Why is that difficult?
A Because when you're studying any adverse event that is very very rare you need to do very, very, very large studies with lots of patients. Because if you do it with a small number of patients it's under powered to tell the difference.
Q And what do you base that conclusion on?
A Many, many papers I've reviewed as a peer reviewer and as an editor and looking at the peer-reviewed literature and also 3M documentation.
MR. EMISON: Your Honor, may we play Clip 20?
MR. BLACKWELL: Same, Your Honor.
THE COURT: The objection is noted and overruled.

You may play 20.

(CLIP 20 WAS PLAYED.)

Q Dr. Jarvis, have you reached a conclusion about whether or not the Bair Hugger provides any benefit to surgical patients who are obese?

A Yes.

Q What's that conclusion?

A It doesn't.

Q What did you rely on in reaching that conclusion?

A Again, the medical literature and 3M documentation.

MR. EMISON: Your Honor, I would like to pay Clips 24, 25 and 26.

MR. BLACKWELL: Same objection for the record.

THE COURT: The objection is noted and overruled. Twenty-four, 25 and 26 may be played.

(CLIP NO. 24 WAS PLAYED.)

MR. EMISON: Twenty-five please.

(CLIP NO. 25 WAS PLAYED.)

MR. EMISON: And the next one please, Chris.

(CLIP NO. 26 WAS PLAYED.)

Q Why is that important to your conclusion?

A Because I don't think - Ms. O'Haver was obese at the time of her surgery and as indicated by these clips and the data she really didn't need a Bair Hugger. So you have a risk associated with no benefit.

Q As somebody who worked for the CDC for 25 years and now works still in the field of medicine looking at potential issues with medical products, what do you rely on to determine or who do you rely on to determine information about that medical product?

A I guess several things. One, any published literature that would be on it and then the manufacturer.

Q As between somebody outside of the manufacturer and inside the manufacturer, who ought to have the most information about the product?

MR. BLACKWELL: Objection, Your Honor, it's leading and no foundation for this witness, Your Honor.

THE COURT: Sustained.

Q In hearing from 3M did we hear that warming for an obese patient is not necessary?

A Right.

Q And what did 3M say about whether or not warming with the Bair Hugger provided any benefit to an obese person or an obese patient?

A It didn't provide any benefit.

THE COURT: Counsel, is this a good breaking point?

MR. EMISON: Can I ask one more question?

THE COURT: You may.

Q Dr. Jarvis, have you reached a conclusion as to

whether or not the Bair Hugger provided any benefit to their Kathy O'Haver during her knee replacement surgery?

A Yes.

Q What is that conclusion?

A It didn't provide benefit. It provided harm.

Q Thank you.

MR. EMISON: We can pause, Your Honor.

THE COURT: Great. Okay, guys, we're going to go ahead and recess for lunch. Follow Carly's lead. She's knows where everything has been set up. She's been busy behind-the-scenes while we've been in here.

(INSTRUCTION READ.)

We'll get started around 1:30. Thanks so much.

(JURY BREAKS FOR LUNCH AT 12:30 PM.)

THE COURT: As it relates to Exhibit 1735. So when we stopped according to my memory it was the request or intention by the plaintiff that although they wanted to use 1735, they did not think that it should be admitted in its entirety whether it be through this witness or at any time during the trial. Is that fair to say or not fair, Mr. Emison?

MR. EMISON: That is fair to say, Your Honor.

THE COURT: Okay. And so do you want to say anything else on that?

MR. EMISON: So yes in that generally I don't

know that I have a concern about publishing this its entirety in general. What I have a concern with is an argument that by admitting this document we open the door to undo the Court's ruling as to Dr. Augustine and his feelings or issues with 3M.

And I understand - I won't speak for 3M so I'll just talk about the portion of this that I think is relevant certainly to Dr. Jarvis and to the plaintiffs is the highlighted section I have there for the Court.

The bottom half of the fourth paragraph starting with "Dr. Augustine and others made it clear to me when I started here in 1994 that some clinicians had concerns about particulates as causes of wound infections." And then there's more about what they did about that.

I think it's relevant to Dr. Jarvis's opinions because he's relying on that as a basis for his opinion that the Bair Hugger does cause infections by increasing particulates.

This shows that that concern was communicated to 3M and before 3M, Arizant when Mr. Van Duren - even before Mr. Van Duren started there in 1994. And so I understand 3M's position is that this was written in response to something Dr. Augustine did. I don't think necessarily that that was described in here with sufficient particularity to open the door to do away with the Court's ruling on the motion in

limine. And because of that I also think that the other parts are not relevant to the issues here.

And so our request would be to publish the relevant portion and redact the other portions. In the alternative, publish the whole thing but not open the door.

MR. BLACKWELL: Your Honor, I think it is very much them trying to have their cake and eat it too. The whole framework for this letter is Alvin Van Duren and Gary Hansen in an exchange about why it is 3M is having to respond to claims about particulates all of a sudden. And it's where the claims are coming from, who's behind the perpetrating of those claims and what are responses to the claims about particulates.

The sentence he wants to cut out of that is expressly in the framework of that response from 3M. And I think either we are talking about things that relate to Scott Augustine and his orchestrations or we're not. But then to go right into it and then to pick and choose the words and sentences they like and tie our hands we think is just wrong when it's coming from one of my letters they want to use but we don't get to say what it is, why it is, what we're talking about with respect to particulates or where the sentence really comes from.

THE COURT: So here's what I will say. When we were doing the huddle up here while the jury was out, I

suggested that I did not see a reason for it to come in and in portions that are in the redacted version. And I question whether or not its admissibility in its entirety opened the door as it relates to your motion in limine.

I have since that time been able to read it int its entirety. I don't believe that it opens the door as it relates to the motion in limine. So my ruling as it relates to the motion in limine will remain in effect and the Court will allow 1735 in its entirety. Any further record from the defendant?

MR. BLACKWELL: None, your Honor.

THE COURT: From the plaintiff?

MR. EMISON: No, Your Honor.

MR. FARRAR: Your Honor, I have one other issue. During Dr. Bowling's deposition we offered 1733. The Court had some redactions that we needed make. So I've made the redactions and I'm offering now into evidence 1733A.

THE COURT: Ms. Pruitt, you did the cross, right?

MS. PRUITT: Yes, Your Honor. I'm reading it.

THE COURT: 1749.

MR. FARRAR: 1733.

THE COURT: So 1749 is the one that I have redacted is A.

MR. FARRAR: So 1733 we redacted also. Dr. Bowling read it. I moved it into evidence and I guess I

did not. I'm just doing it now.

THE COURT: So you are now - I think it was allowed in part with Bowling. I think I didn't allow the exhibit in its entirety because it had not been redacted yet.

MR. FARRAR: That's correct. So I've given Ms. Pruitt the redacted version which the last two sentences were the only thing that was read so I redacted everything else out.

THE COURT: Understanding, Ms. Pruitt, that you had any objection to 1733 of which I ruled on that, do you have an additional objection to 1733A?

MS. PRUITT: Your Honor, just the way these documents are coming in.

THE COURT: Go ahead.

MS. PRUITT: The way these documents are coming in, what the plaintiffs are doing with all of the company documents, as Mr. Blackwell said this morning I think is that they're creating this story using these snippets and bits and pieces. And much of it has to do with the whole story about Augustine and the influences on the science which I understand you have not eliminated.

And so what I want to suggest is by doing it in this fashion it becomes a misleading story and the jury hasn't heard the other side of it yet and they need to hear the

other side of it because it puts into context some of these snippets.

And now for those reasons I have to object to this being done this way because of those reasons. As the Court already knows from looking at what you've looked at, it's a little complicated to understand when the jury doesn't even know anything about it yet.

THE COURT: So I understand your concern and your objection. It will be overruled. I don't feel as though the presentation of evidence thus far has been misleading or narrowed in terms of the jury. So for that reason the objection - that's just kind of my comment generally. But then your objection to 1733A is overruled.

MS. PRUITT: Thank you, Your Honor.

THE COURT: Any further record - I think, Mr. Emison ...

MR. EMISON: Just so I don't forget. I would move to offer 1735 into evidence. And I'll do it again with Dr. Jarvis just to make sure the jury hears but I don't want to forget.

MR. BLACKWELL: Same objection.

THE COURT: The objection is noted and overruled. Let's go off the record.

(OFF THE RECORD.)

THE COURT: 1733A is admitted into evidence.

MR. FARRAR: Thank you, Your Honor.

THE COURT: Let's go off the record.

(RETURN AT 1:36 PM.)

THE COURT: You may be seated. Welcome back. I hope you guys had a good lunch and enjoyed the pizza. We will continue with the direct examination of Dr. Jarvis. Sir, I'll will remind you that you remain under oath.

CONTINUED DIRECT EXAMINATION BY MR. EMISON

Q Dr. Jarvis, early this morning we looked at Exhibit 1735. Is that still in front of you?

A Yes.

MR. EMISON: I would offer Exhibit 1735.

MR. BLACKWELL: No objection.

THE COURT: 1735 will be received.

MR. EMISON: May I publish, Your Honor?

THE COURT: You may.

Q Dr. Jarvis, I've got a little highlighted part there. And in fairness, there's a part about that earlier just before that that says "Some early independent reports show that thermal effects including those caused by Bair Hugger were not disruptive to laminar flow but that obstructions certainly were." And then there's a reference to some footnotes. Do you see that?

A Yes.

Q Does that identify those studies referenced in that statement?

A Yes.

Q When were those studies published?

A Number six was published in 1974 and number seven in 2004.

Q Are both of those before the McGovern study?

A Yes.

Q Both of those before the work that Dr. Elghobashi did when his work was published in a peer-reviewed journal?

A Yes.

Q Would you read the highlighted portion for us?

A "Dr. Augustine and others made it clear to me when I started here in 1994 that some clinicians had concerns about particulates as causes of wound infections. As a result of these conversations I submitted invention disclosures for Jewell heating devices in December, 1994 and in May, 2002 that specifically addressed the advantage of using RF" which I think is restricted fabricating "as a carefree alternative to warming patients in a sterile environment. The disclosures were resubmitted in a 3M patent system in 2011 as N037600."

Q And looking at just different parts of that. So how about this first part that people in the company - first of all, when it says, "clear to me" at the top of this document on the left-hand side does it say who this document is from?

A Yes.
Q Who is that?
A Al Van Duren.
Q And what's the date of this document?
A January 12, 2012.
Q So Al Van Duren in 2012 says that "It was made clear to me when I started here in 1994 that some clinicians had concerns about particulates as causes of wound infection." Why is that significant to your conclusions that the Bair Hugger increases the risk of surgical infection?
A It shows that the developer of the device had that concern and others were already voicing that concern way back in 1994.
Q And then the going onto the next part in talking about "submitting invention disclosures for alternative devices that would provide air-free alternative to warming patients in a sterile environment." First of all, is the operating room around the surgical table and in the sterile feet a sterile environment?
A Yes.
Q And what is the importance to your opinions here about Al Van Duren submitting invention disclosures for an air-free alternative to warming patients in a sterile environment?
A It's similar to somewhat like the McGovern study and others that have talked about using conductive heating rather

than having a forced air warmer. And you don't have the warming air as a way to basically go around the problem of disrupting the air.

Q So this goes to that first way that the Bair Hugger causes operating room contamination air disruption?

A Right.

Q You also talked about how the Bair Hugger can directly contaminate the surgical field. And I believe that you said there was at least a handful of studies ...

MR. BLACKWELL: Objection, Your Honor, leading.

THE COURT: Sustained.

Q Are there studies that you have relied on that support that?

A Yes.

Q Let me hand you Exhibit 1229. Is Exhibit 1229 one of the studies that you have relied on for your opinion that the Bair Hugger can directly contaminate the sterile field in an operating room?

A Yes.

Q Before we get into what any substance of this, tell us what this is.

A This is a paper published in the Journal of Surgery.

A It's a peer-reviewed paper.

MR. EMISON: Your Honor, I would offer Exhibit 1229 for publication purposes.

MR. BLACKWELL: No objection.

THE COURT: 1229 will be published to the jury.

Q Dr. Jarvis, while he's doing that, just tell us why this paper is important to your conclusion that the Bair Hugger can cause direct examination?

A I think several things. First as 3M has said that they market this device as not a sterile device. And they do not claim that the last part that that hose connects to which is the blanket, they do not claim that that filters anything.

This is a case report out of MD Anderson Cancer Center in Houston, Texas where they had a patient that was undergoing a lobectomy, a part of the lung being removed for cancer. In that patient they noted that his temperature was decreasing and becoming hypothermic during the surgery and they had a Bair Hugger and they started the Bair Hugger set it to 43 degrees.

In the midst of the procedure they noticed some smoke in the room. And in trying to determine what the source of that was they pulled the Bair Hugger away. And I don't know the that you can see it really well. Certainly, with my eyes I can't see it very well.

But what you see on there is there was fire in the blue part of this unit, not in the hose but in the blue part. And what you see on that figure is soot. And the soot had gone from the machine and blown through the hose into the blanket and deposited on the patient and actually surgical drape that was

above the patient showing that the fabric in the Bair Hugger was not be a filter. It has soot particles which are bigger than bacteria.

Q How does the air escape from the disposable Bair Hugger blanket to warm the patient?

A Little-pinpoint-holes.

MR. EMISON: Your Honor, may I approach the jury just to show them the holes?

THE COURT: Any objection, Mr. Blackwell?

MS. PRUITT: No, Your Honor.

(MR. EMISON APPROACHED THE JURY FOR DEMO.)

Q Would you compare for us the size of particles that are required to carry something like a bacteria to the size of particles that would be from this soot?

A I remember because the study I looked at this morning that had three different particle sizes were .3, .5 and 5 microns, the holes there are one micron. And so the first two, the one I showed you that had the highest number would make it through those holes easily.

Q Why is that important to your opinions that the Bair Hugger can cause direct contamination?

A Because it shows that if you have which have been shown in numerous studies that the hoses as well as the internal part of the machine can be contaminated. It can easily get through the holes in the fabric.

Q Are you aware of studies where researchers have actually opened up the blue part of the Bair Hugger...

MR. BLACKWELL: Objection, Your Honor, leading.

THE COURT: Sustained.

Q What kinds of studies have you relied on in support of your opinion that the Bair Hugger causes contamination?

A A variety of studies where they take it - either the blue part of the machine and taken it apart and cultured the inner part of where the heating device is as well as at the entrance where the air comes in or where it's coming out the blue device or where it is in the tubing itself.

Q And in those studies where bacteria was swabbed from either the blue part where the heater and the blower is or the hose, where those researchers able to identify viable bacteria that grew or not viable bacteria?

A Yeah, they were viable. They were grown uncultured. There were viable.

Q And so if those bacteria were growing, what does that tell you about whether or not it's possible for living bacteria to survive inside the conditions of the Bair Hugger?

A Well as 3M has said, it's not sold as a sterile device. The cultures from these various studies have shown - and these were devices that were being used on patients that they took off that had been used in a patient and cultured and they survived. And I think that shows that no matter what heat is

being produced in that device it doesn't kill the organisms within the device.

Q Were those peer-reviewed studies?

A Yes.

Q In your background, training and experience in the field of infectious disease, are you familiar with the process used to sterilize, for example, surgical tools?

A Yes.

Q How can that be done? Are there different ways?

A The most frequent way is heat sterilization. It depends on the medical device. Some medical devices can't tolerate that high of heat. In that case they use chemical sterilization.

Q And how hot does it have to get to sterilize surgical tools?

A Most frequently it's 122 to 140 degrees Fahrenheit.

Q Does that happen instantaneously or does that take a certain amount of time?

A No, that usually takes 15 to 30 minutes.

Q And will you to assume for me that the Bair Hugger temperature setting is 43 degrees centigrade which is approximately 109 degrees Fahrenheit. Assuming that's correct, what does that tell you about whether or not bacteria can survive in or viable bacteria can survive inside the Bair Hugger warming and blowing unit and hose?

A By definition the studies that I've done show they can.

Q And if those - and based upon your review of the exhibits that we just saw with the soot coming out, have you reached a conclusion as to whether viable bacteria could pass through the Bair Hugger, it's hose and out the holes in the blanket?

A I believe it can.

Q Thank you, sir. Dr. Jarvis, we've talked today about how the Bair Hugger increases the risk of infection. We talked about how the Bair Hugger provided no benefit to Katherine O'Haver during her surgery. And based upon that and your work in this case have you reached a conclusion as to whether or not the Bair Hugger poses an unreasonable risk of surgical infection including deep joint infection or PJI like Kathy O'Haver suffered when used in a knee replacement surgery?

A Yes.

Q What's your conclusion?

A That it does.

Q And what do you base that on?

A Published medical literature plus 3M documentation.

MR. EMISON: May we play Clip Number 1, Your Honor?

THE COURT: Same objection, Counsel?

MR. BLACKWELL: Yes.

THE COURT: The objection is overruled. You may play Clip Number 1.

(CLIP NO. 1 WAS PLAYED.)

Q So Dr. Jarvis, if I put unreasonable risk is that a fair summary of your conclusion on this issue?

A Yes.

Q I'd like to turn now to Kathy's treatment and the infection that she suffered. WEre you able to review Kathy's medical records for her knee replacement surgery in November of 2016 and in the weeks and months that followed that?

A Yes.

Q Did Kathy suffer a deep joint infection?

A Yes.

Q How do you know that?

A Dr. Collins was the orthopedic surgeon that did the debridement. And during that debridement surgery he documented that there was yellow effusion like pus and that there was necrotic type sloughed tissue in the joint. He also obtained cultures and gram stains at that time.

Q Dr. Jarvis, let me hand you what's been marked as Exhibit 1545. Can you tell us what that is?

A This is an operative report from Dr. Collins on January 1, 2017.

MR. EMISON: Your Honor, I'm not sure if this is evidence yet. If not, we would offer Exhibit 1545.

THE COURT: 1545 is not. Any objection?

MR. BLACKWELL: No.

THE COURT: 1545 will be received.

Q At the top it says "Date of service." What's that, Dr. Jarvis?

A The date they did the surgery, January 1st - actually it was January 2nd.

Q Of 2017?

A And then the date of service is a little bit below which is January 2nd, 2017.

Q And who was her surgeon? Which of Kathy's two surgeries does this refer to?

A The left knee. So she had the insertion of the prosthesis and then this surgery is the second surgery which was to do an incision and debridement for infection.

Q This is the surgery that was to clean out the infection that she had?

A Right.

Q When you look at the preoperative diagnosis and postoperative diagnosis, what is that and why is it important?

A It's what they think the problem is going in and then postoperative is after they've seen what's actually there. Sometimes it changes but in this case it was the same.

Q What else is significant to you that's in this document?

A Well definitely the fact that it's septic arthritis of the knee. So they're saying it's not a superficial infection, not a deep incisional. They did say a deep basically organ space prosthetic joint infection.

Q When it talks about yellowish effusion, what does that tell you about whether or not Kathy had a deep joint or PJI kind of infection?

A Well it suggested it being pus in the white cells.

Q And it says, "deep culture and sensitivity was obtained along with the gram stain," what is that?

A It's basically cultures of the deep surgical site.

Q And that was not at the surface level but down where the knee implant would be?

A Yes.

Q It talks about "necrotic slough-type tissue" being aspirated and debrided from the knee joint, what does that mean?

A I think that's very important because it's saying it's not superficial at the skin layer. It's not just under the skin layer. It's actually down in the joint and that's consistent with septic arthritis and with having a prosthesis there consistent with a prosthetic joint infection.

Q Let me hand you what is marked as 1547. Dr. Jarvis, would you tell us what Exhibit 1547 is?

A This is the surgical pathology report.

MR. EMISON: Plaintiffs would offer Exhibit 1547.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: 1547 will be received.

Q What are we looking at here, Dr. Jarvis?

A This is the microbiology laboratory report of the gram stains and the aerobic and anaerobic cultures that were obtained at the time of surgery, the January 2nd surgery.

Q Why is this important to the work that you've done?

A Well you like to get cultures and gram stains to try to identify what the ideologic agents or pathogen is.

Q And what did this show about the pathogen that infected Kathy's knee?

A Well the gram stain is positive the, first one there.

Q Is that here?

A Yes, for gram-positive cocci which is like those organisms we saw on that electron micrograph, the same type. The other gram stain is negative and you can see the cultures are negative.

And in reading her medical records we see that she had been seen by her initial orthopedic surgeon probably about two weeks before this where he thought there was the potential of her having an infection and started he started her on and antibiotic called Keflex.

And, in fact, when she was in the hospital for her initial left knee arthroplasty procedure, the day after surgery she developed some complications with her larynx and pharynx, her

throat basically from intubation that occurred during the surgical procedure and had laryngitis and pharyngitis where they had put her on antibiotics as well.

And in addition to that, before her placement of her prosthetic joint infection literally three to four hours before the incision she had been placed on her prophylactic antibiotics which in addition to that Keflex and in addition to the clindamycin was magnamycin and ciprofloxacin. So unfortunately, she had had four antibiotics all of which are very effective against gram-positive organisms before those cultures and gram stains were done.

So we're lucky that we got the gram positive cocci being shown and it's not surprising at all that her cultures were negative particularly when you think about it. If I give you an antibiotic it's going to saturate your tissues. So if I then take those tissues and I cut a piece off and I send it to the micro lab there's no way for them to reverse that or eliminate that. So you have the tissue, you have the bugs and you have the and antibiotic in the culture where you're trying to grow the organism. So it's not surprising that those were negative.

Q And you talked about the pharyngitis that Kathy had after being intubated. Did you identify anything in her records that suggested that may have contributed to cause an infection?

A No.

Q Why?

A Because number one, it was after she'd already had the surgical procedure and she had no evidence of having anything associated with that. There's literally no data in the literature that pharyngitis will cause a prosthetic joint infection.

Q Is pharyngitis all by itself an infection?

A Yes, it's just an infection in your throat kind of like strep throat.

Q Is that caused by irritation from the intubation or is that caused by a germ?

A It's caused by the germ that's there either before or after that intubation was done.

Q And whatever antibiotics that Kathy received, how would that affect whether or not that could potentially transport itself from her throat to her knee?

A It would have killed her.

Q Dr. Jarvis, can you determine within a reasonable degree of scientific and medical certainty when Kathy's deep joint or PJI-type infection originally infected her body?

A I think it was during the surgical procedure on November 29, 2016.

Q How do you know that?

A Because the general consensus in the infectious disease and orthopedic surgical world is that the prosthetic infection, as I told you, that site is sterile. So unless the

bug gets there you're not going to have an infection. And the most likely time for the bug to get to that is when that wound is open sitting in the operating room for over an hour.

Q And have you reached a conclusion about whether or not most PJI-type infections come from bacteria introduced when the surgical wound is open?

A That's a general consensus, yes.

Q And what do you base that on?

A The medical literature and guidelines.

Q Also 3M testimony?

A Yes.

MR. EMISON: Your Honor, may we play Clip 106?

MR. BLACKWELL: Same objection.

THE COURT: The objection is noted and overruled.

You may play 106.

(CLIP NO. 106 WAS PLAYED.)

Q Dr. Jarvis, the jury has heard - strike that. Dr. Jarvis, was there something about Kathy's surgical infection that you needed to look at as part of your work in this case, her surgical incision?

A Yes.

Q What was that?

A Looking at the timeline of how things developed clinically.

Q And have you formed an opinion as to whether or not

the time that Kathy's surgical incision opened up slightly and she had some bleeding between December 14th and December 19th was the cause of her deep joint or PJI-type infection?

A Yes.

Q What's your conclusion?

A That it was.

Q That the surgical incision?

A Repeat the question.

Q Yeah. You're aware that at some point Kathy's incision opened up between December 14th and December 19th?

A The top third.

Q The top third. And were you able to determine based upon your work and your experience whether or not the fact that Kathy's knee incision opened up was a likely cause of her deep joint infection?

A No, I don't think it was the cause of it. I think it was as a result of it.

Q Okay. Explain that to me.

A Well when Dr. Ballard first saw her which was December the 14th - let me back up even further. When she was in the postoperative care unit immediately after her surgery her surgical incision was noted as being clean and dry and intact. There's no indication between that time and when she got discharged from the hospital which I believe was December 9th, literally 10 days, there's so notation by a nurse or a physician

or anybody else that her wound was anything other than perfect.

We know that most surgical incisions close up within 48 hours. And, in fact, she had a dressing placed on her surgical wound incision at the completion of her surgical procedure and that would not removed for 48 hours.

At the time of discharge from the hospital on December 9th it also was noted that her wound looked good and was healing well. Then on December 14th so several days, five days after her discharge she was seen by Dr. Ballard in a follow up and he noticed that her incision was healing well.

Q What does that mean that her – what does that mean to you that her incision was healing well?

A That she did not have a superficial surgical site infection. Remember, I told you that a superficial site infection, the CDC definition for surveillance is within – it has to occur within 30 days. So we're almost at 30 days here and she has no evidence of having a superficial surgical site infection.

Q So I think I heard you tell us that the incision and the bleeding did not cause Kathy's deep joint infection, did I hear that correctly?

A Correct.

Q So if I write does not cause PJI infection, does that fairly reflect what you've told us?

A Yes.

Q How is it that you know that it did not cause her PJI?
A Because she'd gone all of this time from the time she had her surgery until December 14th with no evidence of any superficial external infection.
Q When Dr. Ballard and his assistant sutured up Kathy's incision on the 19th, what else did they provide her?
A Before they did that - actually I believe it was on the 14th they actually took her staples out. So she had had no bleeding before that at all. She was using what's called a continuance passive motion machine that keeps your joint moving so it helps you recover. And she did that before the staples were removed and after the staples were removed. And only after the staples were removed did we see the beginning of this bleeding at the upper third of the incision which suggests to me that something deep was going on and that's where this is coming from, not from the surface going down because the external surface of the wound was perfectly fine.
Q When Kathy saw Dr. Ballard and his assistant again on December 19th where her incision was re-stitched, re-closed, what did they prescribe for her to fight any potential surface-type infection?
A Keflex.
Q How good is Keflex generally at fighting skin surface-type infections?
A It's very good. It's a very broad antibiotic and it's

very good against gram-positive cocci.

Q Based on your background in infectious disease and the work that you've done in this case, how likely is it that that regimen of Keflex antibiotic was successful at fightin out back and preventing any potential skin surface-type infection resulting from that incision opening?

A Well I'd say we already had evidence of her prophylactic antibiotic that she got at surgery which is magnamycin, that after surgery until December 14th she had no evidence of a superficial surgical site infection. So the Keflex would've just been an addition to that plus remember, she also was on clindamycin all during that time. So the likelihood of clindamycin and Keflex and these two active antibiotics reached gram-positive, it's unlikely she'd have a superficial site infection is pretty low.

Q Did you see any evidence of Ms. O'Haver's medical records suggesting that there was a surface infection that tunneled down all the way down to her knee implant?

A No. And Dr. Collins did not indicate there was any such sinus tracking and he would've seen that at the time of surgery.

Q And you first talked about this, did I also hear you say that the incisional bleeding didn't cause the PJI but it was caused by the PJI?

A Yes.

Q And so if I write bleeding caused by the PJI, does that fairly reflect your testimony?

A Yes.

Q How can that be?

A I think what you see is in her surface of her skin at the incision site is healing fine. And then they take the sutures out and that's up to December 14th so we're basically two weeks after surgical procedure. So everything is going fine. And it's only when they take out those staples that then you see the pressure from down in the wound coming up, pushes through and you get the drainage and the bleeding of the upper third of her incision and then they suture that.

Q Thank you, Dr. Jarvis. Now I understand that as part of your work in this case you also undertook a differential diagnosis to determine what the most likely source of contamination of the surgical site, the sterile field that transported bacteria to infect Kathy's knee joint, is that correct?

A Yes.

Q First off, would you tell us what a differential diagnosis is?

A Well trying to look at all possible sources for organisms that could cause the surgical site infection.

Q How does a differential diagnosis work? What do you do?

A Look at the peer-reviewed literature with the different sources and other prosthetic joints or even prosthetic joint procedures.

Q And are there two kind of facets to a differential diagnosis about ruling things in and then ruling things out?

A Right.

Q How does that work just generally for the Court and the jury?

A Looking at the peer-reviewed literature and I depended on and my experience in the past. As I mentioned, I was responsible for 17 years at CDC for investigating outbreaks of hospitals throughout the world. And we published almost every one of them that we investigated. So we had a very long and extensive experience in looking at outbreaks of surgical site infections and what the cause of those were.

Q So Dr. Jarvis, in performing a differential diagnosis what is the standard that you use in deciding whether or not you could rule something out or rule something in?

A Looking at my experience, number one. Number two, looking at the peer-reviewed published literature on what has been associated with surgical site infections particularly in orthopedic implant procedures looking even more specifically at total knee arthroplasty procedures.

Q Is there a standard or weight that you look when looking at anything particular on deciding if that was a likely

potential cause of infection or contamination?

A No, again, looking at the data has it ever been associated with such an infection.

Q And what about the percentage of likelihood to rule something in or out?

A I think the standard that we are supposed to meet here is more likely than not which is 50 or 51 percent, not 99.9 percent.

Q As so if I put up here more likely than not, that's the standard that you use?

A Correct.

Q In performing your differential diagnosis did you determine whether Kathy O'Haver was an appropriate candidate for surgery when she had her knee replaced on November 29, 2016?

A Yes.

Q And what did you determine?

A That she was.

Q What all did Kathy's medical providers due to insure that she was proper surgical candidate?

A They did a physical examination. They did a number of different physical examination tests. They did some laboratory tests and they did a number of radiologic tests to look at the condition of the joint. They even did a steroid injection to see if that would help her alleviate the pain.

Q And did they - did they look at all the necessary

things they needed to look at about Kathy's overall general health condition?

A Well the orthopedic surgeon requires that as a general internist, yes.

Q And based upon your differential diagnosis, was it more likely or not more likely that anything about Kathy's general condition prior to surgery was a likely cause of her surgical infection?

A There was nothing in her physical condition that would cause it.

Q In conducting your differential diagnosis did you look at the conduct of Kathy's surgeon and the surgical team as a potential cause of her surgical infection?

A Absolutely.

Q Were they potential causes of her surgical infection?

A No.

Q Why not?

A Because Dr. Ballard and his surgical team did a lot of things to try to reduce the risk to the minimum. As I mentioned, they did the screening for MRSA. They did the Hibiclens bath. They used the Betadine skin antiseptic both the scrub and the paint so twice. They did appropriate hand hygiene before they went into the operating room. They used what they call bubble suits so had their hair was covered so they would not be having skins squames potentially falling into the

operative field.

They used impervious drapes over her. They even at the skin level use what's called the Ioban drape which on this side is the drape and on the bottom side it goes to the patient and actually sticks to the patient. It has Betadine in it. And they cut through that for the incision which keeps organisms that might be on either side of the incision that could fall in if you're doing irrigation.

Now they have a Betadine drape attached to them and basically pulling them away from the incision. After he entered with the incision with a scalpel, he discarded that scalpel. He did not use that again. He then used a Bovie. So it's almost like changing to a different scalpel for the cutting down deeper so he would not take skin organisms down deeper with him.

He limited the number of surgical personnel. Because as I told you, a million to a hundred million skin squames are released by each person every hour in the operating room. So you want to limit the number of personnel and limit the movement. So he limited the personnel and he limited the movement of people coming in and out of the room. So he did a lot of things to try to minimize the risk of any infection occurring.

Q Did you consider bacteria on Kathy's own skin as a potential source of her infection?

A Absolutely, yes.

Q Was Kathy's bacteria on Kathy's own skin a potential source of her deep joint PJI infection?

A It's always a potential source but he had done multiple things. As I mentioned, the Hibclen the cleanse bath. He didn't do any shaving because shaving can be a problem particularly if you use a razor and you do that the day before surgery, which in the olden days that used to happen a lot. It nicks the skin and so the skin organisms are there and then infect the skin. So he did not do any shaving. He did a Hibeclens bath and then he did the Betadine and then used the Ioban. So he did at least five different things to reduce the skin being the source.

Q You made a very good point. You said everything's a potential cause, right?

A Absolutely.

Q And so everything that we're talking about is a potential source?

A Right.

Q Is bacteria on Kathy’s skin a likely source of her infection?

A No.

Q We've already talked about her incision, the bleeding. Was that a likely source of Kathy's deep joint PJI infection?

A No.

Q I want to exclude the Bair Hugger for my next

question, okay. But in performing your differential diagnosis, did you consider other equipment other than the Bair Hugger that was in the operating room as potential sources of contamination?

A Yes.

Q What kind of equipment did you consider as potential sources of contamination?

A Surgical instruments, lights.

Q What else?

A We consider materials back with the anesthesiologist.

Q There's computers in the operating room?

A Right.

Q Even a telephone potentially?

A They're all outside of the sterile field.

Q Right. And, again, there's all kinds of things. There's telephones, cabinets, drop buckets, trash, those things. Did you consider just consider those things again as possible sources to consider in doing your differential diagnosis?

A Right. And I did what's called a medline search which a large computerized search system that the National Institutes of Health NIH have looking to see if any of those have ever been associated with either surgical site infections in general or prosthetic joint infections specifically and they were not.

Q And for those potential forces, other equipment other than the Bair Hugger, did you determine whether or not they were a likely source of Kathy's deep joint PJI infection?

A Right.
Q Were they?
A They were not.
Q And now we get to the Bair Hugger. Did you consider the Bair Hugger as a potential cause or a contributing cause of transporting the bacteria to cause Kathy's deep joint PJI infection?
A Yes.
Q And what did you conclude? Was it a likely source?
A Yes.
Q Why?
MR. BLACKWELL: Objection, Your Honor. This is repetitive at this point.
THE COURT: Overruled.
A Largely because of all the things that we've discussed so far. There's just a lot of data to show that the Bair Hugger increases particles over the operative field; that there's at least two mechanisms by which they can contaminate the operative field. And that it's been associated in numerous studies with bubbles going over the operative field; mimicking the particles; that we know approximately 40 percent of the particles carry bacteria that they go over the operative field and can cause surgical wound infections.
Q Thank you, Dr. Jarvis.
MR. EMISON: Your Honor, I'd pass the

witness.

THE COURT: Cross-examination.

MR. BLACKWELL: Yes, Your Honor. If we can have a moment to get set up.

THE COURT: Sure.

MR. BLACKWELL: Your Honor, may I approach the witness?

THE COURT: You may.

CROSS EXAMINATION BY MR. BLACKWELL

Q Dr. Jarvis, good afternoon. My name is Jerry Blackwell. You and I have never met before, have we?

A I'm not sure.

Q Let me ask you some preliminary questions just right off the top, just about what it means to be an expert witness.

Q Do you agree that as an expert witness you should do your level best to be objective, to be fair and to be impartial?

A Yes.

Q Do you agree that as an expert witness if you want to talk to the jury about a subject you should do your level best to tell the truth, the whole truth and nothing but the truth? Do you agree with that?

A That's what I said I would do.

Q Well I want to ask you a question in that vein just for starters. I want to show you an article that you were just

discussing with Mr. Emison. Do you remember this forced air warming device failure resulting in smoke and soot on the surgical patient? Do you remember that?

A Yes.

Q Do you have it in front of you?

A I do.

Q It's trial Exhibit 1229. And in the spirit of telling the truth, the whole truth and nothing but the truth, I want you to look at that document and tell the ladies and gentlemen of the jury if the name Bair Hugger appears anywhere in this article. It's just a yes or no.

A I take issue with that.

Q Is that a no. The name Bair Hugger does not appear in this article, does it?

A Correct.

Q Now you discussed it with the jury that's an article that's about the Bair Hugger but it doesn't say that, does it?

A This paper did not, yes.

Q We're talking about this paper you understand?

A That's what I just said.

Q Now in telling the jury the truth, the whole truth and nothing but the truth, you showed them this particular article because you wanted to make the point that it was a Bair Hugger that was blowing out soot and smoke, that's what you talked about, didn't you?

A Correct.
Q Did you tell the jury that that was a - whatever this was, forced air warming had been misused? Somebody had put water on it and it short-circuited it. Did you tell the jury that?
A I don't remember if I said that it sucked up any water.
Q You don't remember if you said it or not?
A No, but it did.
Q So that unit, whatever it was is not designed to suck up water, was it?
A No, absolutely not.
Q So that's a misuse and a malfunction, wasn't it?
A I don't know if I'd call it a misuse. It certainly was an accident.
Q What patient warming device do you know of that's designed and meant to suck up water if that's not a misuse?
A I don't say it was - I don't believe they intentionally put water down there and put the Bair Hugger on top of it said let's try to suck this water up. I think it was an accident that the water got into the device and they acknowledged that.
Q You don't know anything about misuse other than what you read in this paper, do you?
A No, I do.

Q Did you talk to the authors?
A Yes.
Q Who were they without reading it?
A I couldn't tell you that. That was over a year ago.
Q Well let me ask you. You talked about soot coming out of a blanket of some kind with respect to this article, didn't you?
A Yes.
Q Isn't it true that particles of soot are smaller than the particles you find with bacteria?
A Some are and some are not.
Q Some are.
A Some are.
Q They come out of small holes because they tend to be smaller, true?
A They tend to obviously be less than one micron.
Q Now you also when you were talking about these particles, you discussed with Mr. Emison and you said two of them stick out in your mind and you talked about the Legg study. That was one you talked about, right?
A Correct.
Q But you mentioned another that you said was Stokes?
A Stokes, but yeah.
Q You said Stokes, didn't you, sir?
A I think I said Stokes.

Q Stokes was not a study about the Bair Hugger at all, is it?
A Yes, it is.
Q You think Stokes is a study about the Bair Hugger?
A It's about particles.
Q Let me try to be clear on my question. The Stokes study is not a study that's about the Bair Hugger, is it?
A It's a study about particles.
Q Do you agree that as an expert witness you shouldn't jump to conclusions?
A Correct.
Q You should carefully, fully, fairly evaluate the facts and reach scientific conclusions?
A Correct.
Q You don't start off with a conclusion and then work backwards, right?
A I haven't.
Q And to the extent you perform research, you should be thorough?
A Repeat that.
Q If you do background research on a case, it should be thorough?
A Thorough, oh yes.
Q And we can certainly agree that as a litigation expert you should never say one thing on the scientific issue in a

courtroom but then say the completely opposite or a different thing on the same issue outside the courtroom, true?

A Unless some data changed.

Q Correct. When you're talking apples to apples you should be saying the same thing about the apples, right?

A Same thing, yes.

Q Just a couple more. We can certainly agree that as an expert witness you should do your homework to understand the facts before you reach conclusions, right?

A Right.

Q And that because it's fair to say that any opinions that you reach can only be as reliable as the facts you base them on, right?

A Right.

Q Now I take it you've talked about a lot of things and I think you've told us that as expert in your field you make a point of having kept up with the literature?

A I try.

Q And by literature, I mean the literature that relates to surgical site infections and particularly in the orthopedic surgery setting?

A Right, I look at surgical site infections generally as well.

Q So let's switch gears and talk a little bit about your experience and background. This where you started discussing

with Mr. Emison your background. You're not really - you're not an infectious disease doctor, are you, sir?

A Pediatric infectious disease.

Q You're not board-certified in infectious disease, is that right?

A Correct.

Q And you're not an anestheologist?

A I'm not.

Q Never have been?

A No.

Q And you've never administered anestheology to any patient, true?

A I guess I'd debate that. General anesthesia, I would say no.

Q You have in front of you your deposition testimony from May 3rd of 2022?

A Okay.

Q I want you to turn to page 202. Let me know when you're there.

A Okay.

Q And I want to read together lines 8 through 12.

"With that being said, Dr. Jarvis, you have never administered general anesthesia in an operating room to any type of surgical patient, correct?"

And your answer is "Correct."

Did I read that correctly?

A Yes.

Q So you're not a surgeon, are you, sir?

A No.

Q So you have never done an orthopedic surgery?

A Correct.

Q So to the extent we're talking with the jurors about what happens in orthopedic surgeries or infections in orthopedic surgeries, you have never actually done an orthopedic surgery, true?

A No. I've consulted in preventing infections in orthopedic cases.

Q You've never held yourself out as an expert in orthopedic surgery, true?

A True.

Q Now you were talking about filtration in the operating room with the jury. And I think you told the jury that all operating rooms have HEPA filters, high efficiency particulate air filters?

A I think I said almost all.

Q No, you didn't.

A That's fine.

Q Now you're not an expert in operating room air filtration either, are you, sir?

A Well I've had a lot of experience in it. But am I

certified in that, no.

Q Have you ever held yourself out in the scientific and medical community as an expert in operating room air filtration?

A I guess would say no to that but that I was on ASCRA committee so it must be considered I have some knowledge.

Q If you were on the ASCRA committee then you would know that not all operating rooms contain HEPA filtration, do they?

A I said, I thought they might.

Q Do you know, in fact, with respect to the operating room where Ms. O'Haver had her surgery, do you know what operating room that was by the way, sir?

A The number?

Q Yes, sir.

A And think it was nine, eight or nine.

Q Eight. Do you know if there was a HEPA filter in that operating room one way or the other?

A I believe there was.

Q But do you know?

A All I can do I go by what Dr. Ballard said.

Q Isn't it true that in a number of operating rooms where they do general surgeries they quite often have something called a Merv filter?

A Right.

Q Merv 14, 15 or 16?

A Correct.

Q Which is not a HEPA, is it?
A Close.
Q Not close. It's not a HEPA, is it?
A It's not a HEPA.
Q Now let's turn to your practice at this point. At this point you don't have a clinical practice, do you, sir?
A Correct.
Q You don't see patients at all?
A I do. I see them as a primary physician.
Q Okay. So you don't do hands-on patient care, true?
A I do some hands-on patient care but it's not described as you would in a clinical practice. I travel too much to be having a private clinical practice.
Q If we look again at the May 3rd, 2022 transcript. I think you have that there again. I was just asking you about whether you do hands-on patient care. If you would turn to page 8, page 8, lines 7 through 9. The question was asked of you and you were under oath.
"Are you currently practicing medicine?
Answer: If you mean clinical medicine, hands-on patient care, no."
Did I read that accurately?
A Yes. That's what I just said.
Q So the point is you don't treat patients with hands-on care?

A Today, yes.
Q In fact, you haven't treated a patient in nearly 20 years, true?
A Close.
Q And so the last time you would have treated a patient as a primary caregiver would have been in about 2003 when you left Emory?
A Correct.
Q So but even going back 20 years, treating patients for joint infections was never a focus of your clinical practice even going back 20 years, was it?
A It wasn't a focus, no.
Q In fact, if you add them all up, all of the periprosthetic joint infections you treated for your entire career, it's fair to say you treated less than 10 of them for your whole career, true?
A That was an estimate, probably.
Q But the point is you've never treated any patient that you thought had surgical site infection, a prosthetic joint infection that was caused by the Bair Hugger patient warming system, is that true?
A Not that I'm aware of.
Q Now you talked a little bit about Dr. Elghobashi's computational fluid dynamics model and we got to meet him yesterday. You never held yourself out as a expert in

computational fluid dynamics either, have you?

A Correct.

Q When you talked about relying on Dr. Elghobashi's model in helping to form your opinion, you have no basis of your own knowledge and experience and background to make any assessments of whether his model is valid and accurate to Ms. O'Haver's circumstances or not? You just have to accept it as it is, right?

A Well I can read the published paper like any other published paper and reach an opinion on it.

Q Do you know if in Ms. O'Haver's operating room if she had powered air vents in the operating room?

A No.

Q Do you know if Dr. Elghobashi considered whether there were powered air vents in the operating room for Ms. O'Haver?

A No.

Q Do you know what impact having powered air vents in the operating room that actively was sucking the air out has on the movement of squames in the operating room?

A It probably depends on how far the operating table is from the vents.

Q Are you guessing?

A No.

Q Have you ever yourself done a measurement in the operating room of the effect of having powered air vents on the

movement or dispersal of squames?

MR. EMISON: Your Honor, may we approach?

THE COURT: You may.

(BENCH CONFERENCE.)

MR. EMISON: Your Honor, this is outside the scope of Dr. Jarvis's expertise. He relied on Dr. Elghobashi's CFD. He is not a CFD expert. Mr. Blackwell's attempting to impeach Dr. Elghobashi through Dr. Jarvis.

MR. BLACKWELL: He talked to the jury about his validity, how he had formed his opinions and he went on about it for quite a while.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So in discussing this issue about how squames would be dispersed in an operating room if they had powered air vents, I was asking you, Dr. Jarvis, if you have any experience or background in measuring dispersal of squames depending on the nature of the powered air vents in the operating room. Do you?

A No.

Q And so if Dr. Elghobashi's model did not take into account having powered air vents in the operating room, you can't tell the ladies and gentlemen of the jury how that would impact the dispersal of squames in a CFD model that took that into account, can you?

A No. It might have some impact, it might have none.

Q Either way you'd be guessing because you don't know, right?

A Correct.

Q Have you ever published any articles about forced air warming?

A No.

Q Have you ever published any articles about the Bair Hugger patient warming system?

A No.

Q When you were talking about that forced air warming unit, you didn't say it was the Bair Hugger that caught on fire where the smoke and the soot that came out. Do you remember when Counsel was showing the jury the holes on the Bair Hugger blanket and how small they were on the backside of the blanket?

A I don't know if he commented on how small they were but he showed them the holes, yes.

Q And you were talking about how easily the soot comes out of there and how easily it would be dispersed into the operating room?

A I don't believe I characterized it as easy. I said the soot did come out.

Q I want to ask you about the facts. Have you yourself done any testing or experimentation with the Bair Hugger blanket either to assess the particles or bacteria that have come out of the blanket?

A No.
Q You know what and agar plate is, don't you?
A I do.
Q You could buy those, a number of them for like $20, can't you?
A I don't know what the price is today on it, but you could buy them definitely.
Q You were I think critical of - you said some of the studies you know where they put agar plates in this part of an operating room or that part of an operating room and turned on the Bair Hugger but those studies don't tell you much. That's essentially what you said, didn't you?
A I didn't say they didn't tell you much. I said if you don't put them near where the surgical incision is it probably is not of great benefit.
Q Are you aware of any study that involves the Bair Hugger that's used the way it's designed with the hose attached to the blanket and turned on using agar plates where anybody has ever been able to culture bacteria coming out of this blanket when it's used properly, any study?
A Well I'm aware of I think either one or two studies where anybody even looked. And in one of those studies it was only two machines that were looked at where I believe was only 30 minutes. So nobody has really done a study the way it should be done.

Q You're a researcher, right?
A Yes, I do research.
Q You do studies, don't you, sir?
A Not that kind of research usually.
Q You could do it, couldn't you?
A I guess it would be possible.
Q You could get a Bair Hugger. You could put it in an operating room. You could put the agar plates exactly where you think they should be, turn it on, do a test and come and tell the jury what you know because you did a test. You could've done it, couldn't you?
A Yeah, I guess but Mr. Van Duren at 3M said he couldn't do a study in an operating room. If 3M can't do it, I don't know how easy it is for me to do it.
Q Now when Mr. Van Duren said that he couldn't do a test with an agar plate?
A He said he couldn't do a study in an operating room because he couldn't get into an operating room.
Q Let's talk about you because you were talking about all kinds of studies that involve particles and smoke and soot and bubbles and all kinds of things for the jury.
A And all of them are in published papers.
Q I'm not finished with my question, sir. Because now you know to the extent we're talking about Ms. O'Haver and having a surgical site infection, we're talking about bacteria,

where it came from. We're talking about bacteria in that wound, aren't we?

A We are.

Q We're not just talking about particles in general. We're talk about bacteria?

A Absolutely.

Q We're not talking about bubbles. We're talking about bacteria, aren't we?

A Yes.

Q We're not talk about soot, are we? We're talk about bacteria, right?

A Bacteria doesn't behave that much differently in terms of movement than soot or particles.

Q Have you written to anyone, anyone at all, Dr. Jarvis, and said it is so easy to do a study that uses plain simple inexpensive agar plates to capture the bacteria from the particles that come so easily and so readily out of the Bair Hugger blanket so we can tell the ladies and gentlemen of jury we have proof that the bacteria we found in the hose or that we found in the machine actually comes out of the blanket and we grow bacteria. Have you asked anyone to do a study like that?

A No, I don't think I've asked anybody. I would've thought 3M would had done it.

Q Well maybe 3M thought if you were coming to testify, you would do it as an expert. Have you asked anyone to do such

a study?

A No.

Q Now you told us that you do consulting work now, right?

A Correct.

Q And that you have a consulting firm that's called Jason and Jarvis Associates?

A Correct.

Q Where is that out of?

A Hilton Head Island, South Carolina, San Francisco and Oregon.

Q And so you tend to be - you fly and locate to spend part of your time in Hilton Head and then part out on the West Coast?

A Correct.

Q Now 40 to 50 percent of your time as a consultant you spend consulting for attorneys in the medical and legal context, don't you, sir?

A I don't know if it's a 40 to 50 percent of my time.

Q Go back to your deposition on May 3rd, 2022 and starting at page 9, line 20. And then I'm going to ask you to look to page 10, 8 through 11.

"Question: Part of what you do is consulting with attorneys, right?

Answer: Correct."

And then on page 10, lines 8 through 11.

"I am sorry, the medical/legal is now 40 to 50 percent and before COVID it was 20 percent."

Answer: Correct."

Did I read that correctly?

A You skipped an answer before that. It says, "It varies tremendously from year to year particularly because of COVID and the impact of travel."

Q What did you say after that? Did you say, "The medical ...

A I said, "So I would say now" and now was May of this year because I can tell you that this month it was nowhere near that.

Q I'm simply asking you as per the deposition whether you told us that you would spend 40 to 50 percent of your time consulting for attorneys in the medical/legal context. And in general, that's true, isn't it?

A At that time, at the time I answered that question, that was a true fact.

Q And most of the time you spend consulting in that capacity, you spend consulting for plaintiff's attorneys like Mr. Emison here but in medical malpractice cases, true?

A As we were talking about earlier, before COVID probably 60/40 and during COVID it fell to 80/20.

Q And most of the time you testify, you testify on

behalf of plaintiffs. And you were retained by plaintiff's attorneys for medical malpractice cases, true?

A Not most of the time but some of the time sure.

Q In lawsuits against healthcare providers, true?

A Sometimes, yes.

Q Now when you are doing the consulting work I think you said you split your time between Hilton Head and San Francisco with the consulting work?

A The West Coast.

Q Dr. Jarvis, have you ever formed any opinion about the Bair Hugger patient warming system before you were hired by plaintiff's attorneys in this litigation?

A I don't know that I looked at it.

Q Do you recall on any occasion where you either published or gave a talk anywhere critical of the Bair Hugger patient warming system before you were retained by the plaintiff's lawyer in this litigation?

A I'd say just in general about normothermia but not specific to the Bair Hugger.

Q Because before you were hired as an expert in this litigation, you don't have an experience with the Bair Hugger, did you?

A I don't know that I'd say I didn't have any experience because I probably didn't know that I didn't have experience because it was in the room.

Q The Bair Hugger in the room is typically going to be managed by the anesthesiologist, right?

A Usually.

Q You have never administered the Bair Hugger to any patient?

A Correct.

Q And to the extent it's in the room where you were not aware, it was being done by the anesthesia person and not by you, right?

A Right.

Q You told us a bit about the rates that you charge. I think you told us $700 an hour for things like reviewing records and so on.

A Right.

Q To testify in court here today you said it was $900 an hour?

A Correct.

Q Do you have a different rate that you charge to appear at depositions?

A Yes, I mentioned that.

Q $800 an hour?

A Correct.

Q Could you tell us, at the time we spoke about this in relation to this case, you hadn't counted up how much time you'd put into this case or what the fee was total up to this point.

Can you tell us what that is now?

A I don't have that memorized, no.

Q You don't eve n have a ballpark for what you've charged for what you done in this case?

A No.

Q Have you submitted any bills?

A Yes.

Q You just don't remember what they were, whether it's $10,000 or $200,000?

A No, I don't remember.

Q Okay. So let's switch gears and talk about the work you did at the CDC. You talked about doing - having worked at the CDC I think you told us from 1980 to 2003, right?

A Correct.

Q And you told us about some of the studies you had done at the CDC where you'd go in to investigate why there might be infectious outbreaks?

A Yes.

Q You've done that several times?

A Many times.

Q And, I think as part of what you did at the CDC, the Centers for Disease Control and Prevention, part of what you did there was investigate infections, right?

A Outbreaks, yes.

Q And that included infections or investigations as to

the cause of prosthetic joint infections. You investigated those too?

A Correct.

Q And that you had to be very thorough as part of your work with the CDC, right?

A I tried to be.

Q You would go into the investigation with an open mind, yes?

A Hopefully.

Q You'd gather all the facts?

A Correct.

Q And you would use an approach that's often referred to as the gold standard for investigating the causes of infections. The gold standard. You're familiar with that reference, right, gold standard for investigations?

A Right.

Q What does the gold standard mean? What's a gold standard investigation?

A On the case, the outbreak investigations that we do it had a general structure to it. There'd be some deviations from outbreak to outbreak and they're very individualized. That included going in, number one, and confirming the supposed task; doing usually a microbiology review to identify all the patients - let me back up. Define the case, what's kind of case is it going to be? And then go and ascertain all of those cases,

micro records, radiology records etc., infection control records. And then usually did some kind of epidemiologic study whether it be a case control or a cohort study.

Then depending upon the case, we might have a specific bug. We might have genetic typing done on that. There might be personnel and environmental studies done. It kind of varies depending on what the outcome is.

Q So but for one of the things you might do following the gold standard is to look at epidemiological studies to try to assess how certain factors might or might not relate to the existence of infection?

A Correct. Usually we do that before the outbreak investigation itself.

Q And you look at the studies but you also look at a variety of potential sources of the infection, right?

A Correct.

Q And where you could you do something called molecular typing. Would you tell the ladies and gentlemen of the jury what molecular typing is?

A Molecular typing would probably done at the end of the study rather than the beginning of the study. If you have the isolates on the infected patient and/or the source you do genetic typing on it. There's a wide variety of different ways to do that genetic typing.

The most common one at the CDC was something called pulsed-

field gel electrophoresis or PFGE. And it would indicate whether if all of you were infected and I had strain from every one of you and a strain from the Bair Hugger, I could do genetic typing on it and see is it clonal where it's all one genotype or is it 15 different genotypes. And that suggests whether it's a common source or multiple sources.

Q So what you're basically trying to do with that is trying to see if you can match certain bacteria to what's found in the patient to a source is what you're trying to do with the molecular typing?

A Well you already have the iso-clonal various patients and sources. So you're saying are they clonal or are they not clonal.

Q But the reason is that you would take all these steps in investigating joint infections is because there are many potential sources of the bacteria that cause surgical site infections?

A Correct.

Q And, I think you told us the sources can be endogenous, that is on or in the patient or exdogenous, outside the patient. Can you agree with that?

A Yes.

Q Do you also agree that for most surgical site infections the source of pathogens, the source of the pathogens is the endogenous bacteria that's in the patient's skin, on the

patient skin or in the patient's body?

A Yes because you used the words surgical site infections. And as I showed you, that includes superficial which are the most common and that is the reason that's affected.

Q So if we're talking about surgical site infections, generally the most common source of a surgical site infection is the bacteria that is in or on a person, true?

A Correct.

Q Now I want to talk about the CDC gold standard and talk about an investigation you did of a periprosthetic joint infection in 1990 at a Tennessee hospital. Do you remember that?

A I do.

Q Now that's an investigation where you used what we call CDC gold standard, right?

A Correct.

Q And you were called into this particular hospital because there was a particularly high rate of infections after total knee replacement surgeries for one of the surgeons there?

A Correct.

Q And so you were a part of the team to help them figure out why that is, what's happened at the hospital that might be the cause of this infection, incidents, out breaks associated with this one particular physician, right?

A Correct.
Q Now you looked at a lot of factors in following the gold standard approach to get at the source, the cause of this infection. You looked at a lot of them, a lot of factors?
A Right.
Q You considered the age of the person, yes?
A Correct.
Q I've got a list here. The sex of the person?
A Yes.
Q The cause of the underlying joint disease?
A Correct.
Q You considered whether they've had prior knee surgery?
A Correct.
Q You considered what's called an ASA score?
A Correct.
Q And, ASA stands for American Society of Anesthesiologists, right?
A Correct.
Q And that's a score that anesthesiologists use as a tool in preparing for surgery. It helps to predict risks in a given patient, right?
A Theoretically, yes.
Q It's basically - it's kind of a health assessment of that patient at the time of the surgery?
A Correct.

Q You also took into account or considered the red blood cell counts of the patient?
A Correct.
Q Steroid use?
A Correct.
Q Whether the patient had diabetes?
A Correct.
Q Whether there was the use of insulin?
A Correct.
Q Whether there was some evidence of what we call the nosocomial infection, that is a hospital acquired infection?
A Correct.
Q You considered the type of knee implant?
A Correct.
Q Whether the implant was cemented or not cemented? You considered that also?
A Correct.
Q The number of people in the operating room at the time of the surgical procedure?
A Correct.
Q You considered whether there was irrigation that took place within the procedure?
A Correct.
Q The duration of the postoperative wound drains?
A Correct.

Q Whether there was an antimicrobial prophylactic used?
A Correct.
Q What is that by the way?
A Antimicrobial prophylactic is giving an antibiotic before the time of the incision so the drug in the blood is peaked at the time of the incision to prevent surgical site infections, predominantly a superficial incision although it works for all.
Q Did you consider the duration of the surgery?
A Right.
Q You considered whether there was preoperative shaving?
A Correct.
Q The name of the surgeon?
A Yes.
Q Whether there was a continuous passive motor machine used?
A Correct.
Q And you explained to us previously what a continuous passive motor machine is?
A Right.
Q Now you looked at the continuous passive motor machine because you know that use of a machine like that might increase the amount of postoperative drainage from the wound site. It could possibly promote wound break down and even subsequent infection, true?

A True.
Q Now that was all a part of what you considered in this 1990 Tennessee study?
A Correct.
Q You know that Ms. O'Haver did use the continuous passive motion motor machine?
A I mentioned that.
Q So just a few more the factors you took into account. If there was any fever, how long it lasted after the surgery?
A Correct.
Q You looked at any wound culture results?
A Correct.
Q And then the time from the knee replacement procedure to the initial reoperation for cases?
A Correct.
Q So when you were investigating the cause of this infection at this Tennessee hospital in 1990, you considered every one of those factors, didn't you?
A Right.
Q You were certainly there at the hospital as a part of the investigation into what was going on, right?
A I was actually in Atlanta supervising.
Q But in any event, this wasn't the type of investigation that consisted of simply reviewing medical records, was it?

A Correct.
Q So you did additional investigations. In fact, I know you were supervising from Atlanta but you actually went to two of the hospitals involved?
A That was a long time ago. I don't remember that.
Q Would you dispute me if I'll show you where you answered this, that you went to the hospitals involved?
A I'll take your word for it. It was what, 30 years ago?
Q But anyway you interviewed people too?
A Probably.
Q Personnel. You interviewed nurses, your team did, true?
A Correct.
Q Interviewed the doctors, true?
A Correct.
Q And you asked everybody, your team did, detailed questions about the nature of the activities, what they did or didn't do?
A Correct.
Q So you took all that information you gathered and then you did a statistical test to try to look at the impact of each of these factors that we just discussed and how they might relate to a possible infection, right?
A Right.

Q Because you were trying to see if anything stood out as to why this surgeon in particular had such a high rate of infection?

A Correct.

Q So once you've done all your investigation, you then concluded that the excessive number of infections at this hospital came down to three primary factors. One of them was the surgical technique, true?

A Correct.

Q Second was having an ASA score of three or higher, true?

A Correct.

Q And the third was the timing of patient use of the continuous motion machine is the third one, right?

A Right.

Q Now when you considered all the factors, one thing that wasn't mentioned as a factor was the patient warming device. That wasn't a factor when you boiled it down to the three that seemed to matter most. It wasn't the patient warming device, was it?

A If one was even used.

Q Do you remember one way or the other?

A I don't.

Q When you remember the top three things you focused on one of them wasn't the patient warming device, whatever kind of

machine?

A Correct.

Q Now when you finished the Tennessee investigation you published a paper on it, right?

A Yes.

Q It was in the American Journal of Epidemiology in 1990?

A Correct.

Q And you were the senior author on that paper?

A Yes.

Q And in it you concluded specifically that "The surgical technique and the patient's severity of illness were the primary determinants of surgical wound infection after total knee arthroplasty."

A Correct.

Q That's what you concluded, right?

A Yes.

Q So I'd like to talk with you a moment about the second cause you identified which is the ASA score of three. The ASA factors in things like whether the patient has chronic diseases, vascular diseases or in the medical sense obesity, right? That's where it takes that into account, right?

A Correct.

Q You found that in the Tennessee study that patients with an ASA rating of three or higher had a higher risk of

infection, correct?

A Yes.

Q And higher risk of infection means wherever the bacteria may come from if that bacteria encounters this person as a potential host, this person has a higher risk of being infected, right?

A In an outbreak, yes.

Q So I want to transition from the CDC study to talk about Ms. O'Haver. I'll start where I left off with the CDC. Because prior to what you did with the CDC work in the Tennessee studies is that you came up with a timeline of events, right?

A I'm not sure what you mean by a timeline of events.

Q Well you came up with a timeline of which persons, what processes happened when at the various hospitals. What occurred at the hospitals and when?

A And, I guess I would word it differently. I'd say we looked at a wide variety of variables some of which have been known to be associated with PJIs and some which have not been. And we looked at were they more common in those people who had infections versus those who did not.

Q What we do know that in the case of Ms. O'Haver you did prepare a timeline for Ms. O'Haver's case, didn't you? It's in a narrative form in your report.

A Yeah, I'd say more of a description that's chronological, a summary I would say.

Q And in terms of the records that you received for Ms. O'Haver, were there any records that you requested that you didn't receive?

A Not that I recall.

Q So you felt you had all of the medical records you needed to form an opinion?

A Yes.

Q So if you would, take a look at your report. I think you have it in front of you there. And I should assume certain facts for the purposes of my next question. I want to show you a timeline.

THE COURT: Mr. Blackwell would this be a good time to take our afternoon break?

MR. BLACKWELL: It would, Your Honor.

THE COURT: We're going to recess until 3:30.

(INSTRUCTION READ.)

We'll get started at 3:30.

(BREAK AT 3:11 PM.)

(RETURN AT 3:32 PM.)

THE COURT: We'll continue with the cross-examine of Dr. Jarvis. I will remind you that you remain under oath. Mr. Blackwell.

MR. BLACKWELL: Thank you, Your Honor.

CONTINUED CROSS EXAMINATION BY MR. BLACKWELL

Q Dr. Jarvis, I want to show you what's been marked as Trial Exhibit 3575. I'd represent certain facts I want you to assume - certain facts I want you to assume for purposes of my questioning related to Ms. O'Haver's medical records.

MR. BLACKWELL: Your Honor, I'd like to be able to show and display for demonstrative purposes Exhibit 3575.

THE COURT: Any objection to 3575?

MR. EMISON: Not for demonstrative purposes, Your Honor.

THE COURT: Okay. 3575 may be displayed to the jury.

Q So we look here on the screen, I just want to first visit the dates. So I want you to assume about Ms. O'Haver's medical history, that on November 29, 2016, she had left knee replacement surgery. We've discussed that already, haven't you, sir?

A Yes.

Q November 30th, 2016, she had antibiotics and steroids prescribed for postop pharyngitis and laryngitis?

A Correct.

Q No infection was noticed then?

A No SSI I presume you mean.

Q No SSI cause there was pharyngitis and laryngitis.

December 9th, 2016, she's discharged from the hospital and no SSI?

A Correct.

Q December 14th a few things happen, a couple of things happen. The staples are removed and the wound was described as "looks good" on December 14, 2016?

A Correct.

Q And then also that evening December 14, 2016, the wound reopens during use of the continuous passive motion machine. And now December 15th there's a report that the wound was bleeding really bad and from her doctor she received preventative antibiotics prescribed. That's accurate, isn't it?

A I don't know about the bleeding really bad but the antibiotics prescribed, yes.

Q You did review her medical records thoroughly, didn't you, sir?

A Yes. I couldn't remember.

Q December 19th the sutures were placed into the open wound and she's given a course of antibiotics again, do you see that?

A Yes.

Q And then it's December 27th after the sutures were put in, "the left knee appeared red and potential infection was first noted,"?

A Correct.

Q And then we see here the course that led to the irrigation and debridement on January 2nd?

A Correct.

Q And the irrigation and debridement was described by her doctors as a "successful procedure," wasn't it?

A I don't remember that specifically. I remember Dr. Collins - it certainly didn't say in his operative notes that it was a successful procedure.

Q Well after the procedure was done on the irrigation and debridement, did she have to go in for any further reopening of the knee for debridement or for replacement of the device or anything of that sort?

A No.

Q Now I want you to assume and work with us as to the facts. Now I want to turn to your report based on your review of the medical records. And you reviewed the records. You formulated your opinions and you put those opinions in the report based on what you had reviewed as your opinions for this case, right?

A Right.

Q Now you did note in your report on page 3 that on December 9 that Ms. O'Haver was discharged to her mother's home with assistance by Spectrum Home Health. Do you see that on page 3 of your report?

A Yes.

Q Now if you look there on page 3 of your report, you didn't make any notation or mention of the fact that Dr. Ballard didn't detect any sign of Ms. O'Haver developing an infection in the 10 days she was in the hospital after replacement surgery. You didn't mention that in your report, did you, sir?

A Nor did I mention that she did have such.

Q If you could answer my question yes or no, that's not in your report, is it?

A Correct.

Q She was in the hospital for 10 days after her surgery but that was overwhelmingly because she had developed pharyngitis and she had to stay longer than usual in the hospital after her surgery because of the pharyngitis, is that true?

A True.

Q But while she was in the hospital Dr. Ballard continued to check on her progress when she was in the hospital, didn't he?

A Yes.

Q Now do you agree with me that had Dr. Ballard seen any signs of infection he would've treated it, wouldn't he?

A He would've evaluated and treated it, yes.

Q So it's fair to say and fair to conclude that if he had seen anything that would indicate that there was any developing infection he would have treated it, true?

A Like I say, he would've evaluated it.
Q Did you read – you read Dr. Ballard's deposition?
A I did.
Q And you certainly relied on it?
A Yes.
Q So let's look at – I think you have it there in your notebook too on March 9, 2022, the deposition of Dr. Ballard. Page 171 starting at line 22 to 172, line 6. This is from Dr. Ballard's deposition where he's being asked questions.
"So Dr. Ballard, if you'd seen any indication that she was developing an infection, you would've done something about it during the time you were following her in the hospital, right?
Answer: That is correct.
So when you discharged her two days after the surgery, is it fair to conclude that you had not seen anything that would indicate that there was any infection developing?
Answer: That is correct."
That's what Dr. Ballard said, right?
A Right.
Q Now December 14th – on December 14th Ms. O'Haver had her staples removed by Dr. Ballard. You mention that on page 3 of your report, don't you?
A Correct.
Q I'd like to focus specifically on a reference that you make on the third page of your report. If we could look at page

3 starting with the line "On December 14th, 2016."

"On December 14th, 2016, Ms. O'Haver's staples were removed by Dr. Ballard during an outpatient visit. He noticed that her proximal incision had delayed healing and placed a suture in the area. Subsequently, that day on December 14th, subsequently, while Ms. Haver was at home her SHH nurse noted drainage from the left knee and sent pictures to Dr. Ballard."

Is that what you wrote in your report?

A It's revised.

Q I'm asking is that what you wrote in your report, yes or no?

A Both of them are my reports but, yes, that's what was written in my April 26th report. In the May report that was changed.

Q When you were first forming your opinions in the case that's what you wrote about what happened on December 14th for Ms. O'Haver, right?

A Correct.

Q Now the reason that you were adding to the language is because this description you gave here, none of those things are reflected in Ms. O'Haver's medical records. Your description here is not reflected in her medical records, true?

A The sentence "He noticed on" was not on the 14th, correct.

Q Subsequently, that day while Ms. O'Haver was at home

her nurse noticed drainage from the left knee and sent pictures to Dr. Ballard. None of that happened, did it?

A It happened but it didn't happen on the 14th.

Q So when you make this reference in your report, you don't cite it to a specific record, do you?

A No.

Q So the fact is when Dr. Ballard removed the staples he said the wound looked good?

A Correct.

Q So that we can agree, on December 14th, 2016, there's no mention made of the delayed healing, right?

A Right.

Q There's no mention made of placing a suture?

A Correct.

Q There's no mention on that date of any drainage, right?

A Correct.

Q No mention made that they were sending a picture to Dr. Ballard?

A Correct.

Q Now on that December 14th would you also agree with me that there's no record of a home health aide visiting Ms. O'Haver's home at all on December 14th, was there?

A I'd have to look that back up.

Q Could we have Exhibit 2655 which I think is in your

notebook also. You can see it here on the screen also.

A I don't think I have it.

MR. BLACKWELL: May we approach, Your Honor.

THE COURT: You may.

(BENCH CONFERENCE.)

MR. BLACKWELL: I'd like to show Exhibit 2655 for demonstrative purposes.

MR. EMISON: No objection.

THE COURT: You may.

(RETURN TO OPEN COURT.)

Q So would you look at the dates - December - in this record, December 13th over to December 15th in Exhibit 2655. Do you see a date for December 13th?

A Yes.

Q And do you see the next date of December 15th?

A Correct.

Q These are home health services records, right?

A Correct. So they didn't go every day.

Q So would you agree with me that in your record notation when you noted on December 14th that the nurse was at the home and did these activities, that there is no record of the nurse being at Ms. O'Haver's home on December 14th based on the records?

A Correct.

Q Is that correct?

A Yes. I subsequently corrected that, yes.
Q Now if we look at your description of what happened, would you agree with me that you didn't have any record at all in your report of Ms. O'Haver's wound reopening on December 14th and being open until December 19? That wasn't in your report, was it?
A Correct.
Q So there's not a mention of the wound reopening while she's using the continuous passive motion machine and that the wound was open for five days, is there?
A Correct.
Q Now you talked about modifying this report. But the fact is you learned that the facts were inaccurate at your deposition when we told you, didn't you?
A Correct, when we discussed it, yes.
Q And at your deposition we were there to ask you questions about the opinions who had already formed. That's what we did at your deposition, right?
A Correct.
Q And at your deposition we pointed out that you had some basic facts related to Ms. O'Haver incorrect in your report as part of your assumptions, didn't we?
A It wasn't a part of my assumptions. It was taken from the medical records, yes. I got the date wrong on that, yes.
Q Well it's not just a date wrong is it, sir? Ms.

O'Haver had an open wound for five days and you didn't even have it noted in your report, did you, sir?

A Well I had it on the 14th. I said she had delayed healing at that point. So I wasn't indicating that her wound was perfectly normal.

Q You said on that date, December 14th by Dr. Ballard. "He noticed that her approximal incision had delayed healing and placed a suture in the area." That's what you said on December 14th?

A Correct.

Q There was not a wound for which he placed a suture on December 14th, was there?

A Correct.

Q In fact, there was an open wound on December 14th and no sutures were placed until December 19th, right?

A Correct.

Q And open wound for five days. And having read again what Dr. Ballard has to say of an open wound, would you agree that an open wound for five days is a pathway for an infection to enter a wound?

A It's a possibility depending upon the patient or it could be drainage from the deep wound coming up.

Q I wanted to show you Dr. Ballard's deposition testimony. So just one moment. If you can turn again to Dr. Ballard's deposition in your book on page 175 starting at line

22 over to page 176, one. And I want to talk with you about what Dr. Ballard said.

A Okay.

Q You don't have any criticism with Dr. Ballard, do you?

A No.

Q "When we have delayed healing in this in which wound dehiscence or the wound opening that we described was it possible for the bacteria to get into the wound?"

And you said, "Yes, there's a possibility there. From an open wound, bacteria can enter."

A Anything's possible, yes.

Q Anything is not possible. Did Dr. Ballard say anything is possible?

A He said there's a possibility there.

Q But the fact of the matter is when you were making your assessments and ruling out possibilities be it the Bair Hugger, other instruments in the operating room, exposures to other persons, all the things you ruled out, when you were going through your process of your differential diagnosis one of the things that you didn't even have on the list was that she had an open wound for five days when the wound had opened up while using the continuous passive motion machine, right? That wasn't on your list?

A Well she had wound dehiscence and I mentioned that. That can be a sign of infection itself.

Q Didn't you say that on December 14th - on December 14th there was delayed healing of the wound and on that date Dr. Ballard put sutures in the wound? Isn't that what you said in your report?

A In the initial report, yes.

Q You didn't say anything anywhere in your report that there was a wound that was open for five days anywhere in your report, did you, sir?

A I don't know about five days. I did mention later that she had an open wound for five days.

Q How many days in your report - so point me to it where you talked about her wound being open for any days?

A I talked about her drainage continuing.

Q Is it in your report, Dr. Jarvis, where you noted that her wound was open for five days? Do you see it there?

A No.

Q Did you reach the conclusion that the cause and source of her infection had to have been the Bair Hugger? But isn't it true that you reached that conclusion never having talked to her treating doctor, that's true, right?

A Correct.

Q You reached that conclusion never having talked to her, true?

A Correct.

Q You reached that conclusion never having gone into

Operating Room Number 8 where the surgery took place, right?

A Correct.

Q You reached that conclusion without - you reached that conclusion without talking to the anesthesiologist, right?

A Right.

Q You reached that conclusion looking at the medical records sent to you by these lawyers sitting in your office in Hilton Head, South Carolina because you never came to Missouri or Independence and went to the hospital to see where she was, did you?

A I read all the depositions too.

Q You read the depositions that the lawyers sent to you, right?

A Correct.

Q You reviewed the medical records that the lawyers sent to you?

A Right.

Q You reviewed the 3M documents that the lawyers sent to you, right?

A And the depositions.

Q And the depositions that they sent to you?

A Right.

Q Now when you were doing your Tennessee study in 1990 and we talked about the 30 factors and things that you went through there in Tennessee, it involved doing all kinds of

interviews with various personnel on site, didn't it?

A It did.

Q And you interviewed all kinds of people. You would've investigated the operating room. You went through all the 30 factors that we talked about as part of that investigation and you publish on it, right?

A Right, as an outbreak investigation.

Q When you did an outbreak investigation for the CDC would you tell the ladies and gentlemen of the jury even one time that you based your investigation on reviewing medical records and documents sent from lawyers and you reached the conclusion about the cause of an infection that happened years ago. Did you do that one time working for the CDC?

A Repeat that again.

Q Can you tell the jury a single time when you worked for the CDC investigating infections that you based your decision about the cause of the decision of infection on medical records sent by attorneys, no investigation of the site, no discussion with any of the medical personnel, no meeting even with the person who is affected and no need to even leave your office in Hilton Head, South Carolina? Did you ever investigate a CDC hospital outbreak in that fashion?

A No, I wouldn't have been in Hilton Head at the time. I was in Atlanta.

Q Is that your only response to my question, sir?

A No, I would have never done an outbreak investigation like that because if there was a lawsuit involved, we would not have gotten involved anyway. I can tell you in many, many, many epidemiologic studies that we published there were outbreak investigations. We did it without going on site. We did it without collecting all the detailed information you presented in that outbreak investigation. So the type of data you collect and the type of analysis you do is dependent upon the problems you are dealing with.

Q How many outbreak investigations would you say you did that were based upon your receiving company documents from plaintiff's lawyers in a lawsuit while you were working with the CDC?

A Well FDA would've got those, not us. We got joint investigations with FDA that did involve companies and they would have gotten all those documents we would.

Q Stick with my question. I want to know you, Dr. Jarvis, as a person who is doing infectious disease investigations for the CDC, can you tell us when is any study been published where you based your opinion on receiving medical records and company documents from lawyers to decide what caused an infection years' before? Name one that you published.

A I don't think anybody at CDC would have that.

Q The CDC would never do that, true?

A The CDC wouldn't be involved in this type of

investigation. The FDA would be doing it.

Q Now I want to talk to you about the ASA score of three that you mentioned. Because in your Tennessee study in 1990 you found that ASA score of three was very significant, do you remember?

A It was significant.

Q You listed several factors that were significant and an ASA of three was significant?

A Right.

Q Now did you know that Ms. O'Haver also had ASA score of 3?

A Yes.

Q So she would have then had a score that was the same as the one you identified and associated with a higher risk of infection in the Tennessee study, true?

A Yes.

Q And the - that ASA score of three reflected what you're describing in your words as an underlying disease is what ASA score of three means?

A Status of the patient, yes.

Q So you had in your review of the medical records had noted a number of the risk factors that would potentially have Ms. O'Haver be more susceptible to developing an infection in your medical opinion? You noted a number of those factors, didn't you?

A Right.
Q We talked about several of those. Smoking would be one, right?
A Correct.
Q You noted that her smoking was a risk factor?
A Correct.
Q And we talked about in the medical sense, clinical sense, obesity, you mentioned that?
A Yes.
Q Another factor that you mentioned in your report was elevated glucose levels, right?
A Correct.
Q Now in your report though you didn't mention the use of the continuous passive motion machine, did you?
A Correct.
Q Although use of the continuous passive motion machine is a risk factor?
A Well it was a risk factor in that one study. It's not been a risk factor in many, many, many, many other studies that have been done.
Q I thought you had said, in fact, that the use of the continuous passive motion machine itself can cause a wound reopening and be a path to infection. You said that, didn't you, sir?
A In that one study, yes. I'm just saying other

epidemiologic studies have not found it to be a risk factor.

Q It's fair to say you've not ever published anything where you said that the use of that machine is not a a risk factor, although you have publicly stated that using it can be a risk factor after a knee replacement surgery and where it might result in an infection?

A I don't believe we listed that as a risk factor in the 1997 CDC for the prevention of certain surgical site infections.

Q Now you testified quite a bit to a reasonable degree of medical certainty that you felt that Ms. O'Haver's infection was related to use of the Bair Hugger. You reviewed Dr. Ballard's testimony. Did he reach the same conclusion as you in that regard?

A I believe he said he didn't know what the source was.

Q The treating orthopedic surgeon said that he didn't have an opinion on what the source was and he was there and did her surgery, didn't he?

A Correct.

Q So you talked with us, Dr. Jarvis, about the various sources in the operating room that you said you could rule out just from your review of medical records and reviewing the documents sent by the lawyers. You said you could rule out the lights above the operating table?

A Well I also said the peer-reviewed literature.

Q You said you could rule out the - were you able to rule out the anesthesia machine?
A Yes.
Q Have you done any studies into the amount of air that is released by anesthesia machines in the OR?
A No.
Q Have you seen to what extent they create squames in the operating room?
A Create what?
Q How they cause squames to move about the operating room?
A No.
Q Now the Bair Hugger has a filter on the bottom, doesn't it?
A Has a what on the bottom?
Q A filter?
A Yes.
Q Do you know what kind of a filter it is?
A 22 microns.
Q And do you know - do you know what a Merv rating is for a filter?
A Right.
Q What is a Merv rating? You talked about being on the ASRA committee. Can you tell the jury what ASRA is?
A If I can remember, the Association of Hospital

Environmental something or other. Basically, it's a group of hospital construction engineers who develop guidelines for hospitals so ventilation systems and things like that.

Q ASRA propagates standards for hospital filtration among other things, don't they?

A Right.

Q And for many hospitals in general surgery and in operating rooms ASRA prescribes the use of a filter that has a Merv 14 rating for a number of hospitals, right, a Merv 14 filter?

A Right.

Q Do you know whether or not the filter on this Bair Hugger is a Merv 14 rated filter?

A I believe it is but I'm not sure.

Q And if it's a Merv 14 rated filter that's the rating of a filter that would be used to filter air within hospitals and in some operating rooms, Merv 14, right?

A Right.

Q Do you know of any of their equipment in the operating room that might generate air? I don't care whether it's the anesthesia machine, cautery saws, reamer saws, computers, anything else that's a machine that blows air in the operating room that contains a filter at all?

A I'm sure some do and some don't but I couldn't tell you which ones.

Q I'm asking if you know if any do that you can tell us?
A I suspect that some of the anesthesia machines do.
Q Do you know that or are you guessing?
A No, I know.
Q Which ones?
A What do you mean which ones?
Q What model?
A I couldn't tell you that.
Q So in terms of the specific product that you can name that the air that comes into the operating room is already filtered possibly with the Merv 14 filter that filters the air coming into the room, right?
A Right.
Q The Bair Hugger then with the Merv 14 filter re-filters the same air through that Merv 14 filter and then distributes it to the blanket onto nonsterile portions of a patient. That's what it does, doesn't it?
A And the air past that filter is contaminated which suggests that the air doesn't all go through that filter. It could go around that filter.
Q The air coming through the filter has been documented contaminated, that's what you just said?
A No, I said the device that's past that filter - so that filter is filtering all the bugs coming into that machine, everything past that filter including all the way down the tube

of the hose should be sterile, right, and it's not.

Q Dr. Jarvis, you're a scientist, sir, correct?

A Yes.

Q I want to ask you about the science.

A Okay.

Q Tell the jury the name of one study that has taken the air coming out of this blanket you said is supposed to be used and cultured even a single bacterium out of this blanket ever, one study?

A Well we already talked about that.

Q Well tell me the name of one.

A There's only been two studies and one of them only tested two machines for 30 minutes and they were both negative.

Q Can you tell me the name of any study?

A I can't.

Q Would you agree with me that in terms of patient warming devices, the Bair Hugger patient warming blanket is the most tested patient warming system that you know of on the entire planet?

A I'm not sure what you mean by the most tested.

Q What patient warming system has been tested more than the Bair Hugger?

A Do you mean studies being done or 3M studies?

Q I'm talking about studies being done by anyone in your peer-reviewed literature. What patient warming system has had

more studies that have been done on it than the Bair Hugger that you're aware of?

A I'm thinking probably the Bair Hugger has had the most studies done but that's because the Bair Hugger is at the most facilities in the United States, number one. And number two, those studies that are being done are not mostly microbiologic studies.

Q All of the studies that have been done that relate to the particles or what have you, the concern that with respect to particles is if they contain bacteria that might infect a wound? That's what you spent a lot of time talking about?

A Right.

Q Tell us the name of one study that evaluated the air coming out the Bair Hugger patient warming blanket that ever cultured a single bacterium. Can you tell us the name of one study they ever found that?

A We've gone through it three times now. There's only two studies and one of those study studies only used two machines and only tested it for 30 minutes. There are only two studies that I'm aware of that have ever looked at air coming out of the Bair Hugger blanket.

Q So if there are nine or 10 studies that have been bacterial studies of the Bair Hugger, your only aware of two, that's what you're saying?

A No, the other nine cultured the white tubing, the air

coming out the machine at the tubing and the inside of the blue part of the machine. So there are lots of microbiologic studies and every one of those have found that past the Merv 14 filter is contaminated and the air coming out of that tube is contaminated with bacteria.

Q I don't want our discussion to be confusing to the jury. I'm not talking about taking the Bair Hugger apart and going with a Q-tip swab. I'm talking about using the product as it would've been used in the surgery for Ms. O'Haver. I just want us to have a clear question-and-answer and maybe I get it.

But to the extent there have been microbiological studies of the Bair Hugger, that is the air coming out of this blanket, you're telling this jury that you're only aware of two studies and of those two studies none of them were able to culture bacteria, is that a fair repeat of what you essentially said?

A I said there were two studies. And one of them it was a subset part of a larger study and they had multiple devices that were culture positive when they cultured the air coming out of the tubing or swabbing the inside of that tubing. They were positive and they only tested two of those that were positive with the blanket attached to the tube and they only tested it for a period of 30 minutes and they used the agar plates.

Q You weren't aware, Dr. Jarvis, that before all of these particle studies began that we talked about, before the

particle studies were started there were studies that were done to try to culture bacteria coming right out of this blanket using agar plates and they were unable to do it? You're not aware of any of those studies?

A Which study are you talking about?

Q I'm asking are you aware of any studies before the particle studies that you talked about with Mr. Emison for quite a while, are you aware of any before that time where there's an effort made to culture bacteria from the air coming out of the Bair Hugger blanket that proved unsuccessful? Are you aware of any such things?

A I'd have to look - from what I just mentioned, I'd have to look at the date. I can't remember the date of that one.

Q That's okay. I'll move on. Now you spent quite a bit of time talking to Mr. Emison about there being no benefit to the patient for using the Bair Hugger in short-term surgeries and surgeries involving obese people. Do you remember discussing that?

A Right including 3M representatives indicating that.

Q So you don't remember whether or not during Ms. O'Haver's surgery - first, was it a short-term surgery? Was it an hour or less?

A No, it was 101 minutes.

Q From the time she was under anesthesia to the time of

her surgery ended, how long was it?

A I think it was 101 minutes.

Q Are you guessing?

A No.

Q I'll represent it was two hours and two minutes. Would you argue with me?

A Would I do what?

Q Would you argue with me if I told you it was two hours and two minutes?

A I'm not arguing but I could look at the time.

Q All right.

A So the procedure started at 2:17 and ended at 3:58.

Q Dr. Jarvis, what time was the anesthesia induced?

A Well when we actually do the incision at CDC - the duration of the procedure is from the start of the incision, not the anesthesia start time.

Q Well we're talking about her body going into hyperthermia. I'd like to talk to about the time anesthesia was induced.

A You can define the times any way you like but that's not the way we collected with the CDC..

Q Wait a minute. When a person's put under anesthesia one of the things that can happen is that the body's ability to self-regulate temperature is in some ways suspended when you're under anesthesia causing the body temperature to drop, right?

A Correct.
Q So that is as of the time that the anesthesia is induced, not as of the time the incision starts, right?
A Correct.
Q So, again, what time was the anesthesia induced?
A I don't know. I don't know that I have that written down.
Q I'll represent to you it's at 1:56 PM on the date of her surgery and the surgery ended at 3:58 PM. 1:56 to 3:58.
A I can tell you the paper went into great detail on it. It was from the time of the incision until the patient's incision was closed and that is the duration of the procedure that CDC collects on every surgical patient in the United States. It is not collected when they start anesthesia.
Q Let's stick with my question. So from 1:56 when anesthesia is induced for Ms. O'Haver until the surgery ends at 3:58, it's two hours and two minutes, right?
A I will take your word for it.
Q Would you agree with me that a person who is in the OR either under anesthesia till the end of the surgery for two hours is not - that's not a short duration surgery period, is it?
A I don't think most anesthesiologists or surgeons would consider all that anesthesia time because in terms - the only reason for warming the patient is to make them normothermic.

And the reason supposedly to make them normothermic 3M represents it will reduce your risk of surgical site infection.

I'm not aware of any of the studies that have volunteers lying on an operating room table that have no incision ever having a surgical site infection. You're not going to have one.

Q Simple question, Dr. Jarvis. Is a surgical procedure that lasts two hours and two minutes a short-term surgery or not? A If you're going from incision opening to close, the answer would be yes.

Q Two hours and two minutes you say is a short-term surgery? I just want to be clear about what you're saying.

A Well the CDC doesn't divide procedures - I don't know any surgeons that divide them into short-term. I guess short-term would be considered an hour or less.

Q So anything that's over an hour is not a short-term surgery then, right?

A I don't know anybody that uses the short-term as a description of procedures.

Q Well how do you describe a surgery that's an hour or less if not short-term? What do you call it?

A Shorter.

Q You were talking to Mr. Emison for quite a while saying the Bair Hugger had no benefit for surgery that's an hour or less which I assume you meant a short-term surgery. What did you mean by that?

A Anything an hour or less and that's what Mr. Van Duren said. He's the expert on Bair Huggers.

Q Do you know if during that two hours from the time Ms. O'Haver had her anesthesia to the time the surgery ended, if her body temperature ever fell into a hypothermic range?

A How are you defining hypothermic?

Q Well, I'll tell you. I would define hypothermic as below 36 degrees Celsius. Did her body temperature ever fall below 36 degrees Celsius?

A I don't think I have those anesthesia records here. I would be guessing. I know she was below 36 but I don't know how low below 36.

Q So are you telling the jury that the Bair Hugger was of no benefit to Ms. O'Haver but you don't even know if she was hypothermic during the surgery, are you?

A It was of no benefit and Mr. Van Duren said it would be of no benefit.

Q I want to talk with you about your opinions as an expert and Ms. O'Haver. If you know, I would appreciate the answer. Are you telling the jury that the Bair Hugger was of no use to Ms. O'Haver and you don't even know if she was hypothermic during her surgery or not at any time?

A I said I don't remember every one of the temperature or temperatures taken during the entire time of her procedure. I don't remember them all. I know that she within the first

hour did not go down below one degree under the normal temperature that she had before she went into the operating room. I can't tell you the result of her temperature measurement every single minute of her time in the operating room.

Q I don't need every single minute. I want to be clear, can you tell us whether there was any minute?

A I would have to know every single minute in order to answer that question.

Q I'll leave it at that.

A We can look at the operative record. I'd be happy to do that.

THE COURT: Counsel, can you approach.

(BENCH CONFERENCE.)

THE COURT: Okay, so I'm about ready to instruct the witness to answer the questions very carefully because I feel like we're adding a lot of time on here. I'm also mindful of you conducting your cross-examination how you want. I also don't want to reprimand the witness in front of the jury if I don't have to.

MR. BLACKWELL: Right. And I'm going to move on to another area.

THE COURT: I would just tell you both for your knowledge that I'm not going to open the door of I'm about ready because we're at 4:20 and we're making no

progress here because there seems to be more of an argument than question and answer. Okay.

MR. BLACKWELL: Okay.

(RETURN TO OPEN COURT.)

Q I want to talk with you about the science and the articles that you referred to that are related. You talked about the Legg study with Mr. Emison and you talked about McGovern with Emison too. But there were there are some eight or nine of these studies involving particles that you saw and that you referred to, right?

A Correct.

Q The McGovern obviously was a study that didn't involve particles. It involved bubbles, correct?

A Right.

Q Would you tell the ladies and gentlemen of the jury and I could go through each one of these particle studies. I could. But I want to ask you the general question first; whether it's the Legg study you're talking about or whether it's the McGovern study you're talking about, whatever study is, can you tell the jury whether any one of these particle studies at the end of it says, this study establishes that there's a causal relationship between the use of the Bair Hugger and developing an infection? Does a single study prove that there's causation?

A I don't they do. The studies weren't particularly looking at the Bair Hugger specifically anyway. They were

looking up particles and looking at the issue of particles and mostly trying to look at measurement of particles to see could you use it as a proxy for measuring bacteria. Because if you're having a surgical procedure and I want to know how many bugs are in the air over your surgical incision.

I can do some air sampling and send it to the micro lab, but the problem is I would finish with your surgery, we'd go back to the ward or the ICU and the lab and still be working on it getting the plate to grow. It would be two or three days later when they get an answer and that's not very helpful.

So the whole purpose or one of the purposes of doing these particle studies is you can do those immediately kind of like the temperature thing that you see people aim at your forehead and you get your temperature.

You can do air sampling and you can get a result fairly quickly. So they look at it as a proxy and they found that there is a correlation between certain particle sizes and bacterial count.

Q Dr. Jarvis ...

A But they're not looking specifically at the Bair Hugger other than some have looked at particles with the Bair Hugger versus conductive.

MR. BLACKWELL: Your Honor, could I ask Dr. Jarvis to answer my questions?

THE COURT: Sure. So Dr Jarvis, I understand

that you're interested in an explanation. However, Mr. Blackwell is asking you very specific questions. And so I would ask that you listen carefully to his question and only answer that question. If plaintiff's counsel feels that an additional explanation is needed, they'll have an opportunity to get up and redirect. Okay?

A Okay.

THE COURT: Thank you, sir. Mr. Blackwell.

MR. BLACKWELL: Thank you, Your Honor.

Q When you were talking to Mr. Emison, your conclusions that the Bair Hugger caused Ms. O'Haver's infection, you talked about the various things you relied on, 3M documents and that you relied on the studies, these particle studies that you were discussing. I want you to tell the ladies and gentlemen of the jury whether any of those particle studies concluded that the Bair Hugger causes infection, a single one of them.

A No.

Q Even the McGovern study that you spent time discussing here where you said there was a 380 percent increase. I want to talk about McGovern. Even the McGovern study says point-blank in the study that whatever the results that are found do not establish a causal relationship for the findings of the study. Doesn't it say that right in the study?

A Right, we talked about causality, yes.

Q We did and you I think said that studies often don't

make - don't reach conclusions about causation. They simply find positive correlations and you discussed smoking and lung cancer, do you remember that?

A Right.

Q Now you have done lots of epidemiological studies, haven't you?

A Yes.

Q And you know that there are many epidemiological studies that establish that smoking causes lung cancer, right?

A I don't know that they say that's a causal relationship.

Q And you know that there are lots of epidemiological studies that conclude that asbestos causes mesothelioma, right?

A Correct. I don't know again if they say causal relationship though.

Q Well the one thing that you can be clear about is that there are no epidemiological studies that conclude that the Bair Hugger causes infections, you know that, right?

A Well the McGovern study says that there's a 3.8 increase in odds that you will have an infection if you have the Bair Hugger forced air warmer versus a conductive source of warming.

Q The McGovern study, "This study does not establish a causal relationship for this association." The results found in the study. Isn't that exactly what McGovern says?

A Right.
Q It does not establish a causal relationship, right?
A A causal relationship, yes.
Q Now do you know who the principal author was of the McGovern study?
A Do you mean the senior author or the first author?
Q Well see if you see a name there by the name of Mike Reed on the McGovern study.
A The senior author.
Q So it would've been the senior author of the study, Mike Reed?
A Correct.
Q Respected scientist, is he? Do you know him?
A Yes.
Q Do you respect him?
A Yes.
Q You're relying on the McGovern study, right?
A Right.
Q Now you know that there was an International Consensus on Orthopedic Infections that Mike Reed was a part of, right?
A Which one are you referring to?
Q I'm referring to 2018.
A Yes.
Q You're familiar with that, aren't you?
A I am.

Q And one of the principal authors of this is also Mike Reed?

A Correct.

Q Of the International Consensus Statement?

A Correct.

MR. BLACKWELL: Your Honor, may we approach?

THE COURT: You may.

Q I just handed you what's been marked as Exhibit 3501. Do you recognize this as the International Consensus on Orthopedic Infections study?

A Right, this is a section of it I believe, yes.

MR. BLACKWELL: Your Honor, I would like to show it to the jury for demonstrative purposes.

THE COURT: Can you remind me of the exhibit number please.

MR. BLACKWELL: 3501.

THE COURT: Any objection to 3501?

MR. EMISON: For demonstrative purposes, no, Your Honor.

THE COURT: 3501 may be published.

Q So we look here at the title. General Assembly Prevention Operating Room Environment. Proceedings of International Consensus on Orthopedic Infections.

Now if you look there who is one of the principal authors, Mike Reed. Do you see my Mike Reed's name?

A Yes.

Q This is the same Mike Reed who was the senior author on the McGovern study that you point to as supporting your opinions that the Bair Hugger as a forced air warming device causes infections, right?

A Right.

Q Let's look with the ladies and gentlemen at question number two of the International Consensus that Mike Reed is a part of.

Question 2: "Does the use of forced air warming during orthopedic procedures increase the risk of subsequent SSI surgical site infections or periprosthetic joint infections? be effective and may be used." And then we look down to the delegate vote. Agreed 93 percent. Disagree 2 percent. Abstain 5 percent.

And that's described as a super majority and a strong consensus, isn't it?

A In this paper, yes.

Q This is not just a paper. This is the International Consensus's position, isn't it?

A Correct.

Q And this International Consensus consists of 800 delegates who are - have expertise in orthopedic injuries, infections and they come from all over the world, respected authorities in the field of orthopedics, right?

A Correct.
Q Now your background isn't orthopedic so you've never been a part of the International Consensus, have you?
A No but I think they're not just orthopedics.
Q It's broader than that also you think?
A Yes.
Q Well I want to scroll down if we could just two paragraphs to Several Experimental Studies. So if we go up to Several Experimental Studies and then we can see where the authors including Mike Reed specifically mentioned the McGovern study. So if you could start at the very top. Do you see where McGovern is referenced here?
A Yes.
Q That in the International Consensus's position taking into account the McGovern study. They're discussing it, right?
A Right.
Q So even in the face of McGovern by a super majority strong consensus they say that there is no evidence linking the use of forced air warming to an increased risk of SSIs or PJIs and they discussed McGovern, right?
A They actually say the literature is conflicting and there is still a lack of strong evidence linking forced air warming to increased SSI risk.
Q My question was they discussed McGovern also?
A Yes.

Q And is McGovern discussed as an experimental study? If we look down and I'll just point out one thing here. The authors noted if you move down to a middle.

A They also call it an observation ...

Q There's no question pending. The authors noted however that "their observational study did not account for infection control procedures that changed over the study period or account for several possible differences in patient risk factors such as obesity and fitness for surgery." Do you see that?

A Yes.

Q And so the issue with McGovern, they're comparing the Bair Hugger to some other type of warming device and looking at how it fared in this comparison study population. The issue was it was it wasn't an apples to apples comparison. That's the issue they're talking about, isn't it?

A Well it isn't an apple to apples comparison.

Q Some people in this group got antibiotics that would serve to reduce infections, the incidence of infections that they didn't get in this group and then you compare them. That's not apples to apples unless they have the same antibiotic treatment, right?

A Well actually in the period where they got two antibiotics the Bair Hugger did worse than the period where there was only one antibiotic. So it actually if they'd had

that during the entire study instead of changing to it the result would've been even worse.

Q Dr. Jarvis, are you making this up at this point?

MR. EMISON: Your Honor, I object. That's argumentative.

MR. BLACKWELL: I'll withdraw.

Q Dr. Jarvis, you also know that there are other differences that the study authors noted in McGovern. It says for example there are risk factors for people developing infections such as obesity for example, such as diabetes as another example, such as any number of kinds of health factors that might predispose somebody to be more at risk than the general population.

And the McGovern study authors note that they didn't control for that to make sure that you had apples to apples comparisons in terms of the accessibility for the developing an infection. That was another problem in McGovern, wasn't it?

A All of the patients were undergoing THA/TKA procedures. They didn't have all the data, as you mentioned, for obesity and fitness for surgery. There's no data that they've talked about later that said that that would've been a variable. Plus, if you don't have a bug it doesn't matter if you're not fit for surgery or if you're obese as can be. You're not going to get an infection. You gotta get the bug first.

Q Dr. Jarvis, I thank the you way described it in your discussions with Mr. Emison, the nature of bacteria of the body is that we're sort of at war all the time with various forms of bacteria that enter the body. White blood cells - do you remember discussing that at all?

A No.

Q But isn't it true, sir, that as a doctor the body is exposed to various types of bacteria through the blood, etc. every day for everybody?

A I hope not.

Q So, again, you're not an infectious disease expert? You did tell us that.

A I am but I don't think we all get bacterium every day.

Q I didn't say bacterium.

A You said in the blood. That's bacterium.

Q So is it your view that there isn't the presence of some form of bacteria that enters the body including potentially even the blood for a normal person every day?

A In the blood every day, no.

Q Thank you, sir. I'll leave it at that.

A I'd like to see that data.

Q I want to show you just a list of studies, Doctor, and tell me if you're familiar with them. If I could just show the list as Exhibit 4039. Dr. Jarvis, are you familiar with this list of studies that's Exhibit 4039?

A I think I've read all of them but maybe one of them, one or two.

Q Do you recognize that as the list of bacterial studies that relate to the Bair Hugger?

A The ones that I've read, yes.

Q Is so that lists nine of them, correct?

A Correct.

Q In your discussions with the jury I think moments ago is that you're familiar with two?

A No.

Q Bacterial studies?

A No, I think we talked about more than that.

Q But the point being, if you look at these studies and you're familiar with them and ...

A Wait, let me finish answering your question. The two that we were talking about were two studies where cultures were obtained from the Bair Hugger going through that tubing with that unit on and culturing the air coming out of the blanket specifically. That's the two. None of those do that.

Q None of this cultured air coming out of the blanket, is that what you just said?

A Except for maybe the one or two that I've not read.

Q Have you read the Oguz study?

A I have read the Oguz study.

Q And is it your view that the Oguz study didn't attempt

to culture bacteria coming out of the blanket?

A I think that was the second of the two that we were going to talk about, yes. And I think that it at most has 20 pages in it and I can't remember how many they cultured. It was very small.

Q You discussed with Mr. Emison there's no such thing as a perfect study. Do you remember that, discussing McGovern?

A There's some that are very not perfect and others that are closer to perfect.

Q Do you remember when you were discussing McGovern authored by Mike Reed who is the same author of the Consensus, one of the authors of the Consensus Statement in 2018 that we talked about forced air warming. Do you remember saying there's no such thing as a perfect study, did you say that?

A Yes.

Q And so these studies now you're criticizing because there are not enough people in them. You say they're underpowered is what you're saying, right?

A Well I'm saying that you have to look at each of these studies individually. You need to read them, not just pull them out of the air and say, what about this one and point out what is positive on one side versus what's negative on the other. Every study needs to be evaluated.

Q Can I see Exhibit 2703?

THE COURT: Counsel, did you say 2703?

MR. BLACKWELL: Yes, Your Honor. May I approach, Your Honor?

THE COURT: You may.

Q I'm showing you what's been marked as Trial Exhibit 2703. Do you recognize this as the Oguz study?

A Yes.

Q You're familiar with the Oguz study?

A Yes.

MR. BLACKWELL: Your Honor, I would like to be able to show this to the jury as demonstrative.

MR. EMISON: No objection as to demonstrative.

THE COURT: 2703 may be used for demonstrative purposes.

Q Now speaking of Oguz, you've seen this study so you know that it was a randomized controlled trial, right, Dr Jarvis? Doctor Jarvis?

A Yes. Let me see. I believe it was, yes, randomized pilot. I don't know about the control part.

Q Now a randomized trial of this sort is a gold standard in terms of studies, isn't it?

A Randomized control trials are considered to be the best type of design of a study to reduce the risk of bias and confounding in that you can have a poorly designed randomized controlled trial and lot of them being underpowered. Do if it's underpowered it's not going to find a difference.

Q And this study was involving an orthopedic surgery, true?

A Yeah, this was - unfortunately it was a really non-invasive orthopedic. I believe it might have been one implant.

Q I'm just asking if it involved an orthopedic surgery?

A It was. I think they describe it as a minor orthopedic intervention.

Q Now in terms of the study participants, half of them were warmed with the Bair Hugger?

A Right.

Q And the other half were warmed with a competing type of warming device that was called the Hotdog, right?

A Correct.

Q Were those the two being studied in McGovern also?

A Correct.

Q The Bair Hugger and the Hotdog?

A Correct.

Q And, the Hotdog is a product or a type of warming system that was manufactured by a man named Scott Augustine, right?

A He developed the Bair Hugger.

Q But he competes with this Hotdog against the Bair Hugger, true?

A He invented them both.

Q Can you answer my question?
A Yes.
Q And, incidentally, a number of the particle studies that you relied on, is it true that a number of those particle studies were themselves conducted by persons associated with Scott Augustine, the competitor?
A I believe a couple of them had a statistician that was somehow involved, maybe a previous employee. I'm not sure. None of them as far as I know were sponsored by Augustine.
Q Let's go back to Oguz. Because in this Oguz study you've got half of the patients being warmed by the Bair Hugger and half by the Hotdog. But what they did in this study is they put agar plates out in different parts of the operating room, didn't they in the study?
A Yes, too far out in the operating room.
Q But the goal was to see if you turn on the Bair Hugger with the forced air warming and you have this other device called the Hotdog warmer, whether or not you get different degrees of bacteria going into agar plates when you compare the two. That was their goal, right?
A Theoretically, yes.
Q So they were looking at whether there was any difference in the amounts of bacteria that got captured in the plates comparing the two, right?
A Correct.

Q And they found no differences between the Bair Hugger and the Hotdog, true?

A Correct.

Q If we could turn to the study on page 2. And there was no difference for bacterial growth. So here was the bottom line for the study. "There was no difference for bacterial growth on the mean of plates five and six between the forced air and the non-forced air warming group. P equals 0.6 Wilcoxon Mann Whitney test." Do you know what that test is?

A They have statistical tests for non-normally distributed.

Q So if the results of the multivariate model indicate that "A longer duration of surgery increased bacteria count on plates one to four and absence of the laminar air flow increased bacterial count on plates one to six significantly. There was a trend that longer duration of surgery increased bacterial counts on these two plates, five and six as well. There was no difference for forced air versus resistive warming for bacterial count on either plate. A reduced model without patient warming did not change any significance as discovered in the extended model." The bottom line for the Oguz study, right, Dr. Jarvis?

A Right. There's no SSIs.

Q Right, no SSIs. And to the extent we're talking about particles and bacteria and all the rest and that there is something that's better than the Bair Hugger, they compared it

to the something. And the testing, the science didn't bear out in this study, true?

A I think it was very dependent on where they put the agar plates.

Q Well where do you think the agar plates should have been placed?

A Where the incision is going to be or as near as possible.

Q Do you know whether agar plates were in fact in the location where the operating room table would have been in the room?

A Right here. They were down by the anesthesia machine.

Q Not all of them, where they?

A Three of them. Plate four was under the operating room table. We know that's not a clean area. So they really only put two and they were both up above and down by the head.

Q So if you're trying to culture bacteria, then you would want to catch down at the floor level and you'd want to catch that high-level both, wouldn't you?

A Not if I was worried about SSIs. I'd want to be near the incision.

Q Suffice it to say though you have never been on that has been asked by a safety, health and regulatory agency to create and implement a microbiological study of a patient warming device, have you?

A Correct.

Q Now turning then back to McGovern. Would you agree with me that looking here at what Mike Reed, the senior author of the McGovern study, looking at what he said in the International Consensus Statement, Mike Reed does not determine when you talk about the 380 percent difference between the Bair Hugger and this Hotdog, he does not determine in the International Consensus that there is any determinative science, definitive science linking forced air warming to surgical site infections, is that true?

A Do you mean is that what he says in this document?

Q The International Consensus?

A That's what I'm looking at.

Q Isn't that true?

A Well this isn't a Mike Reed statement. He's the one drafting this but he's summarizing what the people who are voting on it. The vote itself is not Mike Reed voting. It's all the participants voting.

Q He's one of the participants too, isn't he?

A One vote of however many people. You said it was 800 and some people who are giving their opinions.

Q The one vote added up to 93 percent agreeing that there's no evidence to link forced air warming to an increased risk of SSIs/PJIs. And the International Consensus says that that is a strong consensus at the super majority, right?

A Correct. But they're saying maintaining interoperative normothermia is showing reduced complications and SSI has been shown to be wrong too.

MR. BLACKWELL: Your Honor, may I approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: We're not going to get finished today and maybe if you wanted to let the jury go a little bit earlier, a few minutes.

THE COURT: That's fine. Are there any difficulties with Dr. Jarvis coming back on Monday morning?

MR. EMISON: I don't think so. Do you know about how much longer you have?

MR. BLACKWELL: Forty-five minutes.

THE COURT: Okay. All right.

(RETURN TO OPEN COURT.)

THE COURT: All right, guys, we're going to let you go a whole whopping eight minutes early today on this Friday.

Okay so I earlier this week when you guys first met me across the hall so I have to do that on Monday morning for another judge. And so I probably - I think if you guys got here at 8:45 we'll probably be closer to a 9 o'clock start. And so instead of you guys just sitting back there waiting for me, if you can get here around 8:45, by the time I do

that and get back over here I think a 9 o'clock start would be about where we would be at.

So leave your notebooks there. I'm going to read you the instruction one more time. I also want to thank you guys for your work this week, your promptness. You're a great group. We're all very thankful for you guys and so thank you, thank you, thank you.

(INSTRUCTION READ.)

Thanks so much. I see a few Chiefs here. I hope we're celebrating a Chiefs victory on Monday. So have a good weekend and we'll see you Monday. Court is in recess.

(RECESS AT 4:58 PM.)

PROCEEDINGS

October 3, 2022

THE COURT: Good morning. Welcome back. I hope you guys had a good weekend and didn't stay up too late watching the Chiefs victory. So we will continue with the testimony of Dr. Jarvis with the cross-examination. Sir, I'll remind you that you remain under oath. Mr. Blackwell.

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

CONTINUED CROSS-EXAMINATION BY MR. BLACKWELL

Q Dr. Jarvis.

A Good morning.

Q Let me just first kind of bring us up to current as of today right now. When we broke on Friday obviously your examination was continuing. Did you meet with the lawyers over the weekend?

A Yes.

Q Did you discuss your testimony and go over how you might respond to questions for the remainder of your examination?

A Not really.

Q Then what really did you talk about?

A Specific studies.

Q Any one specific that you talked about with the

lawyers?

A A number of them, yes.

Q Well name them please.

A McGovern, like your dog study.

Q Which study?

A Your dog study, your list of nine, I think it was nine.

Q Did you call it the dog study?

A I did because it's on dogs. It's a veterinary clinic study.

Q Any others?

A Tumia. The Tumia study.

Q Tumia study.

A T-U-M-I-A.

Q Tumia. Any other studies that you discussed with the lawyers?

A Those probably were it.

Q We had talked about McGovern a fair amount on Friday. Could you tell us what did you discuss with the lawyers about McGovern?

A I don't think it was any more than basically a summary.

Q But you understood what McGovern was about so you didn't need a summary, right?

A Correct.

Q So what did they say that was new?

A Nothing.

Q Let's go back to the International Consensus on Orthopedic Infections 2018 that I believe we were talking about when we broke on Friday. That was trial Exhibit 3501. Do you still have your binder there?

A I do.

Q And let me first ask you just a general question about the operating room environment of use, the operating room environment of use. Do you agree that despite all the advancements we made technologically or in a behavioral sense it's still not possible to eliminate all bacteria from a functioning operating room, do you agree with that?

A Yes.

Q Let's go back to question number two that I think we were focused on. That question was "Does the use of forced air warming during orthopedic procedures increase the risk of subsequent surgical site infections or prosthetic joint infections?

Recommendation. There's no evidence to definitively link forced air warming to an increased risk of surgical site infection/PJIs. Alternative methods of warming can be effective and may be used."

You know here that there's a strong consensus for this position statement with 93 percent in agreement?

A Correct.
Q Now I take it, Dr. Jarvis, given what you've told the jury, you believe that there is evidence that definitive links forced air warming to increased risk of SSIs, correct?
A I think I would question that word "definitively." They're making it like 99 percent and talking about more likely than not.
Q So do you think there is evidence to definitively link forced air warming to increased risk of SSIs, yes or no?
A I wouldn't use the word "definitively" because that's a higher standard than I think we're trying to make here.
Q So you do or don't agree with this statement?
A I would say there is evidence.
Q But you wouldn't say that there is no evidence to definitively link forced air warming to an increased risk of SSIs. Do you agree or disagree with the consensus statement? Just pick one or the other.
A I would say in my mind there is.
Q And so to the extent that you say that there is definitive evidence linking forced air warming to increased risk of SSIs, could we also agree that that point of view is represented in the two percent here that disagree with the consensus point of view? You would be in the 2 percent, wouldn't you?
A I would be but the 93 percent and the 2 percent and

the 5 percent have not seen the 3M data that I've seen.

Q My question is you would be the 2 percent, wouldn't you, sir?

A I would be if I were in that group.

Q Now you are anxious to talk about 3M data. If you looked at these 3M documents that you like to bring up, can you show to the jury, name for us, let me find any documents from 3M where 3M supposedly secretly says that 3M believes that there's evidence to definitively link forced air warming to increased risk of SSIs? Have you seen any 3M documents where 3M said that, yes or no?

A That specific sentence?

Q That specific sentence, yes. That's what I'm asking.

A I've never said that specific sentence one way or the other either.

Q I didn't ask you what you said. Listen to my question. Because you like to bring up 3M documents and 3M data, can you point to a single 3M document having looked at all of those what we've talked about, can you pull out a single 3M document where 3M ever says that 3M believes that there is evidence to definitively link forced air warming to an increased risk of SSIs where 3M said there is definitive evidence?

A No.

Q Now when we talked on Friday you said that there were a couple of studies that were meaningful to you. And I think we

clarified that they were the Stocks S-T-O-C-K-S study and then the Legg L-E-G-G study. Do you remember discussing that?

A Yes.

Q Now would you agree with me that - let's take the Legg study for example. The Legg study in fact is a study that was considered by the International Consensus when it came with the 93 percent in favor of there being no definitive evidence. They considered the Legg study, didn't they?

A I believe so.

Q And you also mentioned the Stocks study. Would you agree with me that Stocks, the author of the Stocks study his name is Gregory Stocks?

A Correct.

Q Would you agree that he was one of the leaders on this consensus position was Gregory Stocks, true?

A I'd have to go back and look at that.

Q Do you have a copy of Trial Exhibit 3501 in front of you?

A I do.

Q If we could let's just look at the title page. And look at the list of authors. Do you see Gregory Stocks right there?

A Yes, I see he was part of the general assembly group, yes.

Q He was part of the general assembly group. This is

the group of those who were the leaders that helped to create the consensus standards we're talking about on orthopedic infections contained in this paper. Isn't he one of the leaders?

A I don't know if he's one of the leaders. He's clearly one of the authors.

Q So in any event we know that Stocks is one of the authors. And we know that the International Consensus took into account the Legg study that you said was meaningful to you. Didn't the International Consensus take it into account?

A Yes, apparently.

Q Now the jurors may have also heard in the trial reference to something called the Darouiche study. We haven't talked about it but they may have heard about it. But we can also see that there is a Rabih Darouiche on the second line, number four. We can see that Darouiche was also one of authors on the consensus statement, true?

A True.

Q We also know the International Consensus in fact considered the CFD of Dr. Elghobashi again, didn't they?

A Correct.

Q And so to the extent the jury has seen Dr. Elghobashi's CFD, so did the International Consensus in the paper that was published on it, didn't they?

A Well they at least referenced it and they do mention

it in their summary for one of the studies.

Q Now we've already discussed how the McGovern study and whatever - the McGovern was also considered by the International Consensus and we discussed that already, haven't we?

A Correct.

Q I want to talk with you about some other aspects of the International Consensus statement that I don't believe we've covered yet. Do you have the paper in front of you?

A I do.

Q If I could turn you to page 5 and I want to talk you to about a specific paragraph. The paragraph reads "The most effective and safest mode of maintaining intraoperative normothermia remains unknown."

That's the International Consensus position. Do you agree or disagree with that, Dr. Jarvis?

A Yes, I would.

Q You would what?

A Agree.

Q "Some recent studies have raised potential issues with the use of forced air warming systems that may disrupt the laminar air flow in operating rooms and increase risks for surgical site infections."

Then he goes on to say, "But, from a recent experimental study, disruption of airflow produced by forced air warming was well counteracted by downward laminar airflow from the ceiling."

Do you read that?

A Yes.

Q And you had read this before because you had read the International Consensus statement so you've seen this before?

A Yes.

Q Now you told us that you relied on the CFD of Dr. Elghobashi as in forming your opinions in this case. Do you see here where he's saying that "Disruption at the airflow produced by forced air warming was well counteracted by the downward laminar airflow from the ceiling."

I want to focus on that in particular. In your reliance on Dr. Elghobashi, did you know that he even measured the velocity of the air coming out from under the drapes when the Bair Hugger was turned on in his model? Did he even measure it?

A I would have to go back and look at it. I don't remember.

Q As you sit here, you don't know one way or the other?

A Correct.

Q Do you know if he even measured the heat, how hot was it as the heat came from under the drapes when the Bair Hugger wasn't used? Do you know if it was even measured?

A I couldn't tell you.

Q So as to this statement as to whether the airflow produced by the forced air warming was well counteracted by downward laminar airflow from the ceiling, there's no research

you have or that you could point us to that disputes the statement, is there?

A Well I'd have to read this paper. I don't know what reference 40 is offhand.

Q As you sit here, there's nothing you can point us to that disputes it, is that a true statement?

A I would say no, that there are studies that show disrupted air.

Q And so the extent you say there are such studies, then we agree those studies likely disagree with the position taken by the International Consensus Committee, right?

A Yes.

Q And you can't tell us the names of any specific studies, is that fair?

A Without looking, yes.

Q Now how about the last sentence here in this section. "There are no studies which provide high-level evidence that warming systems may increase infection rates."

You have been telling the jury about studies that you contend provide evidence that warming systems increase infection rates. Isn't that what you been telling the jury about in your direct testimony?

A Yes, that's what the McGovern study shows in reality.

Q And would you agree with me the International Consensus Committee took into account the McGovern study. They

read it. They considered it and they concluded that there are no studies which provide high-level evidence that warming systems may increase infection rates. That's what it says, right?

A That's what that sentence says. This is an opinion poll and I can't say that any of the people other than most of these authors actually read those papers. So they're reading a statement and answering a question. It's like asking a political opinion poll.

Q Now you are now characterizing the functioning and working of the International Consensus Group on periprosthetic orthopedic infection. It's a group that you've never been a part of, true?

A Correct.

Q You've never been to a single meeting, true?

A Correct.

Q They've never sent you any kind of an email, a letter of any sort seeking out your opinions on how they should conduct their business, right?

A Absolutely.

Q You have never spoken to either Mike Reed, Darouiche, Greg Stocks or anyone about how the International Consensus Committee goes about conducting its voting. You haven't talked to anybody, have you?

A I can read the methodology. I can read.

Q You just discussed with the jury how they go about conducting their votes in an opinion poll. That's something you've never been a part of, isn't that true?

A No, I can read their methodology just like in these papers.

Q Have ever been a part of any International Consensus Committee or group? I get not orthopedic infections but any other ones?

A I would have to think about that. I didn't know that they've been called consensus. We don't usually do consensus in infection control. It's an opinion.

Q I'm sorry.

A You're asking people their opinions. And often times they vote on that opinion without knowing any of the data.

Q So have you been a part of any International Consensus that is formulating opinions on issues that relate to medical care and treatment of patients of this sort that you can think of as you sit there on the stand?

A I've certainly been involved in guideline development with CDC, with ASRA where we look at the evidence and we make recommendations. That's I would say a higher level of consensus.

Q Dr. Jarvis, you know that's not what I asked you, don't you?

A No.

Q I asked you have you been a part of any International Consensus Group of the sort that created this International Consensus position. And if so, tell us the name of it.

A No, I have not. I don't know that there's a single one in infectious disease or infection control.

Q So let me ask you about another section in the International Consensus. So this is on page 5107 at the bottom. In the right-hand corner you will see page 3 of 12. Are you with me, Dr. Jarvis?

A Yes.

Q So if you'll look down in the last paragraph where it reads "In conclusion, the literature is conflicting, and there is still a lack of strong evidence linking forced air warming to an increased risk of surgical site infections. In light of this, while we recognize the theoretical risk posed by forced air warming, we cannot recommend discontinued use of these devices at this time." Do you see that, Dr. Jarvis?

A Yes, I do.

Q And, I take it this position of the International Consensus Committee, that's also one you disagree with, isn't it? "We cannot continue recommend discontinuing the use of these devices at this time." You disagree with that, don't you?

A Yes, I do.

Q "We do however recommend following the manufacturer's instructions and frequently changing the filters, making sure

the devices are calibrated and most importantly, using the devices only with the appropriate perforated blanket."

Now and just to clarify it here given that you did discuss some additional studies with the lawyers over the weekend, did you find any study that you discussed with the lawyers looking here at the last point, "most importantly, using the devices only with the appropriate perforated blanket."

Did you find any study where the Bair Hugger was used with the appropriate perforated blanket where again anybody was able to culture any bacteria from the exhaust air coming out the holes of this blanket?

A No, I think we talked about there was like two studies.

Q Right. And so nothing that you saw over the weekend changes that. You still saw no studies where bacteria was able to be cultivated from anything that came out of the blanket, true?

A Right, neither 3M or anybody else.

Q Now just to clarify this. So with respect to the Bair Hugger, 3M never represented to anyone that the Bair Hugger unit itself was meant to be sterile, did they?

A Correct.

Q Can you name for the jurors any piece of electronic equipment in the operating room that is sterile?

A I would assume the Bovie in the sterile field is

sterile.

Q Tell the jury what a Bovie is.

A A Bovie is basically like an electronic scalpel. They push a little button and it has heat and it can cut.

Q So other than the Bovie, for example, the anesthesia machine is not a sterile machine, is it?

A It's outside the sterile field though.

Q So any piece of equipment that is outside of the sterile field is not sterile in an operating room?

A Usually, yes.

Q But the point being 3M as far as you know has never represented that the Bair Hugger itself was a sterile unit nor have any safety or health regulation that required that, is that true?

A Correct.

Q Now I want to talk with you little bit about laminar flow because there was also - and the jury heard testimony about it and there was a questionnaire in the International Consensus also on the issue of laminar airflow. If we can look at number four. This is page 1 of the same example, the very first page.

And here's the question. "Number one, does the use of laminar airflow in the operating room reduce the risk of subsequent surgical site infections or periprosthetic joint infections in patients undergoing orthopedic procedures?"

Here is the recommendation. "Recent orthopedic literature

has not demonstrated that the use of laminar flow systems reduced the surgical site infections or periprosthetic joint infections in patients undergoing orthopedic procedures."

A Yes.

Q "At this time it's not necessary to perform a clean orthopedic surgery procedure, including elective joint arthroplasty in an operating theater equipped with laminar airflow systems." And the delegates vote, 81 percent agree, 14 percent disagree. And that was also referred to as a super majority with ae strong consensus. Do you agree or disagree with this position from the International Consensus?

A I'd say that there have been conflicting reports. Some have said positive prevents infections and others have said it does not. There's quite a variation in how they use laminar airflow or unidirectional systems are set up in hospitals. So they may be comparing apples to oranges sometimes.

Q And to some extent even if the perspective you just expressed was expressed by the International Consensus also. If we can - if we can look at number five. Where there it says, "Various studies suggested that laminar flow ventilation systems were effective in receiving SSIs/PGIs." That's sort of the notion you just expressed to the jurors, right?

A Yes.

Q But if we read on with the International Consensus, if we look then at number six on the next paragraph. This is on

page 2 of 12 where the International Consensus says that "Despite there being early studies suggesting that laminar airflow was effective in reducing SSIs," it says, "On the contrary, a larger body of evidence suggests that laminar airflow is not associated with the reduction in SSIs and PJIs." Do you see that?

A Yes, I do.

Q Have you evaluated the larger body of evidence in the studies in formulating your opinions here in this case?

A No, I've not reviewed all these papers, no.

Q Well let me see if you agree with what's further said in this paragraph number seven. "Gastmeier et al." and this is just in the same paragraph, Dr. Jarvis. "showed in a systematic review that no individual study showed a significant benefit for laminar airflow in reducing periprosthetic infections after total knee arthroplasty." What Ms. O'Haver had was a totally knee arthroplasty, wasn't it?

A Correct.

Q "A systematic review that no individual studies showed a significant benefit for laminar airflow reducing PJI after total knee arthroplasty and only one study showed a benefit in the reduction of PJI after total hip arthroplasty." THA is total hip arthroplasty, right?

A Correct.

Q And then it goes on to say, "However, there were also

a total of four studies showing an increase in the surgical site infection rates after total hip arthroplasty using laminar airflow." Do you see that?

A I do.

Q You haven't done any studies or anything of your own that contradicts that finding, have you?

A I've not done any studies specifically on laminar airflow, no.

Q Now what the International Consensus pointed out is that there are a number of variables in a busy operating room that can disrupt laminar airflow. If you look over at page 5 of 12. You can read it there or look on the screen, Dr. Jarvis, either one.

"There are a host of variables in a busy operating room that can disrupt laminar airflow and their many different manufacturers and types of laminar flow configurations. Examples include rising thermal plumes caused by heat from the OR lights, opening of doors which causes positively pressurized air to escape into the hallways thereby shifting air currents, and turbulence created when air passes overhead surgery lights and the torsos of the surgical staff."

Are you with me there as I read this along? You're reading this with me?

A Yes.

Q Now you relied on the CFD again for Dr. Elghobashi you

told us. Did you see with respect to Dr. Elgobashi's CFD if he in any way considered, provided for, calculated any value of any kind in the CFD that corresponded to thermal plumes caused by heat from the operating room lights? Did you see that he even did anything with respect to that?

A I don't believe so.

Q Did you see any value or calculation in Dr. Elghobashi's CFD that you relied on that he factored at all in the fact that the opening of doors causes positively pressurized air to escape in the hallways and thereby shifting air currents. Did you see that reflected in the CFD?

A I don't believe so, no.

Q And the last one here. "The turbulence created when air passes overhead surgery lights and the torsos of the surgical staff." You know in his CFD he had all the surgical staff standing still, not moving at all in the CFD, right?

A Correct.

Q Did you see how he factored in in any way shifting air currents and turbulence created when air passes overhead surgery lights and the torsos of the surgical staff? Was that factored in in any way that you saw?

A I don't believe so.

Q But, the International Consensus goes on to speak even further about some of the risks associated with laminar airflow. If you would go back to page 2 of 12 in the International

Consensus. And let's look at number eight. "An important weakness of laminar systems as commonly used is that they fail to address the environment outside of the immediate laminar flow zone." That's a statement you agree with, isn't it, Dr. Jarvis?

A I don't know that I've seen the data. Obviously, as I say, some of the reports on laminar flow have showed benefit and others have not. They vary in their design. And I would say that this statement is kind of a generic or generalization of what may apply to some systems and may not apply to others.

Q Isn't the whole purpose of the laminar flow and unidirectional flow above the operating table - isn't the whole purpose of it to prevent, to reduce the likelihood of bacteria entering into the surgical field?

A Correct, particles and bacteria, yes.

Q And here the point is that the surgical field is a limited space or area and laminar flow doesn't address the environments outside of the immediate laminar flow zone. Do you disagree with that proposition?

A They're basically setting up a barrier.

Q Well let's talk more specifically about what the International Consensus found was the issue with laminar flow systems. If we look at number nine in the same paragraph. It says here "Standard vertical laminar," I'm sorry, "laminar systems only treat about a three-meter square area leaving scant room for implant and instrument trays and tables."

Then it goes on to say, "Unfortunately laminar systems may actually contribute to the contamination of these areas by blowing bacteria off of personnel and the floor, onto instrumentation and other personnel."

So we have talked a lot about the notion of the sterile field, to hold the hands up of above the table, putting nothing in that area containing bacteria etc. But if you're reading this statement the International Consensus found is actually air blowing down on the surgeons and staff in the hospital the laminar flow itself may be blowing bacteria off of personnel and blowing off the floor too blowing on the instrumentation and other personnel." Do you dispute this finding from the International Consensus, Dr. Jarvis?

A I don't know that I would dispute it but at least looking at the reference it looks like it's a 1983 study. And there's certainly I would say a lot of progress in the development of laminar airflow since 1983.

Q This International Consensus position was from the year 2018, isn't it?

A It is.

Q And you can't tell the jury as you sit here now what the body of research was overall that the International Consensus Group considers, can you?

A All I can see is what they've reference in that specific statement.

Q And the specific statement here is that "Laminar systems may actually contribute to the contamination of these areas by blowing bacteria off of personnel and the floor onto instrumentation and other personnel." That's what it says, right?

A That is what it says.

Q Again, you're having relied on that CFD for Dr. Elghobashi which you said you did, did you see anywhere in his CFD model where he considered laminar systems contributing to contamination of the sterile field by blowing bacteria off of personnel, on the floor, on the instrumentation and blowing bacteria off of other personnel? Did you see that factored in in any way?

A Not that I'm aware of. And I don't believe most laminar systems probably do that.

Q Well just to remind the jury, you're not an orthopedic surgeon?

A I'm not.

Q You have maybe treated 10 periprosthetic joint infections in your entire career, right?

A Correct. I'm not sure what that has to do with laminar airflow understanding but do most orthopedic surgeons have great knowledge of laminar airflow, I doubt it.

Q Let's stick with our discussions on laminar airflow. Let's look here at the last point on laminar flow from the

International Consensus. We're looking at number 10. "Although the routine usage of laminar flow systems in total joint arthroplasty may no longer be recommended, this should not be interpreted to mean that operating room air quality is unimportant. However, hospitals should not feel obligated to expend additional funds for laminar airflow nor should institutions and surgeons suffer liability for surgeries performed without laminar flow." You see that, don't you?

A I do.

Q And do you see here where the International Consensus based on it having reviewed the data and the evidence is saying that routine usage of laminar flow systems in total joint arthroplasties may no longer even be recommended." That's what they say, right?

A I'm surprised they didn't recommend against it.

Q I didn't hear what you said.

A I'm saying from what you've pointed out so far, I don't know why they didn't recommend against it.

Q Well, specifically, we can certainly say that this isn't a strong endorsement for the concept that some hospitals have to have, is it?

A No, it seems like a pretty wishy-washy statement made.

Q So I wanted to clear up one thing because we talked about the question number two. So we talked about this quite a bit and I won't go into it any further.

So in terms of being wishy-washy statements, we can certainly agree that International Consensus's response on this question about whether there's definitive evidence linking forced air warming to increased SSIs, 93 percent in agreement, that is not a wishy-washy statement, is it?

A Well if they put that word "definitively" in every one of these questions they would all be voted down.

Q I put the word wishy-washy in my question. That's not a wishy-washy statement, is it?

A Well it is by using the word "definitively." They're not saying there's no evidence. They're saying it doesn't reach their level of definitively which nothing in this document would reach.

Q So I'm going to switch gears because we'll talk about a different subject now. And this relates to your having talked to the jury about a forced air warming unit that somebody spilled water on and it shorted out. Do you remember discussing that?

A Yes, I do.

Q Now you apparently did some additional research and learned that it was a Bair Hugger that somebody had spilled water on, right?

A Correct.

Q How did you come to learn it was a Bair Hugger? Did you research that or did the lawyers give you that?

A No, I got a copy of the abstract or whatever - the case report I got.

Q Now just to make sure we put this the proper context for this case. There isn't any evidence in this case that Ms. O'Haver used a Bair Hugger that anybody spilled water on, is there?

A Not that I'm aware of.

Q And no evidence that whatever the damages that might be claimed in this case, nobody's claiming the damage stemming from a Bair Hugger unit blowing soot or smoke on Ms. O'Haver, are they?

A Correct.

Q And can we agree that the claims in this case are not that Ms. O'Haver suffered smoke damage from either a misused or abused Bair Hugger, is that fair?

A That's correct.

Q So let me talk to you about the January 2nd, 2017 irrigation and debridement procedure, the IAD it's called. So you did note in your report in our discussion at least that Ms. O'Haver had a procedure on January 2nd to treat the infection in her wound, right?

A Correct.

Q And this was the one that had reopened after she was going to physical therapy using the continuous passive motor machine, right?

A Part of it was. The upper part was somewhat related but the bottom part was not.

Q Are you aware, Dr. Jarvis, when she went back in for the surgery on January 2nd a Bair Hugger was used for that too, did you know that?

A I did know that.

Q And she didn't have any infections from that January 2nd procedure as far as you know, did she?

A Correct.

Q Now the January 2nd procedure was done to clean out the infection, is that correct?

A That is correct.

Q And what was used is sometimes referred to as a DAIR D-A-I-R procedure, right?

A Right.

Q And, DAIR stands for debridement, antibiotics and implant retention, right?

A Correct.

Q And it pretty much describes what happens in the procedure. Debridement, antibiotics are used or prescribed and implant retention meaning the implant is kept in place, right?

A Correct.

Q It's called a DAIR D-A-I-R. Now as far as you know, that procedure was a successful one for Ms. O'Haver, wasn't it?

A I believe so, yes.

Q There was no additional treatment for the left knee infection after the DAIR procedure, true?

A I would disagree with that. She received over six to eight weeks of antibiotic therapy with multiple drugs. That is therapy.

Q To be clear, the DAIR process; debridement, antibiotics and implant retention it anticipates that they are going to prescribe antibiotics as a part of this, right?

A Correct, for treatment of the knee prosthetic joint infection.

Q We'll get to that in a minute. Now you said that the DAIR procedure in Ms. O'Haver's case was for treatment of a deep prosthetic joint infection?

A Correct.

Q Deep prosthetic joint infection, right?

A Correct.

Q Now isn't it true, Dr. Jarvis, that ordinarily in an irrigation and debridement procedure such as Ms. O'Haver had is done for what is a superficial wound infection, isn't that true?

A No.

Q So if a wound infection goes all the way down deep in the joint where the prosthetic device is, then typically for a deep joint infection of that kind the prosthetic device has to be removed. And it wouldn't be just a simple matter of washing out the wound and putting the patient on antibiotics as happened

with Ms. O'Haver. You'd have to remove the device in a deep joint infection, true?

A No.

Q Irrigation and debridement is for a superficial wound infection, true?

A No, DAIR is for a deep wound infection and it depends upon the organisms that are causing that infection. Some can be treated adequately with irrigation and debridement and antibiotic therapy and others require removal of the implant. Often times DAIR is done first and if that is successful like this case was then you don't have to take out the implant.

Q Now we talked to you about this before, haven't we in a deposition?

A Talked about what?

Q About this issue about whether your view is that irrigation and debridement is something that is done ordinarily for superficial wound infections. This is not the first time you've discussed this under oath, is it?

A I can't recall.

Q Let's take a look at what you actually said in your deposition to see if it refreshes your recollection. If you could turn to you May 19th, 2019 testimony, I'm sorry, February 19th, 2019.

THE COURT: Counsel, is there an exhibit number attached to this?

MR. BLACKWELL: It's just impeachment, Your Honor.

THE COURT: Can you guys approach.

(BENCH CONFERENCE.)

THE COURT: I think just for purposes of the record we should mark the deposition as an exhibit just so we know what it is. We've kind of jumped around a little bit. The last one I have 4309. We could mark this deposition as 4040.

MR. EMISON: I'm going to pose an objection. This is not from a deposition in this case. It's from some other case involving the Bair Hugger. I don't know if a question was asked yet or how it relates to this case. It certainly wasn't asked to this witness in his deposition taken in this case.

THE COURT: It's impeachment. The Court will allow it. Just give me the date one more time of the deposition.

MR. BLACKWELL: February 19th, 2019.

THE COURT: Got it, okay. Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Jarvis, I want to go back to the deposition which we marked Exhibit 4040. Page 31 going over to page 32. So let's read this together starting at line 24. So here you have a discussion from your report about anyone suggesting that

the infection was deep. So not a discussion about Ms. O'Haver.

So the question is "How does the absence of any pus culturable and recoverable pus more superficially suggest that it was a deep infection?"

If we read the answer. "I think there are several things. First of all, he missed it and second of all, he did surgery the next day." Again, not about Ms. O'Haver.

"And you would've taken out the prosthesis if you didn't think it was involved in the infection?

If this was a superficial wound infection there would be no need to do - he could've done an IAD, irrigation and debridement if it was a superficial infection which he said he was going to do but he didn't do. He wouldn't have needed to remove the prosthesis because it wouldn't have been involved and he thought it was involved. And that by definition CDC and orthopedic surgical definition is consistent with a prosthetic joint infection not a superficial wound infection.

A superficial wound infection would've required opening the wound, irrigating the wound, putting the patient on antibiotics for five to seven days and saying goodbye. He did not do that. He treated it as a deep prosthetic wound infection." Did I read that accurately first?

A Yes.

Q Can we agree that in the case of Ms. O'Haver, that what happened on January 2nd, the wound was opened. They

irrigated the wound in the surgical procedure, true?

A Correct.

Q They put the patient on antibiotics. Here it was five to seven days but they put her on antibiotics for a number of days after it, right?

A Correct, 42 or 48 days.

Q And then, thereafter, as you said here, "say goodbye." There is no other need to treat the infection after that point, after this treatment and antibiotic course, is that true?

A They didn't say goodbye after five to seven days. It went longer than that and they also removed her liner which they didn't do in that case.

Q They cleaned the liner and put it back. They didn't take the prosthetic?

A They cleaned the liner and they didn't take the prosthetic, yes.

Q My question is, again, a superficial wound infection would've required opening the wound, irrigating the wound, putting the patient on antibiotics for five to seven days and saying goodbye. That's what you said there, isn't it?

A Correct. Mrs. O'Haver did not have that.

Q So you're saying her antibiotic course was off?

A Just a little bit, two months. You don't treat a superficial wound infection for two months ever.

Q Did you have other comorbidities, Dr. Jarvis?

A It's irrelevant. And infection is treated for a certain amount of time and there's no one that you'll get to come up here and say we routinely treat a superficial wound infection for six to eight weeks period, no.

Q So we're going to hear from others later on who have treated a number of orthopedic infections, more than 10. But my question here is was with respect to Ms. O'Haver again is that her procedure on January 2nd didn't involve removing the prosthesis, that's true, isn't it?

A Yes.

Q The procedure involved washing out the wound, true?

A Correct.

Q It involved putting her on a course of antibiotics, longer than seven days but a course of antibiotics, no removal of the prosthesis, that's true, isn't it?

A Correct. That is what DAIR is D-A-I-R. It's doing a debridement which they did. They cut out necrotic tissue down to the joint and they treated her with antibiotics.

Q Dr. Jarvis, I just asked you if my statement was true. It's true, is it?

A It is true.

Q Now I want to ask you about one other thing. As we discussed on Friday that when you had done your report - we discussed at the very start of your cross-examination that you understood the importance of being thorough and detailed in your

assessment of the facts. You told us that the opinions that are reached in the case can't be any more reliable than the significant facts that they're based upon. Do you remember us having that discussion?

A Yes.

Q Now when we were discussing your background research on Ms. O'Haver, we brought up the fact that in your report you had missed the fact that she had a wound that was open for five days before she got into see the doctor. And you had also not noted or you also missed that the wound had opened while she was using a continuous passive motor machine. We discussed that, didn't we?

A You said she had a wound open for five days. I have not said in my report nor do I say here sitting today that she had a wound that was open for five days because she had an appointment with Dr. Ballard on the 14th and she had one on the 19th and she had one on the 27th. And he doesn't say in any of those notes that her wound was open for five days. She had a bandage over it or Steri-Strips over it.

Q Dr. Jarvis, you're under oath?

A I am.

Q Now you know that in your report you suggested that the wound opened it and it received its treatment on the same day and that that was a mistake and that you said you supplemented your report, isn't that what you told us?

A No, I don't think I said what you just said.
Q You don't believe you said you're made a supplement of the report and corrected that?
A I do remember that but your allegations in between is what I'm saying. She received antibiotics on the 15th which is the day that she started having the drainage.
Q So what you're telling the ladies and gentlemen of the jury that it's your testimony from the stand now that her wound wasn't open for five days. We know it opened December 14th. Why don't you tell the ladies and gentlemen when was it closed, Dr. Jarvis since you saw her medical records?
A Well she had drainage from her upper third of her incision starting on the 15th. And she had it sutured on the 19th. That is five days. But there's no documentation that I can see from any of the healthcare workers including Dr. Ballard that says her wound was gaping open for five days.
Q Well how did it get closed? Is there any reference in her medical records if it's open on the 14th and had to be stitched closed on the 19th, when did they close it in between, Dr. Jarvis?
A She had a dressing over it.
Q And if the dressing worked to close the wound, why did she need stitches?
A I didn't say the dressing was going to close the wound but the wound is not sitting there open. She has a dressing

over it.

Q I'm going to move on. I'm not going to play games with exchange of words. You talked about having done a supplementary report because it was in your deposition that we pointed out to you that the wound opened on the 14th and she actually received stitches on the 19th. It didn't happen on the same day. You said you supplemented your report to the ladies and gentlemen of the jury.

A I did.

Q What did you do with that supplemental report? Where did it go? Where did it go?

A What do you mean where did it go?

Q We have never seen it. Where did it go?

A Mr. Emison.

Q So you sent it to the lawyers here?

A Yes.

Q I presumably you thought it would come to us?

A I figure they would do what they need to do. I don't know.

Q But you're not aware that we've never seen any supplement for you from the time we pointed it out that you had the facts wrong about when her open wound was stitched up. You did know that we've never seen it?

A I would have no idea unless you called and told me or emailed me that you didn't. So how would I know?

Q Thank you, Dr. Jarvis. No further questions.

THE COURT: Redirect.

MR. EMISON: Yes Your Honor. Just a moment.

THE COURT: Sure.

REDIRECT EXAMINATION BY MR. EMISON

Q Dr. Jarvis, when Mr. Blackwell started asking you questions on Friday last week, he started out by asking you about the truth, the whole truth and nothing but the truth. Do you recall that line of questions?

A Yes.

Q Do you agree that it's important to tell the truth when you're testifying?

A Absolutely.

Q Including the whole truth?

A I try to.

Q And nothing but the truth?

A Correct.

Q And that's also true for a company like 3M?

A It should be.

Q And even their lawyers when they stand up in open court?

A It should be.

Q And one of the things that Mr. Blackwell asked you today was if you'd ever seen - talking about the ICOS document,

was if you'd seen any document where 3M said that there was evidence that forced air warming caused surgical infections. Do you recall that?

A Yes.

Q And the whole truth is that there is that kind of a document. Exhibit 225 where there was the letter that 3M was putting together that said there's no evidence of forced air warming increases the risk of surgical site infections ...

MR. BLACKWELL: Objection.

THE COURT: Hold on. Mr. Blackwell. Come on up.

(BENCH CONFERENCE.)

MR. BLACKWELL: Just housekeeping, Your Honor. If he could move the easel because I can't see the Court. Second, if he would just show me what it is before he shows it to the witness so I know where he is.

MR. EMISON: This is admitted into evidence.

THE COURT: I understand that but I think it's also important to reference it by exhibit number and show it to opposing counsel so that they understand that.

MR. EMISON: Sure.

(RETURN TO OPEN COURT.)

Q Dr. Jarvis, is this a document exactly like that where 3M in its paper is saying there's no evidence that forced air warming increases the risk of surgical site infections. And

then Al Van Duren who knows most about forced air warming says actually there is evidence that forced air warming increases risk, isn't that right?

A Correct.

Q That's not controversial in this case, is it?

A It shouldn't be.

Q This is 3M - this isn't some group of outsiders who don't have access to 3M's confidential information. This is from the horse's mouth.

A Correct.

Q That's the whole truth in this case, right?

A Correct.

Q Mr. Blackwell also asked you questions about on Friday and then again today about the article from MD Anderson in Texas were the Bair Hugger machine caught fire and soot came out of the blanket. And it is the truth that that article involved a Bair Hugger, right?

A Correct.

Q And, Dr. Jarvis, it's the whole truth that you know that because there's a photograph that accompanies that article that actually shows the Bair Hugger that was involved, isn't that right?

A That is correct.

MR. EMISON: Your Honor, plaintiffs would offer Defense Exhibit 2900.

THE COURT: Any objection?

MR. BLACKWELL: No, Your Honor, for demonstrative purposes.

THE COURT: 2900 is received.

Q So the truth is that did involve the Bair Hugger. And the whole truth is that you knew that because you'd seen this photograph, is that right, Dr. Jarvis?

A That is correct.

Q And if we're talking about nothing but the truth, when Mr. Blackwell, 3M's lawyer was asking you about that implying that it wasn't the Bair Hugger involved, 3M knew that it was because this is their exhibit, right?

A That is true.

Q And all that time that Mr. Blackwell spent with you trying to convince you and the jury that this wasn't - this didn't involve the Bair Hugger, they had this whole time?

A Correct, they just never said the word.

Q I want to keep on this same article because in fairness if you look at that, that's not on the floor, right?

A Correct, it's on an IV pole.

Q And so it's not like it sucked up water. Something had to be spilled there, fair?

A Presumably.

Q But based upon your review of the documents in this case, 3M's documents, can the Bair Hugger device actually be

placed on the floor near the operating table? Is that part of its instructions for use?

A It's often done.

Q And have you seen 3M documents and seen testimony about 3M documents that talks about what happens when a Bair Hugger is placed on the floor like this?

A Yes.

Q And, Mr. Blackwell asked you what kind of medical device manufacturer would design a device that would suck in water like you thought happened in that article. Do you remember that?

A Yes.

Q What kind of manufacturer would do that?

A Apparently 3M.

Q 3M. Have you seen documents that says that the Bair Hugger the way it's designed will suck in dirt and water and whatever junk is on the floor?

A Correct.

MR. BLACKWELL: Your Honor, may we approach.

THE COURT: You may.

(BENCH CONFEENCE.)

MR. BLACKWELL: Your Honor, I can't tell from looking at these whether these are exhibits or documents already in in the case because they are emails. Again, we've had quite a discussion about emails and I don't want

them just sliding in.

MR. EMISON: They're not getting in.

THE COURT: Then I don't think that should be displayed to the jury until the foundation is laid for those exhibits.

MR. EMISON: And, again, the foundation for these are that he's reviewed Dr. Ballard's testimony. They were discussed in detail in Dr. Ballard's testimony. They were marked in Dr. Ballard's testimony. And these are admissions of a party opponent that go from 3M people by their emails produced by them talking about how the Bair Hugger should be used. And goes through it even, Your Honor, as part of that email exchange from the senior product engineer in 3M's patient warming infection position that what the rep Eric said was fully correct.

THE COURT: Here's what I'm talking about. The way to admit these is not through whiteboards. The way to admit these is to show them, show the emails and lay the foundation for it. No foundation has been laid for these. He's not identified them. He's not talked about any foundational questions. And so to throw out the whiteboard version of this is inappropriate.

MR. EMISON: I will lay the foundation.

THE COURT: Is there a smaller version of these that you can show him?

MR. EMISON: I believe so.

THE COURT: And just at this point the objection is sustained.

MR. BLACKWELL: Give us a number so that we can look them up.

MR. EMISON: Mr. Blackwell, 1531, 1532, and 1533.

(RETURN TO OPEN COURT.)

Q Dr. Jarvis, I'm going to hand you what's been marked as Plaintiff's Exhibits 1531, 1532, and 1533. Do you recognize these as a series of emails from 3M personnel that were referenced in Dr. Ballard's deposition that you read?

A Yes.

Q Did Dr. Ballard in his deposition talk about what these emails said and if that information had been communicated to him as an orthopedic surgeon?

MR. BLACKWELL: Objection, hearsay.

THE COURT: Overruled. You can answer.

A Yes.

Q And did he - and as part of that deposition have you seen these exhibits and relied on them in your work in this case?

A Yes.

Q And do these exhibits discuss 3M's knowledge about what happens when the Bair Hugger is placed on the floor?

MR. BLACKWELL: Your Honor, improper foundation,

improper characterization.

THE COURT: Overruled, you may answer.

A Could you repeat that.

Q Sure. Do these emails reflect 3M's knowledge about what happens when doctors in an operating room put the Bair Hugger on the floor?

A Yes.

MR. EMISON: Your Honor, plaintiffs would offer Exhibits 1531, 1532, and 1533.

THE COURT: Do you want to come up?

(BENCH CONFERENCE.)

MR. BLACKWELL: First of all, Your Honor, Exhibit 1533 relates to a Model 7075. That's not even an issue in the case first off. Second, all that we heard were hearsay characterizations from this witness about what Dr. Ballard might say. Even Dr. Ballard doesn't establish foundation that this is a business record, spoken by somebody with knowledge, made in the ordinary course of business or somebody who's authorized to speak on behalf of the company.

It's just an email exchange of the sort we talked about a ton before we started the trial. And we discussed them at that time instead of just having them swung up in this way. But it's no different than the other emails that we talked about that weren't admitted. That's all, Your

Honor.

THE COURT: Response, Counsel?

MR. EMISON: Your Honor, these aren't hearsay. These are statements by 3M from the folks in the course and scope of their employment who are authorized to do so. Even if the Court were convinced it's hearsay, it goes to 3M's notice of the issue and their knowledge of the issue. So even if they could be properly excluded as hearsay which it shouldn't, it is properly admitted as 3M's notice of what happens when we put this device on the ground. And the evidence is that the 775 has a filter intake on the ground exactly like the 750.

MR. BLACKWELL: If I may. All three of these relate to the Model 7075. And but for Counsel's characterization that they are the same, there's no evidence to that at all in the record. And this is the first we've discussed the Model 7075 in the entire trial and then we're bringing it up in an email this way.

THE COURT: The objection is overruled. I'll announce to the jury.

(RETURN TO OPEN COURT.)

THE COURT: The objection is overruled. 1531, 1532, and 1533 are received.

Q And, Dr. Jarvis, this whole conversation started when Mr. Blackwell asked you on Friday what kind of medical device

manufacturer would design a medical device that would suck up water, right, that's how this started?

A Correct.

Q And so we've got these emails from 3M. And the first one is Exhibit 1531. And you see at the top that it's from a lady named Bet Key Wong?

A Yes.

Q And at the bottom I've highlighted what Ms. Wong's title was at 3M. What's her title there?

A She's a clinical specialist in the 3M Infection Prevention Division.

Q And there's a question. And I'll read the question and if you'd just tell me if I've read it correctly. The question to Ms. Wong is "Does the Bair Hugger need to be off the floor? I believe that is on the IFU but not stated in our competency. If it's not on rolling pipe or IV pole what should they do? What problems would that cause? I do understand the filter is at the bottom but there is some space between the floor and the filter." Did I read that correctly?

A Yes.

Q And in the spirit of the whole truth, this is about a Bair Hugger 775, is that right?

A Yes.

Q Do you have any knowledge or understanding as to whether the filter on the 750 is also at the bottom like it's

described on the 775 here?

MR. BLACKWELL: Objection, Your Honor, it's beyond the scope of expertise in infectious diseases. He's not an expert in models of Bair Huggers.

THE COURT: Come on up, guys.

(BENCH CONFERENCE.)

THE COURT: Counsel, what's your response?

MR. EMISON: He can see cause I'm going to show him the filter on the bottom in my next question.

THE COURT: The objection is sustained. When there is an objection I kind of need there to be a pause in the proceedings so just to let me figure out whether I can rule or not without additional information. The objection is sustained.

(RETURN TO OPEN COURT.)

Q DR. Jarvis, you've seen a Bair Hugger 750 before, right?

A Yes.

Q That's this right here?

A Yes.

Q Where is the air intake and filter on the Model 750?

A On the bottom.

Q So Ms. Wong sent this email on November 8th, 2014, at the top here?

A Yes.

Q And is that roughly two years or so before Ms. O'Haver's knee surgery?
A A little bit more.
Q Then if we look at Exhibit 1532, this is a response to Ms. Wong's email dated November 10th, a couple of days later?
A Yes.
Q And who is this from?
A Eric Engholm, who was the technical support services person.
Q In 3M's healthcare business?
A Correct.
Q And he wrote back to Bet that that "The Bair Hugger should be mounted to a roll cart instead of" and I think that should be a roll cart "or IV pole. They should not be on the ground. With the filter at the bottom of unit the Bair Hugger will act as a vacuum for anything that is on the floor, dirt, water, etc." Did I read that correctly?
A Yes.
Q And then a week or so after that that - if we could have Exhibit 1533, Chris. On November 20th, 2014, there's a response. Who's that response from?
A From Glenn Maharaj.
Q Chris, if we could see his signature block at the bottom. What's his role at 3M?
A He's a senior product engineer at the 3M Warming and

Infection Prevention Division.

Q And he writes that "I will say what our service rep Eric told the clinical specialist, Bet in the thread below is fully correct." Did I read that correctly?

A Yes.

Q So what Eric said about the Bair Hugger with the filter at the bottom acting as a vacuum for anything that's on the floor, dirt, water, etc., Mr. Majaraj who was the senior product engineer says that's fully correct, is that right?

A Yes.

Q But does 3M actually warn users not to put the Bair Hugger on the floor?

A No.

Q He says we recommend against putting the unit the 775 unit that they're talking about directly on the floor but, again, not the level of a caution warning or notice. They don't warn about that, just advice, is that correct?

A Correct.

Q Why is that important to you as an infectious disease doctor?

A Because I've repeatedly seen clinicians, particularly anesthesiologists don't understand this and they will put the device on the floor. In fact, Dr. Bible could not say whether he'd put it on the floor or an IV pole in this case.

Q If this device is on the floor sucking in dirt,

debris, water, blood, anything that's on the floor and if anything gets past the filter, what happens?

A It contaminates the air that's coming out of that device.

Q And this device has feet on here?

A Yes.

Q And those hold it up just a little bit to allow that room for that air to suck in and act as a vacuum?

A Correct.

Q I want to talk a little bit about when Kathy O'Haver got her deep joint PJI infection. You had some discussion with Mr. Blackwell about whether Kathy's deep joint infection started during the surgery in the operating room or whether it started several weeks later when she had some bleeding from that small top portion from her incision. Do you recall that?

A Yes.

Q And we're talking about the truth, the whole truth and nothing but the truth. The truth is you've concluded the Kathy's knee was infected during her new replacement surgery on November 29th, 2016, is that right?

A Correct.

Q And the whole truth is that even 3M's expert Dr. Anderson agrees with you that Kathy got her infection in the operating room?

A Correct.

Q And have you seen Dr. Anderson's testimony where he testified about that?

A Yes.

MR. EMISON: Judge, I don't have an exhibit for this demonstrative but if you want, I will put one on now or I will do it at a break.

THE COURT: Let's just go ahead since it's going to be referenced. The last one I have is 2210. Do you want to mark that as 2211?

MR. EMISON: Can I use 2212?

THE COURT: Sure.

THE COURT: Can I get a name for this please?

MR. EMISON: Anderson testimony.

Q Dr. Jarvis, so you understand Dr. Dev Anderson to be one of the experts that 3M has said that they're going to call to testify in this case?

A Yes.

Q And in Dr. Anderson's deposition he was asked "And in this case, in the O'Haver case it's your opinion that the inoculation" – does the inoculation mean the initial infection?

A Correct. The initial bugs getting to the source.

Q Okay. The inoculation is when the infection starts when the bugs first contaminate the body?

A Correct.

Q Let me start up over again understanding that. The

question was "And in this case, in the O'Haver case it's your opinion that the inoculation of the bacteria was during the surgery?"

And Dr. Anderson answered "Yes, from patient's endogenous flora."

The question was "In the operating room?"

And he says yes.

He didn't say yes. His answer was "In the operating room." Dr. Jarvis, can bacteria from our own bodies, our own endogenous flora can they be blown off our bodies by airborne disruption and become airborne contamination in the sterile field?

A Or even moving of the trace.

Q And in this case where the Bair Hugger is blowing air over the patient and creating thermal plumes in the operating room, is that something that just like those thermal plumes can pick up dirt and bacteria and particles off the floor, can those thermal plumes also pick up a patient's endogenous flora or bacteria from the patient's own body?

A Yes.

Q And that can transfer - that patient's own endogenous flora into the sterile field?

A Correct.

Q As we - we've heard about squames and how our bodies shed off millions and millions of squames and skin cells every hour of every day, is that right?

A That's right.
Q Are those squames, do those include our endogenous flora?
A All of us, yes.
Q And so if I have skin on my body right now that has my endogenous flora?
A Correct.
Q But if I'm shedding that endogenous flora off continuously, can that endogenous flora that was on me just a moment ago then be picked up by airflow currents or airflow disruptions even caused by the Bair Hugger?
A Yes.
Q Based upon what you've seen from the McGovern study and Dr. Elghobashi's study and other airflow disruption studies, can that disruption transport that endogenous flora in the operating room from the patient into the sterile field?
A Yes. It can be either exogenous and endogenous.
Q And so we talked about the truth and the whole true and talked about nothing but the truth. All of this conversation that we've had about whether or not Kathy's infection started with contamination in the operating room or whether it started two weeks later with the superficial opening of her incision, the whole truth and nothing but the truth is that 3M's own expert agrees with you?
A Indeed.

Q Mr. Blackwell showed you the timeline. I don't have a good digital copy. May we use the Elmo? I'm not sure who has to make that switch. Again, this is one of the defense exhibits that you were shown last Friday?

A Yes.

Q And while we're going through this, I just want to assume that what 3M has put up there, the position the 3M has taken is an accurate position. I'm not conceding that fact but for the purposes of these questions let's just assume that what 3M put up there is accurate.

Now the truth, talking about the truth, the whole truth and nothing but the truth. The truth is that Kathy was put on antibiotics on November 30th, the day after her surgery, her knee replacement surgery, right?

A Correct.

Q The whole truth is she was actually put on antibiotics even before that, right?

A Yes, prophylactic antibiotics, yes.

Q And she continued on these antibiotics while she had her slightly extended hospital stay when she was discharged on December 9th, right?

A Yes.

Q And then she went back into Dr. Ballard's office where her wound looked good and the staples were removed?

A Correct.

Q And then the next day on December 15th she did report bleeding and she called in. And what did Dr. Ballard's office do at that point?

A They ordered an antibiotic Keflex, an oral antibiotic to be taken three times a day for five days.

Q And so in this five-day timeframe between December 15th and December 19th, was Kathy on antibiotics?

A Every day.

Q And so the whole truth is that immediately after reporting that she was having bleeding from her incision, Kathy immediately started taking preventative antibiotics to prevent a superficial surface-type infection, is that right?

A Correct.

Q And then she went back into Dr. Ballard's office on December 19th and what did they do then?

A They extended their antibiotics for 10 more days and increased her dose from 500 milligrams three times a day to 500 milligrams four times a day.

Q So even if we believe what Mr. Blackwell said that Kathy's wound was open and gaping and exposed and wasn't properly bandaged or not properly cared for by her home health assistance people, when Dr. Ballard's office re-stitched that, did they identify any active signs of a superficial surface-type infection on December 19th?

A No.

Q And what did they do to prevent any kind of superficial surface-type infection at that point?

A That upper third of her wound they sutured with nine sutures.

Q And did she get more antibiotics?

A She still on from the November 30th antibiotics even then.

Q Even disregarding that she got antibiotics five days on the 15th, right?

A Right.

Q And then she got another 10 days prescription of antibiotics on the 19th?

A Correct.

Q And that would've taken her all the way out until roughly December 29th or December 30th?

A Correct.

Q And so if we're talking about in a period of nothing but the truth, as far as fighting a surface-type superficial infection, was Kathy on antibiotics for the vast majority of this entire time?

A It ended just the day before she had her second surgery.

Q And with that kind of regimen of antibiotics, what is the likelihood that Kathy even could have gotten a superficial surface-type infection?

A She had no evidence of it.

Q Is that likely or is that unlikely that she even could've gotten that type of superficial surgical site infection? A Very unlikely when she was on two drugs that were effective against gram-positive cocci.

Q And when you say very unlikely, if you were to weigh that out on a scale is that tipping the scales to unlikely just a little bit or is that tipping the scales a lot?

A A lot.

Q A lot. Did any of Kathy's medical records describe her infection as a superficial skin surface-type infection?

A None. Her orthopedic surgeon and infectious disease physician all said septic arthritis or deep joint infection.

Q Let's talk just so we understand this for certain. Let's talk about Kathy's incision and how it's open. When Kathy contacted Dr. Ballard when his staff put the stitches back in place, what part of her incision had opened and was bleeding?

A They describe it as the very top third.

Q And later on when it becomes much more serious at the end of December, where were those signs of infection noted? Were they in the top third of her infection where it had opened up and been exposed?

A No. After it was sutured it basically became fine. And then on the 27th is when they noticed - home health noticed that she was developing signs of infection down at the lower

third.

Q And on Friday we looked at exhibit. It was Exhibit 2208, Counsel, the one that showed the microscopic biofilm. May we see Exhibit 2208 please. And you've told us about how when a bacteria adheres itself to something artificial, whether that's the top part of the implant, the bottom part of the implant or the lining part of the implant, all of those are artificial to the human body, is that fair?

A Correct.

Q And so if these kinds of bacteria adhere to an artificial surface, this kind of biofilm can form, is that what we talked about on Friday?

A Yes.

Q And how long can this kind of biofilm protect that bacteria from antibiotics because there's no blood flow? How can the bacteria stay there protected by that biofilm?

A As long as it continues to grow.

Q And what happens when a part of that biofilm gets big enough that it breaks open and those bacteria get out?

A That specifically happens as they grow and grow. They then escape from that biofilm and circulate other areas.

Q And then when those bacteria break out of the biofilm and get into our tissue like in Kathy's knee, what's the body's response?

A Well white cells are going to get there and that's why

you've got the necrotic slough-type tissue that Dr. Collins removed during the IAD procedure.

Q And as part of the body's natural defense mechanism does fluid form and pus build and that kind of stuff happen in fighting that infection?

A Absolutely.

Q Does that create pressure inside our body?

A Yes.

Q What happens when that pressure increases inside our body and there's a weak spot on our skin like a recent surgical incision?

A Well pus tries to go the path of least resistance so it's coming up toward the incision. And when that wound opened up that's an escape route.

Q So based on that, how likely is it that the reason that Kathy's incision opened up was because part of that biofilm had burst open and her body was attempting to fight an active joint PJI infection that was causing pressure below her skin?

A Very likely.

Q And, again, weighing that on a scale, does that tip the scales just a little bit or does that tip the scales a lot?

A A lot and I think the treatment confirms that.

Q And when that bacteria breaks out of the biofilm, is it then exposed to the antibiotics that Kathy's getting to try and fight an infection?

A Yes.
Q And, with Kathy's immune system in conjunction with the antibiotics fighting bacteria, what's the likelihood that it knocks down the bacteria in her tissues?
A Very high.
Q And does that explain why on the timeline that her incision still looks good?
A Yes.
Q Because the bacteria or the infection is in the deep part of her body and not at the surface level?
A Correct.
Q So when part of this biofilm breaks open, does it release all of that bacteria or is some of the bacteria still protected by this film?
A No, it sends out little groups at a time.
Q So even though some of this opens up, is there other bacteria that remains protected by that biofilm?
A Yes.
Q And as those bacteria continue to grow, can they at some point down the road then erupt and get out into our bodies to cause those symptoms like tissue damage and fluid buildup and drainage?
A And fever.
Q And if we look back at this timeline, from the time that Kathy had her knee replacement surgery on November 29th

until she had the wound opened up was about two weeks or so give or take from November 29th to December 15th?

A Fifteen days, yes.

Q And then from the time that she had her wound re-stitched until the time that she had to go back in the hospital to have the irrigation and debridement surgery, was that about another two weeks?

A Yes.

Q It so if this pattern of taking two weeks for the bacteria to grow in the biofilm and erupt, that kinda makes sense?

A Yes, it does.

THE COURT: So we're going to go ahead and take our morning recess. Folks, we'll recess until 10:50.

(INSTRUCTION READ.)

We will get started 10:50.

(BREAK AT 10:32 AM.)

(RETURN AT 10:52 AM.)

THE COURT: We'll continue with the redirect. Dr. Jarvis, I'll remind you that you remain under oath. Counsel.

CONTINUED REDIRECT EXAMINATION BY MR. EMISON

Q Dr. Jarvis, on this part I kinda have to jump around a little bit and I apologize because it's hard keeping my thoughts

together as we go back and forth unlike on the direct examination. But staying on right now our discussion that we've been having about whether Kathy O'Haver's infection. We've been talking about whether it was inoculated, whether it got infected during the operation during the surgery and whether or not it's a deep joint infection versus some kind of superficial skin-type infection.

And we've talked about how even 3M's expert Dr. Anderson agrees that Kathy's inoculation, the initial infection happened in the operating room during the surgery. Now he's not the only expert that 3M has hired that agrees with you.

Dr. Mont also agrees with you that Kathy had a deep joint infection ...

MR. BLACKWELL: Your Honor, objection, this is leading.

THE COURT: Sustained.

Q Have you seen Dr. Mont's opinion about whether or not Kathy had a deep joint or superficial surgical infection?

A Yes.

Q And what does he say Kathy had?

A A surgical site infection.

Q And, Dr. Jarvis, does Exhibit 2213 reflect Dr. Mont's testimony where he said that in a deposition given in this case?

A Correct.

MR. EMISON: Your Honor, I'd ask to publish

Exhibit 2213.

THE COURT: Any objection to publishing 2213?

MR. BLACKWELL: No, Your Honor.

THE COURT: 2213 will be published. And can you give me a title for this, Counsel?

MR. EMISON: Mont M-O-N-T testimony.

Q And so, again, after Dr. Mont's deposition in this case, Dr. Jarvis, do you see where he was asked "Turning to Ms. O'Haver again, no question she had a deep joint infection from your report, right?"

He answered, "At the beginning I did have some questions about that because there was no bacteria organism that grew out, but I would concur, it was a deep joint infection." Did I read that correctly?

A Yes.

Q And so, again, all of this discussion that we've had for all this time on Friday and again today as to whether or not this was a deep joint infection or whether this was some kind of superficial-type infection, 3M agrees with you. 3M's experts at least, maybe not their lawyers, but their experts agree with you.

MR. BLACKWELL: Your Honor, same objection, leading.

THE COURT: Sustained.

Q Mr. Blackwell asked you and read a part of the

deposition that you gave when he was doing your cross-examination this morning. Do you recall that?

A Yes.

Q The deposition that he read from was taken back in February of 2019?

A I believe so, yes.

Q And here's the deposition that he was reading from. That deposition did not involve Kathy O'Haver, did it?

A Correct.

Q This isn't the only case against 3M?

MR. BLACKWELL: Objection, Your Honor. May I approach?

THE COURT: You may.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, this is blatantly violating a motion in limine that was completely gratuitous. It was unnecessary, unduly prejudicial and I think grounds to request a mistrial. He's trying to interject in this that there are other cases and other lawsuits. It wasn't necessary for my impeachment question. He went over there deliberately with this witness, knows there's a motion in limine that precludes that. I didn't open the door. He just had it deliberately and I think it's grounds for a mistrial.

MR. EMISON: He opened the door. He said it

didn't involve Ms. O'Haver.

THE COURT: There was absolutely no testimony that this deposition involved any type of lawsuit or anything like that. It was deposition testimony that was in violation of the motion in limine. I mean I'll deny it but before you make any mention of any other lawsuit, you need to approach and clarify because if it happens again and there's a request for a mistrial, the Court will consider it.

MR. EMISON: Understood.

(RETURN TO OPEN COURT.)

Q Now you and I, Dr, Jarvis, talked about the McGovern study last Friday. And Mr. Blackwell with 3M also talked with you about the McGovern study. Do you recall that?

A Yes.

Q And because this was several days ago, the McGovern study was the one that looked at the neutrally buoyant bubbles. We talked about that study with that neutrally buoyant bubbles and then looked at the actual risk of infection that showed 95 and a half percent confidence of the 380 percent increased risk of infection.

A Correct.

Q And so that's the truth part of it. That's what we talked about, right?

A Correct.

Q Now the whole truth is and we talked about this; that the authors did not exclude other contributing factors like a change in antibiotics in a hospital to data they were looking at because this was an epidemiological study?

A Correct.

Q And you and I talked about that, right?

A Right.

Q And, Mr. Blackwell talked about that with you, right?

A Correct.

Q And if we're going past that looking at about the truth, the whole truth and if we're looking at nothing but the truth, is there any epidemiological study that has ever had a history of or had a conclusion on causation?

A As to causal, no.

Q And have you based that conclusion at least in part on Al Van Duren's testimony?

MR. BLACKWELL: Objection, leading.

THE COURT: Sustained.

Q What have you based that conclusion on?

A The conclusion of?

Q That there's no epidemiological study that has ever shown causation in its conclusions?

A The reading of the medical literature.

Q Have you also - what other things have you reviewed and relied on for that conclusion?

A 3M's testimony and depositions.

Q Dr. Jarvis, let me come back to that in just a second. Before I do that, this is a portion of that testimony that's been marked as 2214. Before I show that to the jury can you just read that yourself and let me know if this is part of what you relied on in forming that conclusion?

A Yes.

MR. EMISON: Your Honor, I'd like to offer Exhibit 2214.

THE COURT: Any objection?

MR. BLACKWELL: Just for demonstrative, Your Honor.

THE COURT: May I have a title for this, Mr. Emison?

MR. EMISON: Van Duren testimony.

Q And Dr. Jarvis, I'm trying to hold it so everybody can see it. Actually, do we have this? Maybe not. Never mind.

Anyway, this is from Al Van Duren's January 25th, 2022 deposition, do you see that there?

A Yes.

Q And talking about the McGovern article?

A Yes.

Q And then following up on that one page later at page 90, line 6 where he asked - he said that they observed some

stuff in a before and after study.

And the question is which is "What epidemiology studies are?"

And Mr. Van Duren answers "Many of them, yes."

"Question: Epidemiology studies never actually have a conclusion on causation, right? It's an association, right?

Answer: I believe that's correct, yes."

And so regardless of any epidemiological studies they always have associations and not conclusions, is that fair?

A Right.

Q How strong was the association in the McGovern study?

A Very strong.

Q 97 and half percent confidence?

A Correct.

Q And so how likely is it that they're right about that association that they reported?

A Very strong.

Q And if they're, again, illustrating that on a scale, is that tipping the scales a little bit or is that tipping the scales a whole lot?

A No. .05 would be maybe - even there it's 95 percent confidence and this is higher than that.

Q That's tipping the scales a whole lot?

A Exactly.

Q Dr. Jarvis, in the years from when the McGovern study

was published in 2011 all the way till today towards the end in the fall of 2022, are you aware of any study that 3M has conducted to refute what McGovern found?

A No.

Q You were asked a lot of questions on Friday and again this morning about the International Consensus or ICOS, is that right?

A Yes.

Q Does ICOS author any studies?

A No. The individuals do but ICOS itself has not published any studies.

Q Dr. Jarvis, I'm going to hand you what I've marked as Exhibit 1696. Could you tell us what that is?

A I believe this is the 2018 - I'm trying to find the date - the proceedings of the Second International Consensus Meeting on Muscular and Skeletal Infection. So, basically, an ICOS meeting and I believe this is 2018.

Q And so is this the same document essentially in a different format than what Mr. Blackwell's 3M employer showed you?

A Correct.

Q And if you'll turn to the second page.

MR. EMISON: Actually, Your Honor, I would offer Exhibit 1696 and ask to publish it to the jury please?

MR. BLACKWELL: No objection for demonstrative

purposes.

THE COURT: Can you guys come up.

(BENCH CONFERENCE.)

THE COURT: So 1696 was used in testimony. I have a concern about offering it just for purposes of publishing it to the jury.

MR. EMISON: Yes.

THE COURT: So I think we need to be clear when we make those statements to jury as they're taking notes and tracking what we're doing. So you're only offering it for the purpose of publishing it for demonstrative purposes, correct?

MR. EMISON: Yes.

THE COURT: So if you would like me to clarify that, I'll do it.

(RETURN TO OPEN COURT.)

THE COURT: 1696 may be published for demonstrative purposes.

MR. EMISON: Thank you, Your Honor.

Q And, again, on the second page we can see that this is the 2018 version by the copyright at the top?

A Correct.

Q And then I'm going to read a sentence and ask you if I read that correctly. It says "It is certainly possible that key studies have been overlooked, some points may be emphasized more

than other points and each section may suffer from potential individual biases." Did I read that correctly?

A Yes.

Q So is the ICOS consensus necessarily evidence-based or can it allow opinion to carry weight?

A I think it's a strong opinion.

Q Dr. Jarvis, I'm going to show you what's been marked as Exhibit 1749A that is already in evidence. This is a document from Michelle Hulse Stevens, the Medical Director of 3M Infection Prevention Division. And she wrote that "Keep in mind a consensus document is not necessarily evidence-based, it allows opinion to carry weight." Is that consistent with your understanding?

A Yes.

Q She also wrote "There is amazing concern about any particulates in the air during joint replacement surgery an almost uniform comment that forced air warming increases particulates in the air." Is that consistent with your understanding as well?

A Yes.

Q And that orthopedic surgeons acquaint particulates with bacteria in the air and cite to studies that support that. Also consistent with your understanding?

A Yes.

Q Now when the folks who are involved with ICOS were

taking this poll, making these votes that could allow opinion to carry the day and not necessarily evidence or that might exclude evidence, do you know if they had access to 3M's internal documents like you had access to?

A I don't believe they did.

Q In fact, does the consensus paper include footnotes to all of the resources?

MR. BLACKWELL: Objection, Your Honor, leading.

THE COURT: Sustained.

Q How do you know that?

A Well they don't say in there in terms of a reference or footnote or any type of documentation indicating that they had such access.

Q I'm going to refer you to Exhibit 3501 that you were shown earlier today? Can you read that page?

A "The page of the references that are used for the statement preceding it."

Q And so throughout this document just looking at this first page are there footnotes referenced throughout here referring to the references on the back?

A Yes.

Q Have you seen any references in the International Consensus Statement document referring to any internal 3M documents?

A No.

Q And, in fact, what we read earlier says, again, that possible case studies may have been overlooked?

A Correct.

Q Let me hand you what has been marked as Exhibit 100. Can you tell us what Exhibit 100 is?

A This is a case report General Infection Control and Hospital Epidemiology that I was an editor of at one point.

Q Is this a document that you have reviewed and relied on in support of your conclusions as part of your work in this case?

A Yes.

MR. EMISON: And, Your Honor, I would offer Exhibit 100 for publication purposes only.

MR. BLACKWELL: Just one moment, Your Honor, so I can see what it is.

THE COURT: Sure.

MR. BLACKWELL: No objection to 100 for demonstration purposes only.

THE COURT: Number 100 may be published for demonstrative purposes.

Q Dr. Jarvis, my copy is different than yours. And talking about papers that may have been missed, did you see this paper cited in the International Consensus document that you were shown?

A I don't believe so.

Q What is this paper? What's it called?
A Persistent Acinetobacter Baumannii? Look Inside Your Medical Equipment.
Q And in the abstract it describes two outbreaks of multi-drug resistant - I'm going to have you pronounce that.
A Acinetobacter baumannii.
Q Thank you. Occurring in our hospitals. And then at the bottom, "Removing dust from the machine and replacing all dust filters throughout the outbreaks." Generally, what's your understanding of what this article talks about?
A Two clusters of infection, primarily respiratory infections like pneumonia of patients in their medical ICUs. And when they did an outbreak investigation they traced it to the forced air warmer Bair Hugger that they were using. They then took the device that you see here and removed the filter and changed the filter and cleaned the inside of the machine. And when they get the outbreak for the transmission of the Acinetobacter baumannii stopped.
Q And they talk about this on the next page where it says, "In the first outbreak the strain involved was found in the interior of a ventilator and out of the Bair Hugger. After removal of dust inside all ventilators and replacement of the filters in the Bair Hugger the outbreak strain was no longer isolated from patients." Did I read that correctly?
A Yes.

Q And then they go down further and it says, "The Bair Hugger is designed to create an airflow. Dust is sucked into the machine with filters becoming contaminated and possibly serving as a secondary source of transmission. It was not known how long the filters had been in place and there was no protocol for regular replacement of those filters. We believe the outbreak strain was transmitted by being carried on contaminated dust from within the machine to the exterior during operation when fan created an air current." Did I read that correctly?

A Yes.

Q Why is that important to your opinion?

A I think it was the same mechanism that occurred in Ms. O'Haver's surgery.

Q And we talked about it, how in 2014 3M knew that the Bair Hugger shouldn't be on the floor because it could suck in dirt, water, etc., right?

A Right.

Q And this was about a 775?

A Right.

Q And you're familiar with what a Bair Hugger 775 looks like, right?

A Right.

Q And we have this Exhibit 2215. What model Bair Hugger is this?

A 775.

Q And where is the filter on the 775?
A On the bottom.
Q And does it have little small legs on it?
A Yes.
Q And, again, on the 750, where the filter on a 750?
A Same place.
Q And the same little small legs on it?
A Correct.
Q This talks about the chairman of the International Consensus. One of those was Dr. Parvizi. Do you see that there? A Yes.
Q Is Dr. Parvizi a safety consultant for 3M?
A Yes.
Q And so when this talks about how there may be that each section may suffer from potential individual biases. One of those devices could be some money paid by 3M?
A Absolutely.
Q It could be lawyers writing to experts in this case?
MR. BLACKWELL: Objection, Your Honor, he's leading and calling for speculation as to his expertise.
THE COURT: Sustained.
Q When you reviewed - well, never mind. I'll hurry this along. Mr. Blackwell talked with you quite a bit about - I do want to ask you one thing and I apologize for jumping around.

MR. EMISON: Your Honor, I'd ask to publish Defense Exhibit 4000-39 as part of the slides that 3M showed in its opening statement.

THE COURT: Any objection?

MR. BLACKWELL: No objection for demonstration, Your Honor.

Q Dr. Jarvis, do you understand this list of studies to be studies that 3M relies on for its position in this case?

A Yes.

Q I'd like to ask you just briefly about this. I know we've talked mostly about what 3M does knows, but I do want to talk about some of the other studies they relied on. On Hall, what are some general criticisms that folks have about the Hall study?

A It's a poster presentation in 1991. And here in 2022 it's still not been published. So you would've thought they would've published it.

Q How many patients or subjects did that involve?

A As I recall, 20 or less.

Q And did it involve an orthopedic surgery?

A I don't think so.

Q Maybe a dental surgery?

A Yeah, oral maxillary surgery.

Q And the Zink study, how many patients did that involve?

A Patients, none, eight volunteers.
Q So the total universe of folks they were looking at was just eight?
A Correct, volunteers who went and laid on an operating room table, had a lower body Bair Hugger so not the upper body Bair Hugger that we're talking about here. And people were coming in and out the room dressed like we're dressed, not in surgical attire. Then they cultured the air around the room and I mean around the room, in other words, in the corners of the room.
Q In the Dirkes study, number three, was that Bair Hugger even turned on to warm?
A No, as I recall that one wasn't on.
Q And, in Avidan study next, what did that study actually find about growing bacteria on the agar plates?
A They did a number of cultures of the inside of the unit as well as the hose and found a considerable number of them were culture positive.
Q And, for example, experiment one, even 40 percent?
A Correct.
Q In the Tumia study I think you've referenced earlier today, what was important about that?
A On that one they actually provided results, again, culturing of four patients. And if you look at the colony count and they looked at CFD you'll see that - and you looked at when

the machine was off versus the Bair Hugger turned on, the colony counts in every one of them increased and sometimes substantially like 200 percent, 50 percent.

Q So in this Tumia study that 3M's relying on it actually showed that the CFD, those are actually bacteria counts increased when the Bair Hugger was used?

A In all the patients, yes.

Q Talking about the Huang study. How many patients did that involve?

A I think that had like 40 patients.

Q Does 16 sound more familiar?

A Maybe 16.

Q Is a vascular surgery?

Q Yes.

Q Not an orthopedic surgery?

A No.

Q And, Moretti. In the three points that Moretti looked at did the actual average bacteria load increase or decrease when the Bair Hugger was used?

A Increased.

Q The Occhipinti, what's that?

A That's the dog study we were talking about earlier. That's a veterinary clinic that did a study of swabbing basically the drape I presume in dog surgeries. In that one they actually found four-positive with the Bair Hugger used

versus two when it wasn't.

Q We're talking about the truth, the whole truth and nothing but the truth, several of these studies showed increased bacteria when the Bair Hugger was used. And this one involves small animal veterinary patients, not even people?

A Right.

Q And, Oguz on agar plates 1, 2, 3, and 4, did that show an increase of bacteria when the Bair Hugger was used or a decrease?

A An increase. And this would've been procedures all of which were less than an hour and only one patient had an implant. There were no infections.

Q Now going back to some of the work that you did in Tennessee that you talked with Mr. Blackwell about on Friday. You talked a lot about what factors you looked at as part of that investigation, is that fair?

A Indeed.

Q Now did all of those factors that you considered turn out to be significant factors in identifying the cause of that outbreak?

A Almost none of them did, two did.

Q Is that the point? Is that why you go and do an investigation like you did there and like the one that we did with Ms. O'Haver to identify the important factors?

A To some extent, yes. Part of it also was this was

going to impact the surgeon's life. So both hospital epidemiologist and the hospital and those of us involved in the investigation wanted to make sure that we did everything possible to find what the true answer was.

Q And, Mr. Blackwell talked with you about a continuous passive motion machine that was involved in part of that outbreak?

A Correct.

Q And, Ms. O'Haver also used a continuous passive motion machine as part of her rehabilitation therapy after she had her knee replacement, is that correct?

A Correct.

Q What did you conclude about the continuous passive movement machine in your Tennessee investigation?

A It was not found statistically significant.

Q And, Dr. Jarvis, was the Bair Hugger used in any of the surgeries that you investigated in Tennessee as part of that outbreak?

A No.

Q Dr. Jarvis, are you aware of any epidemiological study that finds there is not a correlation between forced air warming and deep joint infections?

A No.

Q Have you seen deposition testimony in this case that supports your conclusion?

A Yes.

MR. EMISON: Your Honor, may we play Clip 92?

MR. BLACKWELL: May I inquire?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: I'd just inquire as to what it is.

MR. EMISON: It's on our list that we sent you last week.

MR. BLACKWELL: But what is it?

MR. EMISON: Clip 92 is a question to Al Van Duren testifying as 3M's corporate representative. Is 3M aware of any epidemiological study that states there's no correlation between forced air warming and deep joint infections? He answers I don't believe so.

MR. BLACKWELL: It's fair game.

MR. EMISON: Yeah. I'm also going to ask for this one.

MR. BLACKWELL: Okay.

MR. EMISON: And this one.

THE COURT: Okay.

(RETURN TO OPEN COURT.)

THE COURT: Counsel, you may play Clip 92.

(CLIP NO. 92 WAS PLAYED.)

Q Dr. Jarvis, are you aware of any study that finds the

Bair Hugger does not increase the bacterial load over the surgical site?

A No.

Q Have you seen deposition testimony in this case that supports that conclusion?

A Yes.

MR. EMISON: Your Honor, we'd ask to play Clip 93.

MR. BLACKWELL: No objection.

THE COURT: 93 may be played.

(CLIP NO. 93 WAS PLAYED.)

Q And, Dr. Jarvis, are you aware of any study that concludes the Bair Hugger does not increase the risk for deep joint infection in hip and knee implants?

A No.

Q Have you seen deposition testimony this case that supports that conclusion?

A Yes.

MR. EMISON: Your Honor, we'd ask to play Clip 93 please. I'm sorry, 94 please. It's the one I showed you.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: 94 may be played.

(CLIP NO. 94 WAS PLAYED.)

Q Dr. Jarvis, in this case focusing again on Kathy O'Haver, how likely is it that the Bair Hugger contributed to

cause the infection in Kathy's knee that caused her deep knee joint infection?

A Very likely.

Q And, again, tipping the scales on that issue of how likely that it was the Bair Hugger that contributed to cause that infection is that tipping the scales a little or tipping the scales a lot?

A A lot.

MR. EMISON: Thank you. I pass the witness, Your Honor.

THE COURT: Re-cross.

MR. BLACKWELL: Yes, Your Honor.

RECROSS EXAMINATION BY MR. BLACKWELL

Q Dr. Jarvis, we may be talking for the last time. I don't know that I've heard my name so much. Let me start though with trying to sort out a few things with you because with Mr. Emison you discussed with the jury - I'm showing Trial Exhibit 0100 Your Honor that we just discussed with Mr. Emison. You discussed this particular document with the jury. Do you remember that?

A Yes.

Q And the jurors may have gotten the impression that this study on Acinetobacter baumannii - is that how you pronounce it?

A Acinetobacter.

Q Yes. That this somehow was an outbreak that was related to the Bair Hugger. Now you know that there was no finding in this study that there was an outbreak related to the Bair Hugger, isn't that the fact?

A No.

Q Let's read together what it says in abstract. "Two outbreaks of the multi-drug-resistant bacteria that occurred in the hospital. The outbreak strains were eventually located from respiratory ventilators, an apparatus used to cool and warm patients and for continuous VINO VIUS filtration machines. Removing dust from machines and replacing all dust filters brought outbreaks to an end." I read that accurately, didn't I?

A Not quite but close.

Q Close enough. Now when I was asking you about studies on Friday that would have shown that there was somehow a bacteria coming out of the Bair Hugger that would cause an infection you told me repeatedly you didn't know any on Friday. Now over the weekend you met with these lawyers and now you are coming and talking about this one. Did you forget about this when we discussed it on Friday?

A We didn't discuss that.

Q I asked you for anything on Friday, didn't I? If you had any studies at all? Isn't that what I asked you on Friday?

A Yes.

Q And if we look at this and you can go through it. You have in front of you and see if anywhere in that study, the study offered in this case where there was an outbreak in the hospital due to bacteria that was emitted from the blanket of a Bair Hugger patient warming unit?

A Repeat that please. What did they say what?

Q What did they say that there was an outbreak in the hospital of this particular bacteria due to bacteria being emitted from the pores of a Bair Hugger patient warming blanket?

A Well they say in the first outbreak the strain was found in the interior of a ventilator and of the Bair Hugger. After removal of the dust inside all ventilators and replacement of the filters in the Bair Hugger the outbreak strain was no longer isolated from patients.

Q Dr. Jarvis, I'm going to repeat my question. Is there anywhere in that study where there was a finding that there was an outbreak in the hospital due to bacteria being emitted from the pores of a Bair Hugger patient warming blanket, yes or no?

A It certainly is implied in the last paragraph on that page, yes.

Q Dr. Jarvis, doesn't this study simply indicate when they went in and swabbed the inside of the Bair Hugger they found bacteria inside the Bair Hugger unit but wasn't there the next finding saying that there was bacteria emitted from the patient warming blanket? Is that said in that study?

A That specific wording, no.
Q That's the specific concept. Is there a concept that there was bacteria being spewed out of the Bair Hugger patient warming blanket in that study?
A That's what they say, yes.
Q Where?
A They say the second outbreak of the strain involved was isolated from the dust inside of the CVVH machines which have been used on all of these patients ...
Q Dr. Jarvis, the CVVH machine is not a Bair Hugger, is it?
A That one's not, no.
Q What's a CVVH machine?
A Chemo dialysis machine.
Q And it says here that the strains were isolated to the ventilators?
A And, the Bair Hugger.
Q And what you found was - they found was that any bacteria coming through the Bair Hugger was picked up, it was trapped in the filter and in the machine but there wasn't a finding that any bacteria was actually emitted from the blanket of the Bair Hugger?
A They did not test that, no.
Q And you know from having - and you read the Avidan study? You talked to the jury just now about it.

A Yes.

Q And we're going to come to it in a minute. But you know in Avidan they went through Q-tips and swabbed and said look, we found bacteria inside the unit. But in Avidan they said, once we attached the blanket and turned it on we couldn't get any bacteria out of the blanket that we could culture.

A Two times, yes.

Q Wasn't that the finding of Avidan? They found some in the machine but they could get anything to come out of the machine so that they could culture this bacteria, true?

A In two cases.

Q If you knew that about Avidan when you talked to the jury just now about Avidan, when didn't you tell them that? You talked to the jury about them finding bacteria in the machine but you didn't take the next step and tell the jury that when it was tested whether they got any bacteria coming out of that machine using agar plates again, they could never culture any bacteria because that's the truth in Avidan, isn't it?

A In two cases and we've talked about that several times.

Q Sure. It isn't like that there were four more cases where they found bacteria. And the only cases where they actually tested the question they couldn't culture or grow any bacteria, right?

A In two cases, yes.

Q Now I wanted to talk with you about this board because this is been shown to the jury repeatedly that 3M somehow has knowledge that there is evidence. Do you remember us discussing what is marked as Plaintiff's Exhibit 225? You just discussed it with Mr. Emison. You remember, don't you?

A I do.

Q And what he wants to point out or you want to discuss with them over here, actually there is some evidence. And this evidence was the work that Dr. Memarzadeh did. Do you see that in the comment?

A Yes.

Q So the jury sees it too. And so this has come up repeatedly. Now given that you read in the International Consensus from 2018 you absolutely know, don't you, sir, what the work was of Dr. Memarzadeh. You know what Dr. Memarzadeh found, don't you?

A I vaguely remember him doing something, yes.

Q Now you can't specifically remember these nine articles that Mr. Emison just talked to you about but you vaguely remember Dr. Memarzadeh, is that what you're saying?

A Yes.

Q Let's look back again at the International Consensus Exhibit 3501. "Actually, there is evidence that forced air warming use increases risk. This evidence was the motivation for Dr. Memarzadeh's work." What that International Consensus

is here discussing was what was Dr. Memarzadeh's work and what did he actually find. Not a soundbite, a snippet, a comment but what did he actually find. And here they said, speaking of Dr. Memarzadeh, "Memarzadah reported computational fluid dynamics and particle tracking studies conducted by the National Institutes of Health to assess whether forced air warming devices led to contamination of the surgical site. They found no squame deposition from potential contamination sources due to the forced air warming device in laminar flow theatre situations in their models."

So Memarzadah heard the question that was asked. He did research on the question that was asked and these are his findings. That there was no increase he found in squame deposition from potential contaminate sources due to the forced air warming device and laminar flow theatre situations in their models.

Dr. Memarzadeh was a researcher for the National Institutes of Health, wasn't he?

A Yes.

Q And he after obtaining these findings from his own computational fluid dynamic models he made his findings public, didn't he?

A In what way do you mean?

Q As in we know about them because he put it out there in the literature?

A Right.

Q And you would agree with me that Dr. Memarzadeh's findings on behalf of the National Institutes of Health contradict Dr. Elghobashi, don't they?

A They do.

Q And would you agree with me too that when Dr. Memarzadeh did his study and got his findings he was not doing that as a paid consultant for lawyers and litigation, was he?

A I don't know whether that was the case or not. His publication is one page compares to Dr. Elghobachi's multiple page document ...

Q Dr. Jarvis - Dr. Jarvis.

THE COURT: Okay, hold on. So Dr. Jarvis, I need you to listen carefully to the question that is asked and only answer that question. We also cannot have two people talking at the same time. So if Mr. Blackwell interrupts you, please stop talking and allow him then to ask his next question. Okay? Thank you.

Q My question being that Dr. Memarzadeh in his study he was doing it as a researcher for the National Institutes of Health, that's true, isn't it?

A He was at NIH at that time, yes.

Q Now you had answered a series of questions with Mr. Emison that went something like the Bair Hugger's on the floor and it's sucking up dirt; it's sucking up water; it's sucking up

all kinds of things off the floor. I want to see if we know if that is really relevant to this case or it's just trying to tell an ugly story about the Bair Hugger. So I'd like to talk with you about it.

Now I think we have here a photograph of operating room number eight.

MR. BLACKWELL: Your Honor, may I approach?

THE COURT: You may.

Q I'm showing you what's marked as Exhibit 4000-29.

MR. BLACKWELL: I need to publish it to the jury.

MR. EMISON: And have a question, Your Honor. May I approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. EMISON: He needs to lay a foundation with this. I don't believe Dr. Jarvis has ever seen this photograph he was talking about. So I don't think it's appropriate to use this photograph with him.

MR. BLACKWELL: Your Honor, I'm going to ask him to assume for purposes of my question that this is operating room number eight from this hospital. I'm going to ask him a question about the placement of the Bair Hugger. It's not based upon that's he's been to the OR where everything was at the time. It's demonstrative.

THE COURT: The objection is overruled. Counsel,

you may publish.

MR. BLACKWELL: Thank you, Your Honor.

(RETURN TO OPEN COURT.)

Q I'll represent to you that this is a picture of operating room number eight, the operating room where Ms. O'Haver had her surgery. I'll also represent you it is after that time of her surgery, this the operating room.

I want you to look in the left corner where you'll see a Bair Hugger. Do you recognize that as a Bair Hugger?

A It looks like it.

Q Now this is operating room number eight. And is the Bair Hugger there on an IV pole or not?

A In that picture it is.

Q Now when you were talking to the jury about the Bair Hugger being on the floor and sucking up water and dirt and everything else, isn't it a fact that as this relates to Ms. O'Haver you don't have any idea as to whether the Bair Hugger was on this IV pole like you see here or whether it was on the floor? You don't know, do you?

A Both Dr. Ballard and Dr. Bible both testified they didn't remember.

Q Dr. Jarvis, I'm asking you to testify about what you know. You don't know when you're engaged in this discussion with Mr. Emison that the Bair Hugger is on an IV pole like you see in operating room number eight or if it was on the floor.

You don't know one way or the other, do you?

A Correct.

Q Now you spent ...

A I would point out though it's not the sterile field. It's just below the table.

Q There's no question pending. Now you spoke with Mr. Emison about the instructions for use of the Bair Hugger and what was or wasn't in them. Could you tell the ladies and gentlemen of the jury what the process is for even turning on the Bair Hugger and using it?

A How do you turn it on?

Q Well, what are you supposed to do? What are the steps?

A I would not be able to go through all the steps but I'm presuming you plug it in and press the on button.

Q How do you get it up to temperature? How long does it take?

A I don't know the exact answer to that, not very long. It's usually put on during the pre-anesthesia and it's ready go by the time the procedure is being done. That usually less than 15 minutes.

Q Now Dr. Jarvis, I've heard the expression, how long, not long. But if I'm asking you how many minutes does it take to get up to temperature, since you talked to Mr. Emison about having read the instructions, do you even know the instructions

for how to use it and get the temperature up and how long it takes?

A No, I didn't memorize it.

Q Now you spent I think a bit of time discussing the McGovern study. I wanted to raise again a couple of things related to McGovern. If we could go back to Exhibit 3501. If we could go page 2 of 12. For you also, Dr. Jarvis. If you could go to Exhibit 3501. This is the 2018 consensus statement. If you were to look at page 2 of 12 in the right column in the last paragraph we have here discussion of McGovern. If you could highlight where it starts with McGovern down to the word Legg L-E-G-G which is about seven lines from the bottom.

So here's what the International Consensus found with respect to the McGovern study. I'm going to see if we can clear this up.

"McGovern et al. compared forced air warming and conducted fabric warming devices in a simulation of hip and spine surgery with a mannequin used as a patient. They used bubbles generated at the floor and at the mannequin's head to monitor flow of air in the simulated theater and detected significantly increased bubbles close to the surgical field with the use of the forced air warming devices. They also conducted a clinical review of their infection data between a 20-month period where forced air warming devices were used versus a seven-month period where conductive fabric warming devices were used and found a

statistically higher rate of deep surgical site infections with the use of forced air warming device.

The authors noted, however, that their observational study did not account for infection control procedures that changed over the study period or account for several possible differences in patient risk factors such as obesity and fitness for surgery. Other studies of the same cohorts by these researchers revealed potential impact unrelated to the change in warming modality, including thromboprophylaxis and methicillin sensitive staphylococcus aureus screening." Did I read that accurately?

A Yes.

Q But there's more about this because you have read the deposition testimony of another one of the researchers involved in the McGovern study, Mr. Albrecht. Haven't you read the deposition testimony of Mr. Albrecht?

A I believe.

Q Who was he also involved in this. There was in the McGovern study there was a five-month time period over the whole stand - there was a five-month time period where the same antibiotics and the same anti-thrombal embolism or the same drugs were used as were used with the comparative time period.

So there was a period of time where there was apples to apples. And you know from having read his deposition where we asked of Mr. Albrecht that if he had compared the five-month

period when everything was exactly the same, Mr. Albrecht was clear that there would not have been a significant difference at all between the Bair Hugger and the conductive fabric warming if you looked at the time periods where they used exactly the same thing. He said "They would not be significantly different. I don't need to run an analysis to figure that part out."

If you compare apples to apples he said that the results would have been the same, not a 380 percent difference. Do you recall Mr. Albrecht discussing that?

A Yes.

Q Well if you remember that from Mr. Albrecht while they were up talking about 380 percent difference, why didn't you tell that to the jury, that I happen to know more, that there was another researcher involved in this that for a five-month period that everything was same, there's no difference between the two. And I, Dr. Jarvis know that. Why didn't you tell that to the jury?

A Because it wasn't significant.

Q Thank you. I think you discussed with Mr. Emison the backdrop for the International Consensus. And I think you were discussing it as something that allows for some great degree of simply offering those opinions. And I wanted to go back to Plaintiff's Exhibit 1696 with Dr. Parvizi, the International Consensus one. I at least want to make sure that you and I have discussed this so that the jury understands.

If we could go the next page. Would you highlight the first sentence? It reads "This document on the prevention, diagnosis and treatment of orthopedic infections is compiled as a result of work of over 800 individuals from around the globe."

Now if you would highlight the very last sentence of the first paragraph. "Nevertheless, the responses to each question have been scholarly researched, evaluated by the majority of the delegates and discussed and voted on during the face-to-face meeting in Philadelphia."

Do you disagree that the responses to the questions that were posed by the International Consensus organization have been scholarly researched and evaluated by a majority of the delegates and discussed and voted on in their scholarly research?

A I'm not sure exactly what that means. Have they read all of the papers that are in the reference? I doubt it.

Q So you don't know - I'm sorry, were you finished.

A Yes.

Q So you can't tell the jury if you agree or disagree whether the responses to these questions have been scholarly researched, is that what you're saying?

A Yes.

Q If we could go to page IV. If you'd go to step one. So here it says step one, the very first step. "This step aimed to gather the experts from around the globe with no country

overlooked who could lend an expertise to the consensus process.

The delegates were identified based on their publication, track record in the field. They had to have at least five publications within the last five years, specialty society nominations for their clinical expertise that is a high-volume in taking care patients with orthopedic infections.

The search identified 953 delegates who were sent invitations. Some of the delegates did not respond to the invitation or declined to participate leaving a 869 potential delegates to participate."

Is that your understanding of how the International Consensus organization went about obtaining its delegates?

A That's what it says, yes.

Q Now there's been a lot of discussion, not a lot but there's been references to who the sponsors were. If you'd turn to IX, there's a page of a great many co-organizers. Do you see a co-organizer's section here? Do you see that?

A I do.

Q Do you see a list of diamond sponsors? Do you see that?

A I do.

Q Do you see platinum sponsors?

A Yes.

Q Do you see gold sponsors?

A Yes.

Q Do you see silver sponsors?
A Yes.
Q Do you see bronze sponsors?
A Yes.
Q Do you see just sponsors?
A What was the last one?
Q Sponsors?
A Yes.
Q And the sponsors go on for several pages, wouldn't you agree?
A Yes.
Q And in terms of the delegates, who they were, there are delegates from all over the world in that national consensus. You see countries tht go from Afghanistan to Canada, from Georgia to Italy, from Japan to Oman, from Pakistan to Spain, Sudan to the United Kingdom, countries from all over the world were represented in the 800+ delegates, did you see that?
A I did.
Q To come up with what was an International Consensus. I wanted to - just one moment, Your Honor. You told the jury that no epidemiological study has shown or followed causation in its conclusion. Do you remember discussing that?
A Yes.
Q Are you telling the jury that there aren't epidemiological studies on the relationship between, for

example, cigarette smoking and lung cancer that find causation?

A There is an association.

Q That wasn't my question, Dr. Jarvis. Are you telling the jury that there are not, for example, epidemiological studies on the relationship between cigarette smoking and lung cancer that find causation?

A I don't know that they say it's a direct causal or a definitive link as in the papers that we saw.

Q To try to make it clear, can you answer my question with an either yes or a no or I don't know?

A No.

Q You can't answer my question that way?

A No, there's not a paper that's a causal on smoking.

Q That is in any epidemiological study on the relationship between cigarette smoking and lung cancer that finds causation, that's your opinion?

A It lists it directly causal.

Q I'm searching the papers. I think I'm about to sit down. Dr. Jarvis, thank you for your time.

MR. BLACKWELL: That's all, Your Honor.

THE COURT: Dr. Jarvis, you may step down. May this witness be excused by the plaintiff?

MR. EMISON: He may, Your Honor.

THE COURT: By the defendant?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: Thank you, Dr. Jarvis. Counsel for the plaintiff you may call your next witness.

MR. EMISON: Plaintiff is going to call Dr. Yadin David and Mr. Farrar is going to conduct that examination.

MR. FARRAR: Judge, may we have approach quickly.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: I have a scheduling issue that I just want to bring to the Court's attention. Dr. David has to be home tomorrow afternoon. I've got transportation for him by noon tomorrow. Dr. Jarvis's cross went significantly longer than we thought. He started a day later so we're in this predicament where he's leaving, given his devout religious and I just want to bring that up. I have about two hours on direct. It should be completely fine.

I don't want to be put in a situation where there's a six or seven-hour cross and then he's like I'm leaving. So I'm just putting it out there and I may be asking for the Court's guidance.

THE COURT: So you anticipate that your direct is going to be about two hours?

MR. FARRAR: I would say two to two and a half is my range.

THE COURT: Are you able to guesstimate how long

your cross may be?

MS. PRUITT: Not really. I mean it depends on all kinds of stuff. I will certainly - I'm willing to make a representation that I can do that, Judge, but I feel uncomfortable doing that not hearing his 2-1/2-hour testimony.

THE COURT: We will get through your direct examination and we'll just go from there.

(RETURN TO OPEN COURT.)

DR. YADIN DAVID,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MR. FARRAR

Q Good afternoon.

A Good afternoon.

Q Would you do introduce yourself to the jury.

A Sure. My name is Yadin David. David is my last name and I'm a biological engineer by practice.

Q You are a doctor, correct?

A Correct.

Q Not a medical though, right?

A No.

Q What kind of a doctor are you?

A I'm an environmental engineering doctor.
Q Where are you from, Doctor?
A I'm from Israel.
Q When did you first come to the United States?
A In 1974.
Q Can you tell me little bit about why you came?
A I had an opportunity to receive a scholarship to further my education. I'd never been out of Israel until then. And I felt coming to America would be great. I came to the institution.
Q Where was that?
A That was in New York University. I went there with my family with my two-year-old son and we landed and quickly realized that being in such a concrete jungle wouldn't be a good place to raise my kids and go to school and try to have some continuation of normalcy in our life. And we looked at the map and right next to New York was West Virginia so I went there.
Q So did you go to West Virginia University?
A Yes.
Q Did you get a degree from West Virginia?
A Yes.
Q What's your degree in?
A I got a Bachelor of Science in Electrical Engineering. Because of my GPA, my academic performance, they gave me a scholarship and said, why don't you continue to a master's

degree in electrical engineer.

Q What was your plan? Were you planning on going back home after you got your degree?

A No. If you would have asked me would I stay in this country, I would love to just come to school again and get academic preparation and go back to Israel and then work there.

Q But you ultimately got your masters in electronic engineering or electrical engineering?

A Yes.

Q Where did you get that?

A At West Virginia University.

Q When?

A 1976.

Q What happened after you got your masters?

A After I got my masters something happened that I was not familiar with because I was not familiar with it. There was a fair day. Companies would come and look at you and interview you on-site and may offer you a job. And I went to that just to see what it is and ended up getting a job offer. I said to my wife, give me one year to experiment with that because this is a very exciting job.

Q What was the job?

A The job was actually working with NASA as a defense contractor designing the space shuttle. I remember going home and telling my wife, you know those American things that they

can send people to space and bring them back, reuse the vehicle. I never thought it would happen in my lifetime but if I don't take this opportunity I'm going to miss something that is spacey.

Q Spacey is a funny word. And where was that project, the space shuttle at?

A So the defense contractor is called Rocklin International. They were in charge of developing the navigation systems that brought the shuttle back to earth. And it was in Iowa.

Q Where were they along the spectrum of having an actual space shuttle developed and ready to go?

A When they took me to interview and decided to come work for them they told me here is what you're going to work in. They opened this giant calendar and I remember looking at a wooden mockup of the space shuttle that looks like you take a Boeing passenger plane and squeeze it really tight and it has a tail like a shark and I didn't think it could fly.

Q Well I guess let me ask you, did you take the job?

A I took the job, moved to Iowa and learned all about the cornfields and the flat country. It was the very kind fine farmers that we met. So it was really a nice experience.

Q How long did you work for the contract on the space shuttle?

A And worked a year and half. When I received a call

from the University Medical Center where I took my bachelor and master's degrees basically saying you always want to do biomedical engineering. We are ready to start the program at the hospital. Will you come back and take the job? And I jumped on that.

Q What is biomedical engineering?

A You know, many people ask me that question. It's not very long field but it's very exciting and satisfying to work in that field. It's the cross between life-sciences, the biology and the anatomy in medicine and engineering.

So the way that I describe my job is to find life problems and solve them with technology.

Q Did you take that job back in West Virginia?

A Yes.

Q So tell me about your time back at West Virginia?

A So now I'm starting at the hospital to build the biomedical engineering program.

Q Did they have a program at that time?

A They had a repair shop. It was basically like replace the tires on your car and check the air pressure. They wanted me to take that and really look at the engine of the car and make it more research oriented. So I did work with the dog lab and did experiment on measuring go carts and came up with some instrumentation. And that I saw that time on the campus and working at the university and why shouldn't I continue to gain

education and I took a doctorate degree program there.

Q And you ultimately got your PhD?

A Actually EDD.

Q EDD.

A Yes.

Q What does that stand for?

A EDD stands for Doctor of Education.

Q Did you have a thesis that you had to write for that?

A Yes, I wrote a thesis for the master level program to graduate from and for the doctor of education program.

Q What was your thesis on?

A My thesis was on adult education. And my specific research was to understand how physicians and nurses as adults and students can appreciate and retain information about safe use of medical technology. So this was the biomedical engineering degree that I have and I design tools to train them about safety and then I would test the retention of them.

Q How long did you stay at West Virginia?

A Until 1982.

Q Tell me what happened in '82.

A Two things happen. One, I graduated with my doctorate degree. And the second one is a headhunter from the Texas Medical Center called me up and said there's a vacancy for a Director of Biomedical Engineering. Would you come for an interview? So I looked in the mirror and I said, myself for

that job. That's amazing. This was the most advanced biomedical engineering laboratory at the time.

Q At Texas Medical Center?

A At Texas Medical Center in Houston Texas where everybody, all the sheiks and the kings would come to get their hearts fixed. And Dr. Cooley and a couple of the famous heart surgeons were there and they were looking for a Director of Biomedical Engineering.

I told my wife I wouldn't get the job but if I don't go for it interview I'll never see a laboratory like that. So I was going down with the expectation that I'm going to get the job but I'm going to learn how a laboratory at the top of the world as far as qualitative advancement is working.

Q How was it?

A Obviously, it was good. I got the job.

Q So you moved to Houston and this is 1982?

A Correct.

Q Walk me through your work at the Texas Medical Center.

A So I came in and the obvious need was to understand how to evaluate new technology, new medical devices and how to increase the incentive to design new devices where the gaps exist there is no technology existing and a different variety of monitoring heart conditions, etc. And on top of that we have an increasing inventory of medical devices that are being purchased by the hospitals.

And we were received the responsibility to not only evaluate what device should be bought but also once they are there how to maintain it, maintain the safety level and train the user what is right way to deal with the product or not.

Q Did you do a risk-benefit analysis with regards to certain medical devices?

A So that became one of the methodology that I adopted and developed from other industries, from aviation and transportation, specifically to the medical device industry.

Q Can you explain what that means?

A The risk analysis is a process by which you try to qualitatively and quantifiably evaluate what is the risk that another medical product will introduce to the environment for patient care relative to the benefit that is delivered. In other words, if there are no benefits you probably don't want to introduce another device because every device has a level associated with it.

Q Just to make sure I want to make that clear, every medical device has some level of risk, is that fair?

A It's more than fair. I would say even outside healthcare every product has some associated risk to it.

Q Did you look at warming devices?

A Yes, there were part of the inventory we will be responsible for.

Q What type of warming devices did you evaluate at your

time at Texas Medical Center?

A So warming devices have a variety of users and principles of operation. In using warming a device for an individual patient there are those that circulate warm fluid. You take a water tank, you warm the tank up and then the warm fluid circulates around the patient.

There are devices that are taking the warm air - heating that warm air and move it around the patient. So in addition there are also radiated warmer. A warm with a heating element sometimes called infrared and it's radiant like the sun. We do radiant heat and that's very typically used in newborn and very small baby that cannot compensate for loss of heat because of the large skin surface.

Q And to be clear, when we're talking about warming patients, that could be in the OR but also all other types of uses not outside the OR?

A For example, just like I mentioned with babies. Surviving life, nothing to do with surgery but after delivery they are being put in bassinets with a heating element on top with radiant heat.

Q Are there multiple different ways to warm patients if you want to?

A Oh, yeah, yeah.

Q Did you at your work at the Texas Medical Center did you rely upon the manufacturers of medical devices to provide

accurate and complete information regarding the safety of the products?

A Yes. It makes much sense in the approach that is given to be the case in every hospital in the country and in the world as well is that the group that designed, manufacture and offered for sale a product probably has the most information about it, about the mechanism and about the work and the delicacy, interaction taking place. In this is the information we would expect to receive because we're going to be looking at a hypothesis of first, do no harm and then maintain the performance of the medical product with acceptable safe level.

Q Did you rely on medical device companies to test their products before they put it on the market when you were working at the Texas Medical Center?

A Not only did I rely but it was the standard of care. It was expected.

Q Assumed?

A Absolutely assumed, yes.

Q In respect of different medical devices, you talked about environment of use. Can you give me a little definition of what that means?

A Environment of use is suggesting if I create a knife and use it in the kitChan it's just a knife. But if I create a knife and I say this is going to be a surgical instrument used in the operating room for cutting and removing tissue, now it's

a medical product. So the environment of use is significantly important in looking at the product hazards risk control.

Q So for instance like in this case, Dr. David, you know that the Bair Hugger 200 it's environment of use was not the operating room, correct?

A The Bair Hugger 200 was designated outside the operating room.

Q Whereas, the 750 was - its environment is inside the operating room, correct?

A Correct.

Q And are those type of changes that you as the biomedical director at the Texas Medical Center would have assumed 3M or the manufacturer would've tested to ensure safety for that change?

A Yes. But like I said before, I would assume for any product because it the operating room because the patient in the operating room cannot fend for themselves. They are under anesthesia. The surgeon in their profession is not the engineer in charge of the product. So they expect - they assume that testing was done, information was delivered and so am I.

THE COURT: Actually, I want to break. I was looking for spot. We will get started at 1:30.

(INSTRUCTION READ.)

We'll get started at 1:30. Thanks so much.

(LUNCH BREAK AT 12:20 PM.)

THE COURT: Can counsel approach real quick. I just wanted to make a record for a point of clarification. So we're outside the presence of the jury. I just want to make my thoughts on motions in limine rulings on that clear just so we're all on the same page.

So my motion in limine rulings remain in effect until I change them. So it's my expectation that everyone abides by those motions in limine rulings. If at any point one side believes that evidence has been presented or testimony has been elicited that would cause the Court to revisit those rulings, obviously they're motions in limine so I'm open to that.

But what I would ask is prior to eliciting the testimony as a result of you believing that the door was opened, that you approach and we take it up outside the hearing of the jury and I make that determination whether or not the door has been opened just so that we're all on the same page and only that testimony that I have deemed admissible is brought before the jury. Any points of clarification from the plaintiff?

MR. FARRAR: No Your Honor.

THE COURT: From defendant?

MR. BLACKWELL: Just one, Your Honor. I also heard a couple of times where Counsel would blurt out, that's the subject of a motion in limine ruling. And

there's a motion in limine ruling that we're not doing that too that you're not supposed to say that to a witness. You just ask to approach, object and then ask to approach.

THE COURT: So I don't know that I heard that but yes. I mean my favorite motion in limine is the motion in limine. So, yeah, it's my expectation that all of that be taken up here outside the presence of the jury.

MR. FARRAR: One other thin. May I ask a question?

THE COURT: We can do it now.

MR. FARRAR: I plan on using the bubble study in McGovern with Dr. David. It's specifically mentioned in his report. We notified him on Friday and again on Saturday. The actual study is in the defendant's exhibit list. So it's no surprise about what it is or where it is. And I'm talking about the video.

The bubbles video that's referenced in the McGovern study. It's specifically talked about in Dr. David's report. It's disclosed. We've given them plenty of notice. I think it's fair game.

MS. PRUITT: Your Honor, this is same argument that we spent I don't know how many minutes arguing and we stand on the record that we argued. This is no different for Dr. David because he said - is it David or David?

MR. FARRAR: David.

MS. PRUITT: No different for Dr. David than it was at the time we first discussed it with Dr. Elghobashi and the issues are the same. It's clearly the Court's rulings should be the same with regard to the video as they were on Dr. Elghobashi. And I know the Court probably recalls it.

THE COURT: I do. Is there a change in circumstance for Elghobashi in terms of the disclosure or the reference in his report specifically to the video? Because I found in Elghobashi that just merely citing the McGovern study was not sufficient given the disclosure time and those two things together to warrant that to be in front of the jury. How do you believe that this differs from Elghobashi?

MR. FARRAR: So I think there's two differences, Your Honor. One, at the time with Dr. Elghobashi, we were unaware but we just didn't appreciate that it was on the defendant's exhibit list. So it seems to take away any surprise ...

THE COURT: What is on it? The McGovern study or the video?

MR. FARRAR: The actual video, the link to a YouTube video is on the defendant's exhibit list. And then on page 29 of Dr. David's report he discusses the McGovern study. He specifically says, "Bubble counts in simulated

operations show that the Bair Hugger immobilizes air from under the table under the surgical site." That's his reference to the video. So he's specific about it in his report. They can't be surprised if the video is on defendant's exhibit list. So that's the things that I think make the argument different today than it was prior.

THE COURT: Ms. Pruitt.

MS. PRUITT: Your Honor, just because we put everything in there and anything known to man on our exhibit list because we don't know how the evidence is going to turn out doesn't make it admissible. And so to suggest that somehow because you're not surprised it's admissible, I don't agree with that argument and don't think that is true.

The Court also knows that that particular video that they're referring to is narrated. It's full of hearsay. It's got hearsay all over it. And to suggest that mentioning the McGovern study and referring to the bubbles means that I can talk about this narrated video and I can play it in front of the jury and have them hear the testimony of somebody that's not even in this case by way of hearsay is improper and we're going to object.

THE COURT: Okay. The objection will be overruled in part and granted in part. So what I'm going to do is based upon the information contained in Dr. David's report

I'll allow inquiry and the video to be shown but it should be muted. There should be no kind of sound associated. Whoever's talking in the video I don't think that that's appropriate. So if you want to show the video without sound I will allow that but otherwise no sound. Make sense?

MR. FARRAR: It does.

THE COURT: Any further clarification from the defendant?

MS. PRUITT: Your Honor, I don't know what the rules are a little bit in Missouri, but I would ask that since they were just planning on playing it with the narration that they not be allowed to consult in the break to explain to the doctor how he needs to explain this video. I mean I think that's improper.

MR. FARRAR: I feel like I should be able to at least tell him that we're not going to play the sound.

THE COURT: I think that's subject to your cross-examination as to any questions you want to ask regarding, as Mr. Blackwell did with Dr. Jarvis. So that request will be denied.

MS. PRUITT: Thank you, Judge.

(OFF THE RECORD.)

(RETURN AT 1:35 PM.)

THE COURT: Welcome back. We will continue with

the direct examination of Mr. David. Sir, I will remind you that you remain under oath. Counsel.

CONTINUED DIRECT EXAMINATION BY MR. FARRAR

Q Dr. David, I'm handing you what is marked as Exhibit 701. Can you confirm that is the most recent copy of your CV?

A It is.

MR. FARRAR: Judge, we'd move for admission of 701 into evidence.

MS. PRUITT: No objection, Your Honor.

THE COURT: 701 is received.

Q When we left off we were talking about your time at Texas Medical Center. And what I want to do is - and you ultimately retired and opened your own company. I just want you to walk us through that if you would.

A Sure. So gradually my involvement and responsibility at Texas Medical Center grew over the years and I was fortunate to work with some tremendously good physicians, nurses and therapists and learned a lot from them. My network developed and after 25 years I had the opportunity to retire and start my own business which was in 2008.

Q What's your business name?

A My business name is Biomedical Engineering Consultants, LLC.

Q Is that out of Houston?

A Yes.

Q What kind of work does your company do?

A Essentially continuing to do as a private individual what I did at the medical center. And I provide consultation and expertise to the medical device industry, to medical centers/hospitals and to startup companies who would like to introduce new innovative devices and need to understand better the regulatory framework of what is and can become a clear product.

Q Tell me about some work with hospitals that your company has done. When I say your company, I mean you specifically, right?

A Right.

Q Okay. Tell me some work with some hospitals you've done.

A Yes. As I said, I was fortunate to have a good network developed and expertise and can be useful. As one of my hospital clients I would be proud to name Stanford Medical Center in California, M.D. Anderson in Houston, the Advent Healthcare System in California, Bermuda Healthcare Medical Center. Those would be the names I would put first.

Q Who is M.D. Anderson?

A M.D. Anderson is named after the individual Anderson who started seven years ago a hospital dedicated to fight cancer diseases. It is ranked the number one cancer institute in the

U.S. and one of the top in the world.

Q What did they hire you to do?

A They actually just hired me a few weeks ago. And they requested that we come in and review their biomedical engineering program and recommend of the action they needed to take in order to prepare them to be the model program for the rest of the nation with M.D. Anderson in the fight against cancer with all the new innovations.

Q You said you worked with some device manufacturers. Tell me what you've done for them.

A Device manufacturers seek my expertise in maybe two main categories. One is to better understand how devices are used in the hospital. What is the process that is being taken by the hospital in order to maintain the medical device and what they, the medical device manufacturers need to do in order to support the community.

And the other part is to discuss improvement of medical device design that I could see from the point of care from where the patient is in the hospital and allow them to improve their product as they go into the future.

Q Have you worked with the World Health Organization or WHO?

A WHO is correct. When you said World Health Organization it is an organization that I've worked for probably 20 years now as their technical consultant on health technology

management. In other words, how do you manage technology in the hospital in a safe and effective way with emphasis on projecting that knowledge into the under resourced countries.

So on their behalf, I would travel to Kenya and Africa, Tanzania or India and Asia and I would conduct seminars a week, two weeks at a time pitching the locals. Here's how you create an inventory of medical device. Here's how you rank; what would be your first attention; here's the step you're taking in determining risk safety and all the details as far as how do you get spare parts that they have a need for.

Q In doing that work do you have to understand the level of sophistication for the doctors or hospitals in those countries?

A Of course. And as I said, more than that. The hospital is located in a country that have different standards of care, different regulatory, different support for spare parts for example. How do you get the spare parts for a ventilator in Tanzania? It's not like calling Amazon or Federal Express here. It doesn't happen overnight.

Q With the World Health Organization you did regarding COVID also, right?

A Right. So one of the most recent projects that I led is reviewing the innovation that proposed to the World Health Organization for the under resourced countries to fight COVID19 conditions. And the World Health Organization has no in-house

expertise to evaluate and assist those products. So they came to me and asked me can I develop the technology that they can use and share with the public, show that this is a proper resource and determine of all the innovations which one the World Health Organization should give the seal of approval and recommend for use.

And the application came from so many different parts of the world that receiving a seal of approval from WHO is significant for their business. This method of technology that I developed for the World Health Organization is included in the publication that is available to the public on the World Health Organization website called Compendium of Innovation to Fight COVID19 Deficiencies. And it's literally saying here's Dr. David's proposal to methodology and how do you go about and rank these devices.

Q So COVID19 is obviously an airborne pathogen, right?

A Well if you give the CDC a break on when it's coming and where it's going, you're right.

Q So you were in essence teaching nonmedical folks about airborne pathogens for the World Health Organization, is that correct?

A One of the innovations that was submitted, for example, came from Bangladesh, a country in India, very poor but has a lot of bamboos. And they use the bamboo material to create personal protection gear like surgical suits, facemasks

and surgical caps. And they did not know how to do the testing and they sent it to the World Health Organization and I am now looking at it.

Q Have you done some work with the FDA in your consulting practice?

A Yes, the FDA is a long friend of mine as far as the business relationship. I've served on several advisement panels of the FDA and now I'm chairing the advisory committee for the FDA myself.

Q What's the name of that committee?

A This is the Medical Device Good Manufacturing Practice.

Q The good manufacturing practice, does that do things like testing your products before putting it on the market and while it's still on the market?

A Of course. It talks about specifically what is the role of risk control during the design manufacturing and marketing of the product.

Q Does the good manufacturing also talk about what are adequate warnings that you want to give to the user of the product?

A Yes.

Q You obviously do some consulting work in the legal field because you're here today, right?

A Right.

Q And clearly, you're going to be paid you for your time. What do you charge per hour?

A $450.

Q Is that for everything whether it's reviewing documents or inspecting machines or testifying here today?

A Correct.

Q Do you know how many hours you've spent in your health hazard evaluation of the Bair Hugger?

A Oh, I don't know which case you're referring to. There are several.

Q Let's say your evaluation of the Bair Hugger as a general proposition ...

MS. PRUITT: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, this the second time whether inadvertent or not that they tried to introduce more cases than just this one. Another witness may not have been instructed about it. But first of all, the question Brett Emison specifically asked the question and the Court as I understand it did not grant a mistrial. We'd ask for a mistrial again.

This witness has specifically talked about it depends on which case you're talking about. It's clear what's happening here, Your Honor. There trying to imply to this

jury that there are a number of cases out there and that does affect jury's decision. Yes, it does and it's improper. I'm asking for a mistrial because of the cumulative nature of it. And I'm asking that it not happen again and the jury be instructed.

And I need to think about how to instruct them without highlighting the fact that there are other cases, Judge. I mean this is serious.

MR. FARRAR: I did instruct him and that's why I phrased my question the way I did is how many hours have you done doing health hazard evaluation of the Bair Hugger. I talked to him about it. I phrased the question in a specific way to not say that. Sometimes a witness says what he says. I mean I'll move on. I did spend time with him on this issue.

THE COURT: The objection is sustained. The request for a mistrial is denied. I'm not going to give the curative instruction at this point. If you want to propose one later on, but I have the same concerns about unnecessarily highlighting it. So the Court will request at this time that you move on.

MR. FARRAR: Absolutely.

(RETURN TO OPEN COURT.)

Q I'm going to let you brag on yourself a little bit. I know that's uncomfortable. But can you tell the jury about some

of the career awards that you've won?

A I have made very good friends in the business in biomedical engineering and they took the time to recommend me to several awards and I'm humbled to be the recipient. And one - I'll start with the Hall of Fame that the Biomedical Engineering Society gave me for achievement reached in creating guidelines how to properly evaluate and use medical devices.

I will continue with their FDA Commissioner who gave me a special citation for protection of the public safety. I don't know if you remember but the era of using cell phone in the hospital. It was very detrimental to medical devices. And I came up with protection about that.

Other awards relating to my service to the World Health Organization in recognition and my University of West Virginia gave me and award for a lifetime career achievement.

Q Are you familiar with the National Academy of Engineering?

A Yes.

Q You're not a member of that, right?

A Right, I'm not.

Q Have they published - have they published any of your work?

A Just recently the National Academy of Engineering started to publish a journal. And they published an editorial column that I crafted and it got their attention. And they

liked it and decided to post it.

Q What was the issue?

A The issue was with the current situation of COVID19 and shortage of man power at hospitals, nurses under stress and physicians that are working all the time. I came up with an idea that through joint education that biomedical engineers can take some of the peripheral activity that nurses are consumed by.

I'll give an example. Putting the EKG electrodes on the patient's skin, there's no much that you need to know about anatomy and physiology and can be delegated and can save nurses time and put their attention into real patient care.

Q So a letter to the editor, that's not peer-reviewed in a journal, correct?

A Well this was an editorial column. To answer your question, a letter to the editor is a communication from an individual who feels that they have an opinion about something that was published.

Q It's not like, an actual study?

A Absolutely not, no. It's an individual opinion.

Q I want to move to your work in this case and ask you this question. Would you agree that all the opinions you're going to give are to a reasonable degree of engineering certainty?

A Biomedical engineering, yes.

Q What materials did you review to make your analysis of the Bair Hugger?

A So first I started by the manual of the device and instructions for use. Then I went to the FDA side and looked at what the regulatory threshold were met, what material was submitted. Then I looked at the literature, medical literature, engineering literature related to the Bair Hugger and did some search and read material about that and continued to look at material that was provided by 3M during discovery and about the processes they used in the design and manufacturing of the product. And finally, I ordered a Bair Hugger 750 and examined that device.

Q When you examined it did you take it apart and try to have a good understanding of how it works?

A Yeah, that was one of the reasons that I wanted to have access to such a device so I could take it apart, understand the functionality and the construction of the Hugger.

Q Let me ask you, when you examined the 750 that you bought on eBay, did you make any notes about the little feet?

A Yes.

Q What did you note about those feet?

A The device that I bought was used. So when it came to me I noticed that those feet that you're pointing at were very obviously suffered wear and tear.

Q What does that tell you?

A It tells me that it must've been on the surface like the operating floor that I'm familiar with which is not very smooth.

Q This Bair Hugger marked Plaintiff's 1471, can you see wear on the bottom of those feet also?

A Yes, I do.

Q Does that indicate to you that whoever used this in operating rooms had it on the floor?

A It does.

Q There's some things - let me just to be clear, you're not here to give any opinions specific to Ms. O'Haver, is that right?

A Correct.

Q So you didn't, for instance, look at her medical records, correct?

A I did not.

Q Or you didn't go visit her OR?

A Correct.

Q So we know what you looked at. If you would, just walk me through how did you do your hazard analysis on the Bair Hugger?

A So the methodologies suggest that primarily you look at what might go wrong with the device and can you identify or predict it that it will happen only after you're aware of it or the features that need to be warned against or design of on the

device. So when you do that you come up with at least a list of features and you rate them from high impact to low impact.

So hazard analysis have three main pillars to it. What is what's the probability that it will happen? If you go to swim in the ocean, what's the probability that a shark will attack you? And it's ranked between very low probability, very probable to highly likely.

The second pillar is if that hasn't happened that you met the shark, what is the extent of the injuries impact. If the impact is low and it can happen very often, it's not that critical. If the impact is high and even if it's randomly happened it's very important you don't want any patient to suffer an unintended outcome.

And the third one is what is the predictability that it will happen? So, for example, you know that in the hospital they are heart monitoring patients to go into heart surgery. If the heart rate is racing, if the blood pressure is increasing there is an alarm bing, bing, bing, bing. That tells the nurses intervention is needed.

So here's the situation. It's a hazard but you can predict it because I have an alarm. It will not leave the patient in a hazardous and risky situation without announcement.

So those are the three parts for the hazard analysis that you go through in order to see, did I discover anything that needs action? If I did, what action is required and if there is

residual, if left afterwards is still not sufficiently safe, did I communicate that?

Q By communicate, do you mean warn?

A Correct. There are medical devices that have tags on them that say you shall not use in water or whatever.

Q Well for instance the 200 says should not be used in the OR. That would be the same thing, correct?

A Correct.

MS. PRUITT: I object, Your Honor. That's not what the warning says, assumes facts not in evidence.

THE COURT: Overruled.

Q Did you focus on a particular environment of use for your analysis?

A The environment of use, as I spoke about it before the lunch break, the knife that is in the kitChan versus the knife within the operating room is highly important to understand the risk and the quality of the device. So in this case in the Bair Hugger the environment of use is the operating room and that is a very unique environment.

Not only that but we are discussing the situation that's relating to a particular set of patients, orthopedic procedures and that is a more unique operating room than the rest.

Q And even with an orthopedic did you focus on joint replacement surgery?

A Correct.

Q Do the environment on use that you looked at and focused on was joint replacement surgeries in the OR, fair?

A Fair.

Q And what hazards did you focus on? Or I guess what hazards did you discover?

A So when I took the Bair Hugger apart and immediately I realized that while it has an IV clamp for an IV pillar in the hospital where you can hang fluids on it and you have a screw that you can put devices on it, the Bair Hugger has been used on the floor because of the feet situation that we described. If it sits on the floor I know hospitals and I was responsible for close to 40 operating rooms in the Texas Medical Center.

So it's very obvious to me that the environment of the floor in the operating room is not as sterile, not as clean as we would like to believe it is. And the device that would sit on the floor, therefore, I wanted to make sure that it does not bring anything from the dirty floor toward the patient.

Q Is it true that everything below the operating table is considered dirty, the nonsterile portion?

A That in general is correct because you have the sterile surgical drapes that are considered to be in sterile field. But I was hesitant in my response because the material is up too high.

Q Here's my point. If this machine is sitting either on the ground or if it's on an IV pole as we saw a picture earlier

today about this high, does it make any difference as to whether not it's sucking up dirty air?

MS. PRUITT: Objection Your Honor, leading.

THE COURT: Overruled. You may answer.

A Because of the structure and the principal operation of the Bair Hugger having a fan very close to the bottom of the device, the distance to the floor is minimized. The fan has high velocity of sucking air, it will bring up from the floor into the device enclosure whatever is there.

Q Have you seen anything in your review of the materials where 3M has told doctors or hospitals to not put this directly on the floor?

A No.

Q Were you able to identify if the Bair Hugger was able to cause deep joint infections in orthopedic joint surgeries?

A So what I was able to identify in my hazard analysis is that this Bair Hugger device contributes to higher colony forming units around the surgical field.

Q What is a colony formed unit?

A It's a description of the number of pathogen of organisms in space and considered to be one of the reasons that infections are happening.

Q From your review of the materials was 3M aware there were concerns about airborne contamination and deep joint infections for a long time?

A Yes.

Q From your review of the materials and internal documents and depositions, was 3M receiving complaints from the field about the risk of infection associated with the use of Bair Hugger?

A In reviewing internal documents provided by 3M and reading the position of 3M officers such as Al Van Duren, I believe he's the director if I'm not mistaken and Michelle Stevens who – she is the Infectious Control Officer at 3M. Both of them testified in internal documents that they were amazed by the size and volume of the complaint received from surgical – from the orthopedic surgeon.

Q So the jury heard in opening that no treating physicians had ever contacted 3M to say the Bair Hugger caused a surgical infection. The plaintiff called in to say they're concerned about that risk, correct?

MS. PRUITT: Objection, Your Honor, hearsay and leading.

THE COURT: Overruled. You may answer.

A The documents I reviewed clearly show that the gentleman from 3M testified that they have received multiple concerns from leading orthopedic surgeons.

MR. FARRAR: May I play Clip 83, Your Honor?

THE COURT: Any objection to 83?

MS. PRUITT: Same objection.

THE COURT: Noted and overruled. You may play Clip 83.

(CLIP NO. 83 WAS PLAYED.)

Q Dr. David, that's what you're talking about 3M being aware of this concern, correct?

A Correct.

Q Are also aware that 3M is knowledgeable and had experts in the field that have heard that same concern, right?

A Correct.

Q Is that also from your depositions?

A Correct.

MR. FARRAR: Your Honor, I would asked to play Clip 112 and 113.

MS. PRUITT: Same objection.

THE COURT: The objection is overruled. Exhibits 112 and 113 may be played.

(CLIP 112 WAS PLAYED.)

MS. PRUITT: Your Honor may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: I could be misreading this but I don't have an accepted clip that has THAT testimony that that was just given. What I have is she said at this conference she also found out there was, "that forced air warming increases particulates in the air, correct. That's

what I was hearing." That's all have.

MR. FARRAR: You're reading the wrong one. That's 112.

MS. PRUITT: 112, okay. I'm mistaken.

THE COURT: Okay.

MR. FARRAR: Can we play 113 also?

(CLIP 113 WAS PLAYED.)

Q Now Dr. David, in your work and experience in the field, when companies get complaints like that should they investigate them?

A No question, of course.

Q Did you see in your materials that 3M did anything to try to validate their concerns - try that again. In your review of the materials were you able to determine that 3M did anything to try to see if there is any validity to those concerns?

A I did not find any evidence of that.

Q And, in fact, did you see testimony to confirm that they didn't do any work to validate those concerns?

A I agree with you.

MR. FARRAR: We would like to play Clip 45, Your Honor.

MS. PRUITT: Same objection.

THE COURT: Objection is noted and overruled. You may play 45.

(CLIP NO. 45 WAS PLAYED.)

Q Doctor, from your perspective as a biomedical engineer is that what a reasonable medical device company does?

A Absolutely not.

Q Why not?

A Because, again, there is something that's easy to refer to, first, do no harm. And if you bring the product to the market the product is expected to be safe and free of hazards. If it's not, you then have communication of warning the user or not to be marketed.

Q One question, just sort of housekeeping that I didn't ask. The clip before that of the lady, do you know who that is?

A That is Dr. Michelle Stevens I believe.

Q Do you know what her position was at the time?

A I referred to her position as the Medical Director in charge of infection control.

Q The jury has heard a lot of discussion about sort of the two ways in which the Bair Hugger can cause infection in their patient. If you'd give me a quick summary and we're going to talk about in little bit different perspective, okay?

A The two ways that I as a biomedical engineer identified was one, disruption of the laminar airflow around the surgical site during orthopedic surgeries. And the second one is contributing pathogens that existed in the enclosure as well as on the operating floor and blown into the surgical site.

Q We heard from Dr. Elghobashi who is a stickler for

words. He said there's no such thing as laminar. Would you say laminar - is that just hospital speak for the downward flow from the top?

A Correct. Unidirectional flow from the ceiling to the ground of fresh air around the surgical site.

Q So let's talk about that method first or that issue first. And I guess the question is is it controversial?

A I don't believe so. There is sufficient evidence of that showing that it happens.

Q Are you aware of any studies that don't show that the Bair Hugger when on increases the particle load over the surgical field?

A No.

Q Are you aware that 3M has also said there are no such studies?

A That does not contribute?

Q Double negatives are tough. Let me ask you a different way. Did you in part rely on testimony from 3M saying that there are no studies that show that it doesn't increase the particle load?

A Yes.

MR. FARRAR: May we play Clip 68?

MS. PRUITT: Same objection.

THE COURT: The objections is noted and overruled. You may play clip 68.

(CLIP NO. 68 WAS PLAYED.)

Q Again, this isn't controversial that you see particulates over the surgical field, right?

A Yes.

Q 3M knows that, right?

A Yes.

Q Is that unsafe?

A Of course it's unsafe.

Q Why is it unsafe?

A Particularly with those that are "dirty" pathogen organisms that contribute to increase infection for surgery and post-surgery.

Q And you reviewed literature that supports this opinion also?

A Yes.

Q I'm going to hand you Plaintiff's Exhibit 96 and ask you if this is one of the pieces of literature you used to rely on in this case?

A Yes.

Q And this is from Legg but it's 2013, right?

A March, 2013, correct.

Q And journal is it published in?

A In the Journal of Arthroplasty.

Q And was this a study that's comparing the airflow of two different warming devices?

A Correct.

Q What two devices?

A The Bair Hugger and what I believe is the Hotdog which is a warming blanket, a warming device.

Q And remind me - can you explain the difference between convective and conductive heating?

A Sure. I'm happy to have an engineer question. The easiest way to approach it is to tell you that it's like the oven and the stove. You want to heat food, you could put in the oven and you would have a confection or molecules from the heating element surrounding the food, rising the heat as you rise up and the cold usually drops down.

However, if you take the food and put it on the stove with a contact, this now becomes a conductive heating because they are elements that actually come in contact and moving the energy of heat because they touch each other.

Q So the conductive like the blanket, does it have the same type of moist heat?

A No, it does not and it also does not have an air blower that's blowing stuff.

Q So if I go to grab something out of the oven and I open the oven door I get a blast of hot air in my face, right?

A Yes.

Q If I go and make some eggs, I don't have a blast of hot air coming from the stove?

A You must be a good chef.

Q I can assure you I'm not but I'm lucky to be married to one. Is that sort of the basic way, is that a fair way to say it?

A That's correct. I think in essence the idea is one, which is the conductive as the name said, you have to conduct some physical element of touching. And the other is a conveyance and a convection. You convey the heat. You don't touch it. You convey it.

Q So if we're talking about the Legg and I want to make sure we're telling the truth and the whole truth, the two devices were the Bair Hugger and the Hotdog, correct?

A Correct.

Q Do you recall what they did, how the study was conducted?

A Yes. This was a simulated study meaning they have a mannequin and they cover it just like they do in a real surgery. They put a surgical drape around it and look to see by counting air bubbles what is the effect of using those devices. One, they did it with the forced air warming device and the other one by putting the blanket underneath the mannequin.

Q So this is just picture of the set up so the folks can understand how they set it up, right? And I want to look at the results if you could read that for me.

A The results section of the paper is talking about

airflow visualization.

MS. PRUITT: Just for the record, I don't think we asked for this to be published to the jury in.

MR. FARRAR: I apologize.

MS. PRUITT: We should do that for the record.

MR. FARRAR: It's Exhibit 96. Do you have any objection to me publishing?

MS. PRUITT: Not for demonstrative purposes.

THE COURT: 96 may be displayed for the jury for demonstrative purposes.

Q Dr. David, I skipped a step, got a little ahead of myself. I'm sorry. Could you start from beginning please?

A Under the section called Results of the Study under the heading Airflow Visualization. "Unidirectional airflow was significantly disrupted when forced air warming was used. Convection currents were set up within seconds of the forced air warming system starting up. The bubbles rose approximately one meter above the operating site, moved away from the drape, and then fell directly onto the surgical site before rising again to start the next cycle."

Q And then this chart here, does that illustrate that phenomenon?

A Right. And I think to help the jury understand, under the arrow there is a white shadow. This is the surgical site.

Q I think you told us you reviewed Dr. Elghobashi's

computational fluid dynamics study, correct?

A Correct.

Q Is this basically saying the exact same thing that Dr. Elghobashi's CFD showed?

A Yes, he just showed a wider video of it.

Q Under Particle Entrapment can you tell me what that says and why it's important?

A The particle entrapment says that "The forced air warming device significantly increased the volume of the particles over the surgical site." And in this paper, they give an example of comparing the forced air device having over two million particles permit a few with the volume of particles counted when the blanket was used. There was no forced air warming which was 1,000 times more particles."

Q So there's 2.1 million particles with the Bair Hugger in 1,000 particles with the Hotdog?

A Correct.

Q How did the Hotdog increase the particle load versus having nothing at all - there's no warming at all, correct?

A Correct.

Q So how does the Hotdog versus nothing at all fare?

A The explanation would be that there are some particles in the air regardless of the number of devices and the heat that is going on and existing in the room. That's why in the beginning of the testimony today that I gave, the importance of

the environment of use is so critical because we're trying to keep the surgical theater for orthopedics procedure to have any associated with it extremely clean.

Q So this says in the last sentence, "However, there was no significant difference between the radiant warming device and the controlled," which means the Hotdog?

A No.

Q Is there a way to quantify the risk of increased particles over the surgical field?

A There is a way. There's another study that shows if you look at the rate of infection after surgery and count off the particulates in the air during surgery, you can relate to the two.

Q What is the relationship? How many colony forming units per meter cube does it take to double the risk of acute joint infection?

A Well usually I would suggest that you need an infectious disease expert to say. But from this study that I just referred to it was a simple reading of their conclusions that for every increase of 10 colony from a unit per meter cube then there is doubling of the risk of infection as an outcome.

Q That study was authored by a fellow named Oguz. I'm probably pronouncing it incorrect. One more part of the study we'll read and we'll move on. Would you let us know what that means?

A So basically what this section is saying is that having a source that causes additional heat under the operating table on the OR flooring and around the operating table creates an enhancement for airflow in a direction that are not good for patient outcome. They take airflow from the floor and drop it on the surgical site and that's not good practice to prevent infection.

Q And in the study it says, "The clearest interference with unidirectional airflow occurred with a forced air device." That was the Bair Hugger, correct?

A Correct.

Q One last part. I do want to read this last paragraph. It says, "This study does not show that forced air warming increases the risk of infection." Why does it say that, Doctor?

A I see that ...

MS. PRUITT: Objection, calls for speculation. There's been no foundation laid about it.

THE COURT: The objection is sustained. Why don't you lay some additional foundation.

Q You understand how the study was done, right, with the methodology?

A Correct. The paper is describing it too.

Q Okay. And there's a mannequin, not live human beings, right?

A Correct.

Q Does that put it in context what this sentence means as you, the reader, trained to read scholarly articles?

A Yes. This makes no sense because ...

Q Let me ask a question. Tell me why this makes no sense?

A Because when you have the mannequin those particulates are landing on artificial material, not on human tissue. So to determine infection it's impossible because there's no live organism to host the infection. It's a mannequin, it's a plastic container so you cannot measure it.

Q So is that they were testing in this was infection rate?

A They did not.

Q They were looking at airflow, not infection rate, correct?

A Yes.

Q I want to talk to you about - the jurors heard a lot about it so I'm not going to put the study up but a study called McGovern. Are you familiar with McGovern?

A Yes.

Q As part of the McGovern study, did the authors do an air visualization demonstration to explain the results visually?

A Yes. It also described the setup of the study and probably looked at conditions and then they came and edited the visual description.

Q That's something that you reviewed and relied on for your case, is that correct?

A Correct.

Q Would that visualization help the jury understand what these airflows do?

A I think it’s very clear evidence.

MR. FARRAR: We're going to ask to play 2204NA with no audio which is the audio portion out.

MS. PRUITT: May we approach?

(BENCH CONFERENCE.)

MS. PRUITT: I just want to make sure it's clear for the record that we're not waiving our objection that we had on the record at lunch. This is a video that the Court decided not to let in with Dr. Jarvis. And it's a video that they've argued somehow that now is a different situation. So for the record and I'm just trying to make my record. I don't want to waive those arguments.

THE COURT: The objection is noted. My ruling remains the same. It will be played without audio. Counsel, can you give me that number again?

MR. FARRAR: 2204NA.

(RETURN TO OPEN COURT.)

Q Doctor, can you narrate ...

MS. PRUITT: Your Honor, may we approach again please.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, you sustained the objection not to have this video narrated and now he's trying to get the witness to narrate. He's not a computational fluid dynamics person and he's not an airflow person. It is just an attempt to go around the Court's rulings that this video can be shown with it being narrated.

THE COURT: So I believe my ruling wasn't that the narration associated with video was not going to be allowed. I also don't think that just a narrative is a question so just ask questions or stop it. But I don't think a narration is appropriate. That's sustained.

(RETURN TO OPEN COURT.)

Q I'm going to ask a couple questions and have you explain but don't just narrate yourself, okay?

A Okay.

Q Do you know what transfer particles are?

A It's artificially made bubbles to be able to follow their movements.

Q So this is with the Bair Hugger on, correct?

A That's what it says on left, correct.

Q It shows it side-by-side on the left with the Bair Hugger off versus on, correct?

A Correct.

Q You know what neutral buoyancy bubbles are?
A Those are small bubbles that can be suspended in the air.
Q So that neutral buoyancy does not have any weight?
A Correct.
Q And in this you see the difference between the Bair Hugger off versus Bair Hugger on, correct?
A This is when it's on.
Q So this is a conductive fabric warming, this is the Hotdog, correct?
MS. PRUITT: Objection, Your Honor, leading.
THE COURT: Sustained.
Q What we say - what was that?
A It's showing that there is levels that are rising up because of the additional heat that is there.
Q The one on left is conducted with?
A That's a blanket and it shows that the air is not hot enough to rise.
Q Dr. David, well let me ask you this. Was this video a part of the published peer-review study in the McGovern study?
A Yes.
Q So it's something that experts in this field can watch and rely on, correct?
MS. PRUITT: Objection, Your Honor, speculation.
THE COURT: Overruled. You may answer.

A Yes, they would.
Q Is that, again, in your opinion consistent with the computational fluid dynamics that Dr. Elghobashi did?
A It certainly is.
Q The jury heard testimony today about computational fluid dynamics by Dr. Memarzadeh. Have you looked into that at all?
A I don't believe so.
Q Well do you know that if it's a study or if it's a letter to the editor?
A I believe I saw a copy that is - identifies a letter to the editor.
Q We talked about that earlier. Are those restorative?
A No, this is obviously by the title letter to the editor an individual member having an opinion about the subject and sends it to the editor. Now the editor can decide should I publish or not but it's not subjective to peer-review and evaluation quality.
Q Did you see evidence of where the calculation for that study was done?
A Yes, I did. And I recall seeing an internal document from 3M that said that that was done on an airplane.
Q Well Mr. Memarzadeh was on an airplane when he did the calculation?
A Yes.

Q Not a supercomputer?
A I don't think he would have access on the plane to supercomputer.
Q I'm handing you what's marked as Defendant's Exhibit 3253 and ask you is that the basis for your knowledge that the calculations were done on an airplane?
A Correct.
Q You see that email from Mr. Memarzadeh, correct?
A Yes.
Q You also see the study was sent to 3M before it was submitted to the editor?
MS. PRUITT: Your Honor, can I get an exhibit number on it?
MR. FARRAR: Defense Exhibit 3253.
Q Do you see where the study was sent to 3M before it was sent to the journal for the letter to the editor?
A Yes.
Q Is that normal in your field?
A Maybe for a letter to the editor but not for a study.
Q Is it normal to send your work to the manufacturer of a product to have them look at it and review it before they publish?
A No, it's not normal. And if you do that, you need to disclose it so the people reviewing the paper for publication will know.

Q Otherwise, you're just buying the science, right?

MS. PRUITT: Objection, Your Honor, argumentative.

THE COURT: Sustained.

MR. FARRAR: We would move for Defense Exhibit 3253 into evidence, Your Honor.

MS. PRUITT: May we approach, Your Honor?

THE COURT: You may.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, you can't just hand up a hearsay document that doesn't even - it's got third-parties on it. It's clearly hearsay. It doesn't come into evidence. It's not admissible. It's a hearsay email with people on it outside of the company, discussions with people outside of the company and it should not come in.

MR. FARRAR: Your Honor, it goes to the liability of the studies that 3M had. It's not for the truth of the matter and it's not hearsay.

THE COURT: If it's not offered for the truth of the matter, what's the relevancy of it?

MR. FARRAR: I'll withdraw.

(RETURN TO OPEN COURT.)

Q Do you know from your review of the materials did 3M ever warn doctors or hospitals about the increased risk of particles with the use of the Bair Hugger in orthopedic

surgeries or in any surgeries?

A I did not see that in the record.

Q In fact, have you seen evidence they in fact did not give a warning?

A Correct.

MR. FARRAR: We'd ask to play Clip 178.

MS. PRUITT: Same objection.

THE COURT: The objection is noted and overruled.

Clip 178 may be played.

(CLIP NO. 178 WAS PLAYED.)

Q Dr. David, is this something that you would expect a reasonable prudent medical device company to warn about?

A Absolutely.

Q Why?

A Because physicians and surgeons that are caring for patients would like to know what condition they are using the device and the impact on patient care and should they do something different when that particular device is in use. They need to have the alternative to make a decision for the safety of their patient. And the only way they can do it is by getting knowledge that that is condition with forced air warming.

MS. PRUITT: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: He just showed a document on a different

device and we filed a motion in limine on it this morning. Apparently, Mr. Farrar is getting ready to talk about a warning on different product other than the Bair Hugger. There's been absolutely no fact testimony in this litigation or any other document produced that sheds light on the origins of this language.

The parties and experts have no idea whether it was included based on a genuine scientific consideration or whether it is in response to attacks on the Augustine scheme to cause people to file lawsuits. It is not relevant to the warning issue in this case.

The FDA subjects every single device to its own regulatory approval.

THE COURT: This is the strike that you're referring to?

MS. PRUITT: Yes, Your Honor, that's right.

THE COURT: Are you aware of the motion in limine that was filed?

MR. FARRAR: I have not seen it. She said it was filed today.

THE COURT: So you're unaware of it?

MR. FARRAR: I'm not aware of it.

THE COURT: We've got to take a break for me to take this up. This is not something I can do right now.

MS. PRUITT: I think it was filed early this

morning, Your Honor.

THE COURT: I'd like to go until 3:10 before the break but.

MR. FARRAR: I can go back. It's fine.

THE COURT: Why don't you go back to it.

(RETURN TO OPEN COURT.)

Q Doctor, we'll come back to that question. I want to move and talk about the other methods that the Bair Hugger can cause infections that you talked about. I call it the dirty machine and that's where it sets up particulates and increases that over the surgical field, okay?

A Okay.

MS. PRUITT: Object to the commentary, Your Honor.

THE COURT: Overruled.

Q Did 3M conduct any testing with respect to whether the contaminants inside the Bair Hugger could ultimately migrate to the surgical field?

A No, I did not see any evidence of that.

Q In fact, did you see evidence to the contrary that they did not do any of that testing?

A Yes.

MR. FARRAR: We would like to play Clip 39.

(CLIP NO. 39 WAS PLAYED.)

Q I skipped a step. I apologize. Do you have an

opinion as to whether or not there is bacteria, in fact, inside the machine and inside the hose itself?

A So as this machine is located just less than an inch above an operating room floor that is not sterile and continuously sucking air from that environment into the enclosure, that enclosure is a box that is dark, that is humid and has a heating element, great condition for an organism or pathogen to grow.

And then they have the corrugated hose with surfaces that allow for dirt to accumulate there. There's no cleaning procedure recommended in the manual for the internal of the machine except changing the filter. So that is a big risk associated with use of this machine.

Q From your review of the materials was 3M aware that there's bacteria harbored both within the machine itself and in the hose?

A Yes.

Q Is that your testimony also?

A Yes.

MR. FARRAR: Can we play 122?

MS. PRUITT: Same objection.

THE COURT: The objection is noted and overruled.

Clip 122 may be played.

(CLIP NO. 122 WAS PLAYED.)

Q Dr. David, I want to talk to you about one of those

studies that was published last year out of Stanford. This is Exhibit 1712. Doctor, is this an article, peer-reviewed literature that you reviewed upon in your opinions here?

A Yes.

MR. FARRAR: Your Honor, we'd ask to publish 1712.

MS. PRUITT: No objection for demonstrative purposes.

THE COURT: 1712 may be published for the jury.

Q You know that this was - what year was this published?

A In 2021.

Q In Stanford University, correct?

A Yes.

Q And if you'd just look at the conclusion for me. I'm sorry, the conclusion in the summary on the first page. If you can see it up, but if you wouldn't mind reading the conclusion?

A "Our study showed that the BH patient warming device could be a source of airborne microbial contamination in the OR and that individual BH and NSSS units exhibit a air output of microbial CFU than would be expected compared with incoming room air. We make simple suggestions of ways to mitigate those risks."

Q Could you tell the ladies and gentlemen of the jury in lay terms what does that mean?

A Sure. That was a study that we're looking at two

medical products in the operating room that are extending air out. One is called the SSS. Basically, it's a suction machine that collects waste in the surgical site to contain it and prevent infection.

And the other one was the Bair Hugger. They took samples from their procedure every 10 minutes I believe on something called blood units and calculate the amount of CFUs that were found during those procedures.

Q And if you'll look at the table on page 2 we can see the results. What was colony forming units for incoming air?

A For the incoming air it's showing 8.75.

Q With the unit off?

A The next one is 13.54.

Q And the Bair Hugger?

A And, the Bair Hugger is 26.04.

Q On the same page under Discussions, Doctor. If you would I'm going to have you - there is just a word or two on the next page.

A "The heated air from BH is filtered once at the intake manifold underneath the device, and it circulates through the machine and output hose before reaching the patient. All parts following the filter are exposed to OR air, and even with the well-functioning HEPA filter, it is quite possible that particulates from the OR air can enter the open-ended hose and settle within the corrugated tubing only to be reintroduced back

into the heated air when the machine is turned on.

This concept is supported by two studies that isolated multiple staphylococcus SPP from the internal air path surfaces of the BH. These same investigators confirmed that BH filters in use as recently as 2013 were operating at an efficiency of 61.3 to 93.8 percent, well below industry standards."

Q So I want to see if I understand that. The filter that's down below here, I think you said at the end it's well below industry standards?

A Correct. Because you call it a HEPA filter, high efficiency particulate air removal and it must be 99 percent or above. And as you can see, they didn't find it.

Q Are you aware is 3M ever told folks that they had a HEPA filter.

A I believe they did.

Q Did they ever - did they actually have one on the 750?

A I don't think so.

Q Did you see testimony in documents from 3M explaining what they believe the purpose of the filter on the bottom of the Bair Hugger is?

A I probably did. I don't think I recall what it was.

Q I want you to turn to the next page if you would. By the way BH is Bair Hugger, correct?

A Correct.

Q Would you read the portion I highlighted up there

please?

A "These blankets have over 1,000 holes and provide no additional filtration, therefore, sampling from the blanket itself while closer to the actual OR conditions would have increased the risk of introducing room air."

Q The blankets being talked about are these disposable blankets right here, correct?

A Correct.

Q The researchers at Stanford said they have no additional filtration, correct?

A Correct.

Q In fact, if 3M trying is to tell doctors or hospitals that that filter - I'm sorry, that that blanket is an additional filter with that be a legal claim they could make?

A Unless they can show studies that support the statements, it would be misleading and inappropriate.

Q Misbranding would be the word, is that right?

A Misbranding, yes.

Q But the lawyers can say it here but the actual company cannot tell doctors or physicians that that blanket acts as a filter, is that correct?

A Correct.

MS. PRUITT: Objection, leading, Your Honor.

THE COURT: Sustained.

MS. PRUITT: I'd ask to strike the answer, Your

Honor.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: So I'm not going to strike it. It's an objection likely and I know that he's moving quick but just try to be more timely because with an objection like leading I'm not going to strike answer just so you guys know moving forward.

(RETURN TO OPEN COURT.)

Q Dr. David, let me ask you this real quick. Do you have an opinion as to whether or not 3M knew that their hoses were dirty?

A Yes.

Q Did you see evidence where they tried internally different design concepts to design that issue out?

A Absolutely.

Q And we talked earlier and you said that there was the design trying to design it out and then warned, correct?

A Correct.

Q So designing it out would that be the first step?

A Correct.

Q Have your seen a company try to design out a problem that doesn't exist?

A No.

Q So if there's evidence that they were trying to design

away from this issue, they're telling you there's a problem that exists?

A They're trying to overcome some type of problem.

Q I'm going to hand you what's marked as Plaintiff's 725 an ask you if this is one of the documents that you have reviewed in your work? Before I do that, I forgot one question.

On the Stanford study from 2001, can you read the first sentence where it starts with "In conclusion" please?

A "In conclusion the BH is likely a direct contributor to an increase burden of airborne microbes in the OR."

Q The Bair Hugger's is the BH, correct?

A Correct.

Q Back to 725. Is this one of the documents that you reviewed and relied upon in forming your opinions in this case?

A Yes.

Q And this is an internal document?

A Correct.

Q And does it deal with the issue of contaminants in the Bair Hugger system itself and in the hose?

A Correct.

Q And do you see the date on it?

A March 5th, 2014.

MR. FARRAR: I'd offer Exhibit 725 into evidence.

MS. PRUITT: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: I have an objection to this document being used for demonstrative purposes. It's hearsay and it doesn't come into evidence. He's just moved it into evidence.

MR. FARRAR: It is a statement by a party opponent that's offered against it. This design concept is at issue. The objective on page 2 - the object is to create ideation concepts of ways to keep the hose clean. It's being offered for demonstrative purposes.

THE COURT: But I don't think a sufficient foundation has been used nor do I find the exhibit in its entirety to be a statement of a party opponent. So at this time the objection is sustained to the admissibility but the use for demonstrative purposes will be allowed.

(RETURN TO OPEN COURT.)

Q Do you have 725 in front of you?

A I do.

Q Go ahead and put up the demonstrative if you will. This is March 5, 2014. You can see 3M up there at the bottom, correct?

A Correct.

Q And you understand that the folks that wrote this for 3M employees - well, let me ask you this. What do you understand the purpose of this document was?

A So this document I found as part of the 3M discovery process where internal documents from their engineering section were produced showing and those activities.

Q If you'll go to page 2 and the left is a little bit cut off because of that Bates number. But you see down the second one it says "Objective for the 'ideation'. Could you read what the objective is?

A "Great ideas and concepts on ways to keep the hose clean."

Q And they had a couple of different ideas and concepts. What are those three?

A Three are insertable filter, modular disposable hose and self-cleaning system.

Q And insertable filter. What is your understanding of what that means?

A The document is continuing to cover each one of those three topics with the specific design. They came out with potential solutions to the problem of the Bair Hugger case and the hose being dirty. One is to have a filter built of specific to be inserted into the hose.

Q At the end here?

A Actually, where they're showing it is closer to the top.

Q Okay.

A And the idea is to put another barrier for the dirty

particulates to reach the blanket.

Q I'm not going to go through every different idea but if we sort of go through the document. Is 3M continuing to look at different ways for an insertable filter first?

A Correct.

Q And they had a different idea only also that was a modular hose. Can you explain what that is?

A Yes. So the second idea was can we break the system down to modules? And then the modules can be replaced, can be disposable and may be used for one patient at a time only.

Q So it would be disposable like the blanket, right?

A Correct.

Q Do you understand that a new blanket is sold for each surgery, correct?

A Yes.

Q That's how 3M continues income with the product. It sells a blanket for each surgery, do you understand that? Is that right?

A I guess it's right. I can't see their books. I don't know.

Q So, again, modular disposable where the hose is disposable. And the last way was a self-contained cleaning system. We don't have to go through that. The point I'm getting at, Dr. David, is in 2014 3M - is it fair 3M was trying to design away for this problem of a dirty machine?

A That's clear.

Q Did you also see evidence that 3M considered a antimicrobial coating?

A Yes.

Q What is an antimicrobial coating?

A Actually, it's something that go very popular during COVID because we all wanted to make sure that surfaces are clean and we have tools to fight the virus. Antimicrobial meaning that you're providing a final surface by spraying an agent that does not allow for a pathogen to go or to come in.

Q I'm handing you what has been marked as Plaintiff's Exhibit 178 and ask you is that a document you reviewed and relied upon in making your opinions in this case?

MS. PRUITT: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: I'm sorry to keep doing this but they have - they're supposed to give us the list of exhibits that they're going to use with these witnesses. The last exhibit I just checked. They didn't give us a list and they haven't given us this one. I'm sitting here on the fly trying to figure what the heck it is.

We've had this happen. It's not fair for them to come in here and just start handing out documents that they haven't told us that they're going to use with this

particular witness.

MR. FARRAR: These are the two documents as reported. I don't know how else to do it. It's always moving. It's my core work product. I've given you my outline.

THE COURT: Which one are we talking about, 178?

MR. FARRAR: Correct.

THE COURT: But your response is that 178 isn't included in his report?

MR. FARRAR: Right, it is. This document is in his report.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q Do you see the date on 178, Dr. David?

A Yes.

Q And, I guess tell me what Exhibit 178 is and what the date is.

A June 4th, 2009. And it is titled *Anti-Microbial Assessment Report I for Arizant.*

Q Is this something you used and relied upon for your opinions in this case?

A Correct. It's part of my report.

MR. FARRAR: We'd ask to move 178 for demonstrative.

MS. PRUITT: I have no objection to

demonstrative.

THE COURT: 178 will be used for demonstrative purposes.

Q Can you tell me what this study – sorry, the report from BION shows?

A So they use a laboratory to measure micro-organisms volume before and after certain time period and application of a microbial layer. The idea was to spray the inside of the hose with this agent that delays the condition that allows an organism to grow.

Q So if we're looking at the Arizant, again, this was June 4th, 2009. We see this 3.14 billion. Can you tell me what that is?

A So this is the number of micro – the volume of micro-organisms that can cover from control up to 24 hours.

Q The control is just the Bair Hugger 700 series, correct?

A Correct.

Q If they used this antimicrobial covering, what is the results of the sampling?

A That is showing in the next column which is showing that it is less than 100.

Q So the Arizant folks are saying if use our coating in the tube, you'll go from 3.4 million bacteria to less than 100?

A Yes.

MS. PRUITT: Objection.

THE COURT: Sustained.

Q Tell me with the difference is between those numbers.

A It's significant when we talk about 3 million and something and you talk less than 100, you are looking at their list that you have reduced significantly.

Q If we look at the last page at the top, do you see those - what are those called, those little plates?

A Agar plates.

Q Agar plates?

A Yes.

Q Can you tell me what we're seeing on the top between the two different agar plates?

A Those are plates that are using a laboratory to determine changes in the volume of pathogen organisms, if they're staying the same, less or more as well as you can identify the type. In this plate she could see on the left that after the application of the antimicrobial surface, the agar plates seem to be clean. And on the right, you can see in multiple areas.

Q Did 3M ever implement antimicrobial coating to this hose?

A I don't believe so. I did not see it.

Q I asked you a question earlier. It's a little bit different. Have you seen - let me ask it a different way. Has

3M done any tests internally to see if the bacteria can come out of the hose and into the surgical field?

A Not that I've seen.

Q In fact, you have seen evidence that says they have not done that, correct?

A Correct.

MR. FARRAR: Your Honor, we would ask to play Clip 48.

MS. PRUITT: Same objection

THE COURT: The objection is noted and overruled. Forty-eight may be played.

(CLIP NO. 48 IS PLAYED.)

Q Has 3M ever warned doctors or hospitals that the Bair Hugger harbors bacteria?

A No.

Q And do you know specifically from looking at the video clip deposition today, as far as you know, they've never done that, correct?

A Correct.

MR. FARRAR: Your Honor, I would ask to play Clip 132.

MS. PRUITT: Same objection.

THE COURT: The objection is noted and overruled. 132 may be played.

(CLIP NO. 132 WAS PLAYED.)

Q You know that they've never warned about that issue, correct?

A Correct.

Q Is that something that doctors and hospitals would expect to be warned about?

MS. PRUITT: Objection Your Honor. This physician is not a doctor. There is no foundation for the question.

THE COURT: Your response?

MR. FARRAR: He's expert in the field of warning for specifically doctors.

THE COURT: The objection is overruled.

A So we in the hospital have a system where we have specific critical information coming from an infection alerting about things associated with the device. Sometimes they are part of the instructions for use. Sometimes they can later when evidence is discovered. So it's critical for the user in the hospital like myself to be aware of such information, therefore, being able to direct the physician to seek alternative instruments or decide on a different type of care.

Q Is it fair to say that a doctor knows that the outside of this is not sterile?

A Right, it's not.

Q Is it different that knowing it harbors bacteria inside the machine and inside the tube?

A No, that's completely different because we have several similar situations. For example, infusion pumps that are going from patient room to patient room to the OR and recovery. They are cleaned outside and there's nothing that goes to the patient that is coming from internal part of the machine.

Q Is there a way to open this machine up and sterilize it and clean the inside of it?

A The fact that it opened up, there is a way but it's not been part of the instructions for use, not recommended to be done. And the internal inside of the device is not induced for pouring alcohol and other cleaning solutions.

Q If a reasonable manufacturer of medical devices changed the environment for use of their device, do you or would you as an expert still expect there to be testing to ensure it's safe in the new environment?

A That's a basic standard of care that we in the hospital would expect.

Q Are you aware, sir, that the original Bair Hugger 200 was not meant to be used in the OR?

A Yes.

Q And at some point, a model came along that moved into the OR, you understand that, correct?

A Yes.

Q In your review of the materials and investigation, did

you see that 3M or any of its predecessors had done anything to ensure it would be safe when moved into the OR where people have open incisions?

A I have not seen any.

Q And, in fact, what you saw was the exact opposite, they did not do that, correct?

A Correct.

MR. FARRAR: Can we just play Clip 130.

MS. PRUITT: Same objection.

THE COURT: The objection is noted and overruled. 130 may be played.

(CLIP NO. 130 WAS PLAYED.)

Q Dr. David, is it reasonable to move a device that blows air from outside the operating room to inside the operating room to perform internal or external testing to determine if that's safe?

A It's not responsible.

Q Why not?

A Because you are causing hazard that make a risk of reality and damaging patients.

THE COURT: Why don't we go ahead and take our afternoon recess. Folks, we're gonna recess until 3:30. We'll be in recess till 3:30.

(BREAK AT 3:08 PM.)

THE COURT: Okay, guys, why don't you come up and

let's make a record regarding the motion in limine in that testimony. We're outside the presence of the jury. During Dr. David's direct examination ... do you mind stepping out into the hallway, sir?

Okay so during Dr. – is he a doctor?

MS. PRUITT: He's a Doctor of Education.

THE COURT: ... Dr. David's testimony direct examination there was a question regarding Trial Exhibit 382 which the defendant filed a motion in limine on. I believe it was received this morning. Ms. Pruitt, would you like to make additional argument as it relates to your motion?

MS. PRUITT: Yes. Your Honor, they're going to try to use a warning on a different device than the Bair Hugger and it's a products case. And the touchstone for what warnings go into devices and so forth are based on a specific product. Just because another product has a different warning or a substitute warning or an additional warning is not relevant to the issue of whether we should have warned.

The evidence is about what Bair Hugger should have or shouldn't have done. It's not admissible to hold up everybody else's warnings and to use that as some kind of a comparator to suggest that if they did it you should've done it too. That's improper.

If they're going to do that you would have to spin off and have a complete mini trial on what you went through on the regulatory process, what made you decide to do it. We don't have any foundation that they were doing it for any safety reasons.

There's actually evidence that they could have been doing it to keep themselves from being sued. So to just let a warning get thrown up and to make a suggestion or try to get the jury to infer that another device had a different warning is not probative of anything and it's designed to prejudice the case.

It is not the touchstone of what we should've done with regard to our relationships with the FDA and what the FDA approved with regard to our warnings. And I've been involved in a lot of products cases where this issue has come up, Your Honor. And, typically, the warnings are not to be used as a comparator to the product that's actually at issue in this case which is the Bair Hugger, not the Mistral.

MR. FARRAR: So a few things, Your Honor. The motion in limine is untimely. This is, again, a document directly cut-and-pasted in Dr. David's report. So they've known it was coming. More fundamentally, 3M asserted there is no risk associated with this.

I have to prove - I have to warn the company either

knew or should have known of a risk. So the fact that this other company in 2009 is warning for a risk, if I lay the foundation that this is a similar product, has the similar risk factors that they warn on, it's directly relevant to whether or not 3M should have warned on their product as well.

If the Mistral did not have a warning I suspect it would be in here and saying they don't have warnings known to the industry at the time. This proves it was known.

THE COURT: I'm not inclined to allow it. And if you make an offer proof in that regard and I can consider the testimony. I can't have you lay the foundation for that without the jury hearing it. So if you want to do that, you know, we can do that. But without hearing that I'm not inclined to allow 382 into evidence. So do you want to make an offer proof?

MR. FARRAR: I do. But to be clear, I wasn't going to offer it into evidence.

THE COURT: Testimony and evidence as it relates to it.

MR. FARRAR: I guess we were on the same page. Should I do it now? Is it okay?

THE COURT: I'd like to take a break so how about we take a 10-minute break and then I can't imagine the offer of proof will take longer than five minutes.

(OFF THE RECORD.)

THE COURT: You guys ready to make the offer proof? We're outside the presence of the jury. And can I have that exhibit back? The Court took up the defendant's motion in limine regarding, as they call it, the strike for literature and the Court was considering 382. So Mr. Farrar wanted to make an offer proof so, Counsel, you may proceed.

OFFER OF PROOF BY MR. FARRAR

Q Dr. David, did you review Exhibit 382 to form the basis for your opinion here?

A Yes.

Q Is this a technical manual for a different forced air warming device?

A Yes.

Q Did you look at that forced air warming device in terms of how it operates and things like that?

A Yes.

Q Does it operate similar to the Bair Hugger?

A Yes.

Q Does it have a blowing unit that warms warm air through a hose and out a blanket and onto the patient?

A Correct.

Q Do you have the date of November, 2009 at the bottom

of this?

A It looks like November of '09.

Q Does the manufacturer of the Mistral-Air M-I-S-T-R-A-L Air forced air warming system have a warning regarding blowing airborne contamination?

A Yes.

Q What does this one say?

A It says under safety precautions that the Mistal-Air Plus warming unit is safe for use. However, airborne contamination should be taken into consideration when using the warming system.

Q Why is that relevant to your opinions?

A Because here is a device that is functioning and operating very similar to the Bair Hugger and yet it carries clear communication to the user that there is residual risk associated with the use of the device.

Q Do device manufacturers warn about risks that don't exist?

A I guess they could.

Q Does this warning show that it was technologically and economically feasible to warn in 2009?

A Yes.

Q Does it demonstrate that the industry, other manufacturers in the industry knew that there was risk of airborne contamination with the use of forced air warming?

A Correct.

MR. FARRAR: That's all, Your Honor.

THE COURT: Ms. Pruitt, do you have any questions as it relates to the offer of proof?

MS. PRUITT: Yes.

BY MS. PRUITT

Q Hi, Dr. David. I'm Lyn Pruitt. I have a few questions about the Mistral-Air. Did you review the FDA records with regard to the Mistral?

A Yes.

Q Do you know what the discussions were between the FDA and Stryker regarding warnings about airborne contamination in this case?

A I don't believe I saw that.

Q Do you know who drafted the warning for the Mistral-Air Plus Warming Unit at Stryker?

A I didn't hear the beginning of your question. Sorry.

Q Do you know who drafted the warning language from Stryker?

A No but I know the process so I can guess that somebody at the FDA helped them out.

Q Do you know why the motive for Stryker in drafting this warning, in other words, whether they voluntarily drafted it for reasons about litigation and things that were being

discussed on the market at the time about airborne contamination? Do you know it all one way or the other?

A I do not.

MS. PRUITT: That's all I have.

THE COURT: Okay. Sir, do you mind stepping back out to the hallway. Thank you. Any further argument from the plaintiffs?

MR. FARRAR: Just to be clear, we're not offering it for the truth of the matter asserted but rather notice that this was an issue in other devices and that it's feasible in contemplating technology.

THE COURT: Ms. Pruitt?

MS. PRUITT: Your Honor, the evidence has already been cumulative on the notice issue about airborne contamination. And it involves this product, the Bair Hugger and not the other product. And so to suggest that they're just offering it for notice because there's nothing else to put us on notice, they've already established that.

And to introduce a document that has no - this witness nor any other witness knows what's knows what the negotiations were on the warning, knows the reason why the company did it, knows who drafted it and it just sets it up for a complete mini trial on this issue.

And, quite frankly, you know, it's a waste of our time to try to focus back on Mistral and try that warning

because we're here to try the Bair Hugger warning. And we object to its admissibility for any purpose, either demonstrative or in evidence.

THE COURT: The motion in limine or the motion will be sustained and the Court will not allow testimony as it relates to the strike for the literature as indicated or Trial Exhibit 382. Any further record from the plaintiff?

MR. FARRAR: No, Your Honor.

THE COURT: From the defendant?

MS. PRUITT: No, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(RETURN AT 3:25 PM.)

THE COURT: We'll continue with the direct examination. Sir, I will remind you that you remain under oath. Mr. Farrar.

CONTINUED DIRECT EXAMINATION BY MR. FARRAR

Q Doctor, I'm handing you what's been marked as Exhibit 903 which is already in evidence. Do you know what the word contraindicated mean?

A Yes.

Q What does contraindicated mean?

A It's part of communication this us used in the medical device, communication to user that the use of - it can be a drug

or a device for a particular condition or section of the patient population that is not a device.

Q If a device is contraindicated for either a particular patient or surgery, is that information that has to get to the doctor or hospital?

A Oh, absolutely.

Q And why is that?

A Because it is suggested there is a condition that if you don't follow the advice an adverse event will take place and there's no reason for that.

Q And you've seen Exhibit 903 before, correct?

A Yes.

Q And if you would, turn to page 12.

MR. FARRAR: Your Honor, this is in evidence if I can publish.

THE COURT: Any objection to that?

MS. PRUITT: No objection.

Q Do you see there's a chart doing a comparison between pre-warming and forced-air warming or the Bair Hugger. And do you see the advantage or pre-warming over forced-air warming that I have highlighted?

A Yes.

Q What does that say?

A Can be used when intraoperative warming is contraindicated (aortic cross clamp, orthopedic cases.)

Q Do you also see where an advantage of pre-warming over Bair Hugger is the one that starts with "Reduces." Can you read that?

A "Reduces the incidence of surgical site infection."

Q Do you see the one that "Does not contaminate."? Can you see that.

A "Does not contaminate sterile field."

Q Do you see the one that says, "Reduces the potential for nosocomial."? Can you read that?

A "Reduces the potential for nosocomial transmission of pathogens by eliminating the need for intraoperative warming."

A That means that by not using a warming means, the potential for infection can be eliminated.

Q If you look at the front cover of this document you'll see who authored it.

A It says Arizant.

Q Dr. Al Van Duren?

A Correct.

Q The date?

A September 6th 2007.

Q In your review of the materials, Doctor, did 3M or Arizant ever warn that the use of the Bair Hugger is contraindicated in orthopedic cases?

A No.

Q Did they warn that use of the Bair Hugger contaminates

the sterile field?

A No.

Q Did they ever warn that the use of the Bair Hugger increases the incident of surgical site infections?

A No.

Q Did they ever warn that the use of the Bair Hugger has the potential for nosocomial transmission of pathogens by eliminating the need for intraoperative warming?

A No.

Q The things that Al Van Duren says that risks associated with the Bair Hugger were never communicated to people, is that fair?

A That's correct.

Q Is that something that you would expect a reasonable company to have told clinicians?

A I would expect it and it's a standard of care.

Q I want to talk to you about the dirty machine and its use of alternative designs. There's a study I wanted to show you that's marked as Plaintiff's 2215 and ask if this is something that you've seen in your review of the materials and if you find it authoritative?

A Yes, I believe I saw this before.

Q Where was it published?

A In the Annuals of Medical Surgery, a very reputable journal.

Q When?
A October 28, '21
Q And does this support your opinions regarding the dirty machine and the use of safer alternative designs?
A Correct.
MR. FARRAR: We'd like to publish this to the jury, Your Honor.
MS. PRUITT: No objection for demonstrative purposes.
THE COURT: Can you give me that number again please.
MR. FARRAR: It's Plaintiff's 2215.
THE COURT: 2215 will be published.
Q And just for explaining, this is called the Lange article, that's the author, correct, L-A-N-G-E?
A Correct.
Q And we're just going to jump to a conclusion. Can we put it up for the jury, please?
THE COURT: I'm sorry, Counsel. Can you approach.
(BENCH CONFERENCE.)
THE COURT: You said 2215?
MR. FARRAR: Yes, Your Honor.
THE COURT: So I already have a 2215.
MR. FARRAR: We'll mark this at 2216.

THE COURT: And can you give me a title for it?

MR. FARRAR: The title?

THE COURT: Uh-huh.

MR. FARRAR: It is Forced Air Contamination Risk in the OR.

THE COURT: And just a date?

MR. FARRAR: October 15th, 2021.

(RETURN TO OPEN COURT.)

Q We have renumbered this. Dr. David, this is 2216. If you would again read the conclusion.

A "FAW forced air warming device component contamination is a real risk in the OR. Cross contamination of the environment is a risk factor. As hypothesized in the 2018 FAW study, a reduction in surface and airborne colony forming units they positively reduce infection risk. Based on the correlation between pathogen and SSI risk, it has been determined that infection risk may be limited to the use of alternate patient warming technology/techniques."

Q Is that saying that something like the Hotdog can eliminate this risk?

A It doesn't call to a specific technology but that's the essence.

Q And it says FAW. I'm not sure if this is the Bair Hugger or it identifies what product was used. Do you know -

well, I'll start again. Forced air warming - is the Bair Hugger forced-air warming?

A Yes.

Q There may be some other devices also but the Bair Hugger is a forced-air warming device, correct?

A Yes.

Q It is incumbent upon a medical device company to continue testing their products while it's on the market as opposed to just once it goes on and you sort of let it go?

A No, it's part of the normal procedure and expectations.

Q Why?

A Because things change, not just in healthcare but also in hospitals. And new users and new indication with other cleaning solution environments and air handlers are all part of the reason to continue to test.

Q Did you see evidence that 3M shut down any continuing safety testing of the Bair Hugger at some point?

MS. PRUITT: Your Honor, may we approach.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. PRUITT: This is the same issue that we've been dealing with on this Chan article where the Court has ruled that all that has occurred in testing is privileged information. And you specifically told them ...

MR. FARRAR: I'm doing that on this issue.

MS. PRUITT: ... that's what this question implies, Your Honor. Are you aware of any testing that 3M has shut down?

THE COURT: What was the question that you asked?

MR. FARRAR: Are you aware that 3M shut down testing at some point in time. It has nothing to do with the CFD.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q Dr. David, the question was have you seen evidence that at some point 3M shut down testing related to the safety of the Bair Hugger?

A Yes.

Q I'm handing you what I've marked as Exhibit 134. I'm really only going to focus that very top paragraph of this email. And do you see that it says, "Internal 3M email.?"

A Yes.

Q Does it relate to testing about the safety events such as safe forced-air warming?

A Right.

Q Do you see on page - on the notes, the date?

A July 10, 2016.

Q And who is it from?

A For Mark Vulcan.

MR. FARRAR: We'd move Exhibit 130 into evidence, just the top paragraph.

MS. PRUITT: May we approach, Your Honor.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Once again I need to know some information about this email. I could've had this together if I was told they were intending to use this. But this Trial Exhibit 134 is a 3M document and he's only looked at 64 3M documents out of 300,000. I have no idea if he had it in his report and relied on it. That's the first. The second it's again hearsay.

THE COURT: May I see it?

MS. PRUITT: It's hearsay through this expert witness so it shouldn't come into evidence at all.

THE COURT: Counsel, what's your response?

MR. FARRAR: In 2015, 3M through their critical research manager said that they have stopped pursuing clinical research on the safety of the Bair Hugger. That is very relevant to his opinion. Ms. O'Haver's surgery is in 2016. He said for a good device manufacturer that is completely unreasonable and there should have been more testing on that.

THE COURT: The Court will allow that limited portion. I'm not going to allow 134 in in its entirety,

but that limited statement that the Court will attribute to 3M will be allowed in.

MR. FARRAR: So just that sentence?

THE COURT: Yes.

MR. FARRAR: I'll just have him read it.

MS. PRUITT: Just to be clear Your Honor, also I want the Court to know that the last sentence, also we would need to really understand what type of study is being proposed given the ongoing legal situation where decisions were made previously on high-level not to pursue clinical research on this topic.

This is all wrapped up with the Augustine attempts to dis this product, his contact with the FDA, his manipulation of the studies, everything that Augustine has done to make sure that everybody hates the Bair Hugger. That is the subject matter of an underlying part that this email is based on.

THE COURT: That may be so, but the fact of the matter is this is a statement made by 3M that I'm going to let this witness testify about. I don't believe that the door has been opened as it relates to the Augustine issue. But for that very limited purpose I'll allow the statement to be considered by the jury.

(RETURN TO OPEN COURT.)

MR. FARRAR: Your Honor, so 134, that one portion

is in evidence now, is that correct?

THE COURT: That's correct.

Q Doctor, I'm going to make it easy so I'm going to read it to you. But if you look at the first paragraph there's a sentence that begins with the word "Given," do you see that?

A Yes.

Q And it says, "Given the ongoing legal situation decisions were made previously (at a high level) not to pursue clinical research work on this topic." Did I read that correctly?

A You did.

Q Did you understand from looking at the subject the topic is the *Safety and Efficiency of Forced Air Warming*?

A That's what it says.

Q Is it reasonable for a company to stop doing clinical research on its product?

A If they answer all the questions and remove all the risks it could be reasonable.

Q Was that the reason 3M did?

A No.

Q Can you define the word safer alternative design?

A Safer alternative design is a definition that's used to suggest that if a product is being introduced to the user and the public and it's not safe, there is a need to come up with an alternative design, something that will make it safer. That is

the concept.

Q Before - I jumped ahead of myself. We're going to do one thing first. There was a discussion to the jury about some alternatives to forced-air warming. I want to talk to you. In your analysis do you have to weigh the risks versus the benefits?

A Correct.

Q I'm handing you what is marked as 1599. It is an article that we discussed earlier in the case called "Protect." Have you reviewed and relied upon this to form the basis of your opinions in this case?

A Yes, I reviewed this paper as well as the PowerPoint presentation that goes along with it.

Q How many patients did this Project Protect have?

A They have if I recall over 5,000.

Q 5056?

A Yes. They're now incorporating some hospitals that include the Cleveland Clinic and 12 Chinese hospitals.

Q And you know this came out in 2022, correct?

A Correct.

MR. FARRAR: Permission to publish this to the jury.

THE COURT: The exhibit number again?

MR. FARRAR: 1599.

MS. PRUITT: No objection for demonstrative

purposes.

THE COURT: 1599 will be published to the jury.

Q So it's published in May of 2022, correct?

A _____ Medical Journal.

Q Do you see the author, the first author?

A Yes.

Q What's his name?

A Daniel Sessler.

Q And do you know that Dr. Sessler was a paid consultant for 3M at one point?

A No.

Q In this study to sort of a short-circuit it they had an actively aggressive warm group and then what was the other group?

A So what they tried to answer is the question is warming is all that is needed in surgical procedures, or can there be another way to keep the patient what's called normothermia situation or condition. So they looked at aggressive warming versus routine thermal management.

Aggressive warming provides times even to the Bair Huggers where at least one Bair Hugger connected to a patient before and during the surgical procedures keeping the core temperature at 37 degrees centigrade.

The routine thermal was a second group of about even number of - almost an even number of patients where the patients would

be kept warm with blankets and the Bair Huggers would be on only if the core temperature would drop below 35.5 degrees centigrade.

Q And there was no prewarming in that routine care, correct?

A Correct.

Q The jury was shown a slide and this was the best copy that we could get during opening of the advantages of normothermia, staying normothermic during surgery, do you see that?

A Yes.

Q And I know you've never seen that before, but I want to compare that with the results in that Protect study. So I am looking at table 2. Do you see surgical site infections?

A Yes.

Q And it's up here to help you a little bit. Under the aggressive warming, what percentage of people had a surgical site infection?

A 7.2 percent.

Q And what in the routine care, what percentage?

A 6.3 percent.

Q So less than the routine care, correct?

A Correct.

Q And surgical site infection can sort of be any of that, correct?

A Correct.
Q So if we look back at the opening chart, we know from Project Protect this year of 5,000 patients, that this is not accurate anymore, correct?
A Correct.
Q But we look at the next one. "Transfusion Requirements." What percentage of transfusion requirements in the aggressively warming?
A 10 percent.
Q What percentage in the routine care?
A 9.5 percent.
Q So if you look over again, blood transfusion, this is not an accurate statement, correct?
A Correct.
Q If you look at median length of hospital stay, it's the same for both aggressive and routine care, correct?
A Same number of both, yes.
Q So for length of hospital stay we could cross that out, correct?
A Correct.
Q If we look, there is a section on that same page that shows orthopedic, specifically orthopedic care. Do you see that?
A I do.
Q Does the findings in this study say that routine care

or aggressive warming is more useful for orthopedic patients?

A It says this study favors routine care.

Q So not the active warming, correct?

A Correct.

Q So then if there's no benefit is any risk reasonable?

A Yes because every product and device have risks associated was it. If you could eliminate that you are protecting the patient and to be safer and with less unintended outcomes.

Q I want to show you one more memo from Mr. Van Duren marked Plaintiff's 1777. I believe it is in evidence. Is this an internal document you reviewed and relied upon informing your opinions in this case?

A Yes.

Q That is offered by Al Van Duren, correct?

A Yes.

Q And the date is October 10, 2019, correct?

A Yes.

MR. FARRAR: We'd move 1777 it evidence please.

THE COURT: For demonstrative?

MR. FARRAR: No, in evidence.

MS. PRUITT: May we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, before this is moved

into evidence I would like to have a chance to look at this. It's one of the documents he put in his report. He already viewed 64 other documents and I'll have somebody look as quick as I can.

MR. FARRAR: I can show you real quick it's in there.

THE COURT: Do you have the reports showing it?

MR. FARRAR: It's in seven in the report.

MS. PRUITT: Okay. Your Honor, the objection is not based on that, Your Honor, but just that this is a hearsay document. He's wanting to put the whole thing into evidence. Again, Al Van Duren does not have the authority to bind the company on some of the issues in this document.

There's been no foundation or authority laid that he defines the company on scientific articles, purpose of scientific orders or anything of the sort. He's not even a doctor.

THE COURT: Response?

MR. FARRAR: Yes, it's a statement by the party opponent. It's Al Van Duren specifically citing the benefits for decades on the benefits based on all studies that are no longer applicable the new device. That's a direct statement. I think it's in a 1668. It's marked in different places.

THE COURT: 1668 was admitted over your

objection.

MS. PRUITT: Your Honor, I'm just trying to be careful.

THE COURT: I get it. No worries.

(RETURN TO OPEN COURT.)

THE COURT: Okay. What we have come to realize is that I forgot the number. Regardless, the exhibit that's now being referred to as 1668, is that correct, counsel?

MR. FARRAR: It is, Your Honor.

Q It's in evidence and I'm going to short circuit so the jury can see that. I'm going to go back to Project Protect and I'm going to talk about heart attacks.

If you would like to short-circuit, I'll read this section and you tell me what it means. "There was nonetheless no significant or clinically meaningful difference in the primary composite outcome of myocardial injury, nonfatal cardiac arrest and 30-day mortality. The incident of myocardial infarction was also similar in each group."

What does that tell us about whether or not aggressive warming helps prevent heart attacks?

A So this multi-centered study is saying that after reviewing over 5,000 patients that they have not found a significant difference between that two methods of warming patients. And they continue an additional conclusion as well.

Q So what the jury was told in opening about the benefits of forced-air warming on or normothermia, it turns out we have a 5,000-person study from 2022 that says those are no longer benefits, correct?

A Correct.

Q Because the operating rooms have changed significantly in the 20 or 30 years where studies did show a benefit, correct?

A More than just the operating room, but the medical practice changed as well and orthopedic surgical procedure, for example, are becoming a faster pace.

Q Operating rooms are warmer now than they used to be, is that true?

A I don't know.

Q How about the fluids that they use intravenously, are they warmed up now?

A Right. The IV fluid, blood transfusions are warm.

Q You're aware - we were talking about safer alternatives. I want to show you what has been marked as 2211 and ask you if this is a 3M email discussing alternative designs to forced-air warming?

A Yes. I saw this document as I reviewed materials provided by 3M and Jay Issa.

Q And there's a chart in the back that lists different types of forced-air warming - I'm sorry, different types of interoperative warming technologies, correct?

A Correct.

Q And it has a chart that says "Disadvantage, Safe and Effective and Easy to Use" and things like that, right.

MR. FARRAR: I would move Exhibit 2211 into evidence.

MS. PRUITT: May we approach, Your Honor.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. PRUITT: This appears to be hearsay. It is a hearsay document. It's not any kind of an admission. It's a marketing document where they discuss different products and how they're going to deal with the perceptions of products by the consumers. It has nothing to do with specific studies or scientific research about those products or that somebody thinks based on the science one is better than the other, none of that.

It's a marketing document that has to do with perceptions as you can see from email up front. Remember that this needs to be looked at from a customer point of view and how they perceive the attributes received from each modality. So it's not probative of the issue of safety and advocacy. All this is is a marketing document and I don't believe that anything in it is an admission by a party opponent other than that these other things are being sold in the market still accounts your response.

MR. FARRAR: It's an admission of other modalities to warm a patient. It's that research they put together. It's an admission by party opponents. It's not hearsay.

THE COURT: The Court does not find Exhibit 2211 to be an admission of a party opponent. The objection is sustained.

MR. FARRAR: What about the motion for demonstrative to show?

THE COURT: The Court will not allow that either.

(RETURN TO OPEN COURT.)

Q Dr. David, are you familiar with the NICE guidelines?

A Yes.

Q What are the NICE guidelines?

A Yes. The word NICE came from the abbreviation of the title of the National Institute for Clinical Excellence. It's a UK British organization that is trying - came to the reality because they tried to equalize the care and the technology used for patients in the UK.

Q Did you review the 2016 NICE guidelines to help form the basis of your opinions in this case?

A Yes.

Q Is there a discussion about the comparison between conductive and convective warming?

A They do.

Q Was that part of the basis of your opinions in this case?

A Yes.

MR. FARRAR: Your Honor, we'd asked to publish 1748.

MS. PRUITT: Your Honor, is this for demonstrative purposes?

MR. FARRAR: Correct.

MS. PRUITT: No objection.

THE COURT: 1748 may be published to the jury.

Q At the bottom there's a number. If you'd go to page 13 for me please. This is really just a heading under the next page. It says *Forced Air Warming Compared with Conductive Fabric Warming in The Laminar Flow Theater*." Did I read that correctly?

A Yes.

Q So what I want to do is look at the part that says "Why is this important?" If you would read that to the jury why it's important?

A "It has been suggested that forced air warming may increase the risk for surgical site infection during implantation surgery such as joint replacement because the air flowing through the forced air warming device disrupts the airflow around the surgical site. Research suggests that conductive warming devices are less likely to cause surgical

site infections because the disruption to airflow is less than that caused by the forced air warming."

Q Now I want to talk about the RCT and we can short-circuit this. Ultimately, does the NICE guidelines say that three should be RCTs carried out to determine this?

A Right.

Q What is an RCT?

A RCT stands for Random Control Study.

Q Random Control Trial?

A Yes.

Q What are some examples of conductive warming?

A Conductive warming meaning that you have a surface that is able to be in physical contact with the patient so it's able to conduct the heat from its surface to the patient.

A simple example used all over the world is a cotton blanket put in the warmer cabinet and the nurses continuously will go to a patient's room and the warming blanket will be put on the patient.

Q Is there also a conductive warming that are electric, sort of like an electric blanket?

A Correct.

Q We talked about the Hotdog. Are there other examples?

A Yes.

Q Give me an example of some other products.

A I don't think I remember.

Q Body heat for example?
A They're in my report but I don't remember.
Q That's okay. The point is there's more than one conductive warming device on the market, correct?
A Oh yeah.
Q And obviously cotton blankets are available for anyone, correct?
A Yes.
Q Now you see this is - it says New 2016 right here. Are you aware if 3M conducted an RCT to look at the difference between convective and conductive warming in terms of infections?
A No, I did not see any evidence of that.
Q Have you seen any documents you reviewed where folks at 3M said that that would be a bad career move for them?
A Yes.
Q I'm going to hand you what's marked as 1745 and ask you if this is an internal 3M document?
A It is.
Q Written by who?
A Al Van Duren.
Q What's the date?
A April 10, 2006.
Q In this document does Mr. Van Duren say it would be a bad career move to do an RCT?

A It does.

MR. FARRAR: Your Honor, we'd move Exhibit 1745 into evidence.

MS. PRUITT: Objection, hearsay.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: Your objection is hearsay, Counsel?

MS. PRUITT: Yes.

THE COURT: Mr. Farrar, your response?

MR. FARRAR: They're clearly saying it's a bad career move to do an RTC. It's not hearsay.

THE COURT: The Court finds Exhibit 1745, the objection is overruled. And I'll announce to the jury 1745 is admitted.

(RETURN TO OPEN COURT.)

THE COURT: 1745 is received.

Q Doctor, prewarming is also a safer alternative to intraoperative warming, is that fair?

A Yes.

Q The jury has heard a lot about that but you know from your review of the materials, how long can prewarming keep a patient warm intraoperatively?

A The material I read gauged in the range of three to four hours.

Q I want to finish up with sort of a few conclusions.

Based on your review of the materials, the documents, the literature and your knowledge, do you have an opinion as to whether or not the Bair Hugger is unreasonably dangerous when used in orthopedic joint replacement surgeries?

A Based on the material I've reviewed and my expertise and examination of the product and literature in the medical field, it is clear that the Bair Hugger is a very dangerous product. There are other alternative mechanisms to warm patients and the two factors of interfering with unidirectional flow of fresh air from the ceiling to the ground during such an orthopedic procedure is relevant to usage. Unnecessarily material from the machine itself into the surgical site are unacceptable and an unreasonable risk.

Q Unreasonable risk is another word?

A Correct.

Q Do you have an opinion based on your hazard analysis and review of the documents if 3M adequately warned about known risks associated with use of Bair Hugger in orthopedic joint replacement surgeries?

A They did not and they should.

Q Because people's lives are at risk?

A Correct.

MR. FARRAR: I pass the witness, Your Honor.

THE COURT: Cross-examination.

MS. PRUITT: Yes, Your Honor.

THE COURT: Counsel, can you approach before we get started on that.

(BENCH CONFERENCE.)

THE COURT: So before I forget and while it's still fresh in my mind, is this your redacted 134?

MR. FARRAR: Yes.

THE COURT: Great. Thank you.

(RETURN TO OPEN COURT.)

MS. PRUITT: Your Honor, can we have a moment to set up? I have one more question. May I please approach?

(BENCH CONFERENCE.)

MS. PRUITT: I'm trying to plan my examination and I heard the Court's admonition which I agree with that they go at five. I just wanted to make sure that's what we're going to do today.

THE COURT: Yes, we're going to recess at five.

(RETURN TO OPEN COURT.)

MS. PRUITT: May I proceed, Your Honor.

THE COURT: You may.

CROSS EXAMINATION BY MS. PRUITT

Q Good afternoon, Dr. David.

A Good afternoon, Counsel.

Q How are you?

A I'm surviving.

Q Well I hope you do survive. So I would like for you to find the document that you were referring to just a moment ago on the NICE study. Would you do that for me please. And tell me when you have it.

A I have it.

Q Looking at the page 14 which is what Counsel was talking to you about. Why was this important?

A I'm there.

Q Okay. The same sentence that he referred to I'm going to put it up on the Elmo to make sure the jury can see it. "The RTCs should be sufficiently powered to show clinically significant differences. Primary outcomes should be surgical site infections and core temperature at the end of the surgery." Did I read that correctly?

A You did.

Q RTC stands for Randomized Controlled Trials, right?

A Yes.

Q And you know because of your work, Dr. David, that randomized controlled trials are conducted generally by independent researchers outside of the company that's doing those trials for a device, right?

A That's possible.

Q I'll ask you, and that is because the company doesn't want to be accused of trying to influence or have some control

over that study, right?

A Well the studies are sponsored by a company and they're being disclosed during the end of the study when it's published.

Q And companies have people all over in different specialties, depending what they're studying, do their own randomized controlled trials, right?

A They can.

Q And they ask for the product from the company, right, to conduct them sometimes?

A They can.

Q Okay. Now the jury has heard a lot of science today and I want to be sure that we're on the same page. McGovern is the randomized controlled trial in this case, correct?

A Correct.

Q And let's talk about the McGovern study. This suggests that "Primary outcomes should be surgical site infections and core temperature at the end of the surgery." Did I read that correctly?

A You did.

Q The McGovern study does not do that. It doesn't look at a primary outcome of surgical site infection, does it, sir?

A Well this does not mean to say that NICE is telling the world you cannot do any other studies, only what we tell you. This is talking about in this particular condition and

they're trying to cover the gap on, by knowledge, they suggest that should be the subject. But it is unreasonable to suggest that this is the only subject that NICE would say don't do any other studies, in my opinion this is the only one.

Q I'm not making that suggestion, Dr. David. What I'm asking you is in the McGovern study the primary outcome of surgical site infections, that was not the primary outcome, was it, sir?

A Correct.

Q And the core temperature at the end of the surgery in the McGovern study, that was not the primary outcome, was it, sir?

A I don't see a problem.

Q Now I want to talk to you for just a moment about your past experience. I think you told the jury that you had gone to interview for a job at Texas Medical Center, correct?

A Correct.

Q And am I correct by reading your CV that you were employed by Texas Children's Hospital and St. Luke's?

A Correct.

Q And both of those institutions are a part of Texas Medical Center, right?

A Right.

Q And you had that job - and I don't remember the exact years, but you haven't done that job since the year 2008, right?

A Correct.
Q And so 14 years ago you were in using your skills for Texas Children's and St. Luke's but you haven't done that in 14 years, is that right?
A No, that's wrong. I was not employed by those two institutions for the past 14 years but I think I was clear by saying that I continue my private practice doing similar responsibility in biochemical engineering.
Q I understand, Doctor. I wasn't trying to imply otherwise. You haven't worked in a hospital setting at Texas Children as an employee or at St. Luke's since 2008, is that right?
A That's right.
Q Now when you made a determination and told this jury that the Bair Hugger was unreasonably dangerous and that's just what you told them just a few moments ago, I need to ask you a question. Did you call Texas Children's and tell them that your opinion was that the Bair Hugger was unreasonably dangerous?
A No, I don't take my work investigations to other entities because usually I'm bound by confidentiality and NDA nondisclosure agreements.
Q Did you tell St. Luke's after you arrived at this opinion that the Bair Hugger was unreasonably dangerous? Did you tell them your opinion that it's unreasonably dangerous?
A No, they're not a party to this litigation. I did not

tell St. Luke's nor did I tell Stanford or M.D. Anderson. They are not involved in this litigation.

Q Did you know, Dr. David that Texas Children's still uses the Bair Hugger today?

A I have no knowledge of that.

Q Did you know, Dr. David that St. Luke's still uses the Bair Hugger today?

A I know that the Bair Hugger is used out there in the field by hospitals. Which one and how many, I do not know.

Q Did know that Methodist Hospital also part of the Texas Medical Center uses the Bair Hugger today?

A No, I don't know that.

Q Did you know, sir – well, let me just ask you. I think he told the jury this morning that probably everybody agrees with you that M.D. Anderson is the number one cancer center in this country, correct?

A Correct.

Q Are you aware that M.D. Anderson still today uses the Bair Hugger to intraoperatively warm patients?

A No, I don't know that.

Q Now you would agree with me, wouldn't you, Dr. David, that intraoperative warming is the standard of care in this country?

A You would need to ask a physician a question like that, not me.

Q Well you mentioned the term standard of care when you were giving your testimony to the jury?

A About the device, yes.

Q So you can tell them what the standard of care is about a device but if wanted to know if the standard of care as to intraoperatively warm a patient in the United States in this country, then I would need to ask a medical doctor, correct?

A Correct.

Q Are you aware of how many institutions across this country still use the Bair Hugger for intraoperative warming?

A I do not know.

Q Now I want to talk to you just a little bit of the Bair Hugger machine itself if I can, okay? Is that okay?

A Sure.

Q Now you told the ladies and gentlemen of the jury that you ordered one of these machines. That's not what you told us in your deposition. You told us that this machine was ordered by the lawyers and provided to you, right?

A This is a test of the memory. I don't recall which way it was. I said I ordered it but --

Q If you will take a look at your deposition testimony that you gave on August the 1st, 2017, then maybe we could refresh your recollection. Take a look in that book, Doctor. You'll see those tabs. One of them says Deposition August the 1st, 2017. Tell me when you're there.

A I'm there.
Q Okay. Turn to page 10, please, sir.
A I'm there.
Q I think I highlighted it so you can find it easily. I'm looking at lines 20 through 25. The question was "Had you ever seen a Bair Hugger device before you ordered the one from eBay that's described in your report?"
And you said, "I just want to correct one thing. I did not order myself. I asked counsel to order it for me."
Did I read that correctly?
A You did.
Q Does that refresh your recollection that Counsel ordered off of eBay the 750 that they sent to you to look at, right?
A If that's what it says, that's the case. I don't remember.
Q Do you know, Dr. David, what model Bair Hugger was used in Ms. O'Haver surgery?
A I believe it's a 750.
Q And where did you acquire that information?
A Counsel provided me that information.
Q Now when they sent to you this device that they ordered off of eBay, you also received a Bair Hugger blanket from Counsel, correct?
A Not from counsel but I received a blanket, yes.

Q Who did you receive this Bair Hugger blanket from?
A The vendor who sold me the Bair Hugger.
Q So you ordered this and bought it, right, the blanket?
A Right.
Q So where did you order from the vendor, which vendor did you order from?
A Oh, come on. You want me to remember that?
Q I want to know if you got it from 3M or if you got it off of eBay, a vendor.
A Think I said an eBay vendor.
Q So the blanket that you ordered was ordered off of eBay as well, correct?
A Correct.
Q Can you tell the ladies and gentlemen of the jury whether there are different blankets that are used with the Model 750.
A Sure.
Q There are different blankets?
A Yes.
Q Do you know which blanket was used in Ms. O'Haver's surgery?
A No.
Q Do you know which blanket was used in a typical knee replacement surgery?
A No.

Q Do you know how it is applied, sir?
A How it is applied?
Q How is it applied to the person?
A Yes.
Q And how do you know that?
A I watched a video describing it.
Q And who gave you the video to watch describing how it's applied?
A 3M website.
Q You watched that on the 3M website?
A Yes.
Q So having watched that video - first of all let me back up just a minute. You told the jury this morning I believe or maybe it was this afternoon that it's very important to consider an environment of use, correct?
A Correct.
Q In giving your opinions, right?
A Right.
Q So I want to talk to you about your first opinion which is that I think Counsel called it a dirty machine. And one way that it contaminates would be coming out of this machine into the hose and going through the blanket and landing onto the surgical site, correct?
A Correct.
Q Now I want to talk to you about that concept for just

a moment. If you watched the video on the 3M website you understand, don't you, Dr. David, that the patient in any surgery has their arms spread out like this, correct?

A That's correct.

Q And you saw that in the video?

A Correct.

Q You also saw in the video that this particular blanket that's used for the upper body has tabs on it. First of all, it has a surgical tape strip that are used to secure the blanket to the patient, right?

A Correct.

Q It also has ties that are used to tie the blanket down on both arms in two different places. Are you aware of that?

A Yes.

Q And are you aware that after the tying down is done that there are continual drapings done over the blanket that's already on the patient, right?

A Right.

Q And do you know whether they're sterile drapes, right?

A Right.

Q Do you know if there's one or two sterile drapes placed over the patient after the blanket is tied down?

A I don't recall.

Q And you also saw on the video I'm certain that there is a surgical drape that goes from the top of the surgical table

way up high and it is a drape that blocks off the patient's upper body from the knee site or the surgical site, right?

A The difficulty I have with your description is the size of this curtain. It is a square, not as monumental as you're describing.

Q I don't think I described it as monumental. I'm asking, sir, if there's a drape that separates the upper body of the patient from the surgical site where they're doing the knee replacement, right, sir?

A Right.

Q And you saw that on the video?

A Yes.

Q It so that is part of that description that we've been discussing, this part of the environment of use that's used in a typical total replacement surgery, correct?

A I don't know what particular procedure but it's used in these procedures.

Q It's part of the environment where the surgery takes place, right?

A Right.

Q When you looked at this machine that Counsel bought off of eBay and sent to you, you noted that that machine had been in operation for 5,260 hours, right?

A I don't remember a number like that.

Q So 5,260 hours if that's what's in your report, you

agree with that?

A Yes.

Q And you also found in the device archives as you looked inside that machine and you went into the device archive and you found some fault codes, correct?

A Correct.

Q But you don't have any idea how that particular Bair Hugger that you tested had performed in the past, right?

A Except the error codes, there was no problem.

Q Well let me just finish this line of questioning and I'll go back to that. You didn't have information that applied to this Bair Hugger about how it performed, where it was used, that type of thing, did you?

A Correct.

Q The simple fact is that you were not trying to find the device that simulated a clinical environment, were you?

A I have a different opinion. I was specifically interested in having an example of the device similar to what's used in this case that I can take apart and understand the mechanism that controls the level of cleanliness or dirty and the role of the filters, the hose, and its overall feature and deliveries. So that was the purpose.

If the blanket has two arms, three arms tied down or not, that is different than what my purpose was. My purpose was to look at Bair Hugger 750 and see how it is constructed, what are

the components. Are they harboring unclean particles? Can they be reached by nurses to be cleaned? Does the product allow itself to be cleaned by anybody? Those are the important stuff.

So I just wanted to highlight that while you're looking at clinical issues, I looked at engineering issues.

Q Okay. My question was really very simple, Dr. David. And this will go a lot faster if you'll answer my question which is the simple fact is you were not trying to find a device simulating a clinical environment, were you?

A I don't understand how medical can simulate a clinical environment. Medical is used in a clinical environment, not a simulated clinical environment. So when I'm looking at the device, I look at the device operation. The clinical environment is the operating room. And, no, I did not simulate the operating room.

Q So the answer to my question is when I asked you the simple fact is you were not trying to find the device that simulated a clinical environment? And the answer to that question is?

A No, I was not.

Q No, you have the wrong question. I was trying to modify as much as I can. Let me try a different way. No, let me look at your deposition. I think it'll make this go faster. If you'd look at that on page 39.

MR. FARRAR: I don't have a copy.

Q Have you found page 39?
A Yes.
Q Would you look at line 25 and then on the top of the next page. I think 40 the first three or four lines.
A Okay.
Q You said, "You see the simple fact is that I was trying to have a device - I was not trying to have a device that simulated clinical utilization. My specific reason is to become familiar with the product integrity." And that's still true today, isn't it, Doctor?
A I believe that's what I've said for the past 10 minutes. This is exactly what I intended to do.
Q The device you received off of eBay from Counsel did not come with a user's manual or manual, did it, sir?
A No, it did not.
Q So you went onto the web and looked up some information about instructions for use, right?
A Not some information. I looked directly for those manuals.
Q And you've looked at those instructions for use that came with the 750 Model, haven't you, sir?
A Correct.
Q And in those instructions for use can you tell the ladies and gentlemen of the jury how long it takes once you turn the device on for it to heat to the point where it emits the

heat?

A I'm wanting to remember. How long it takes, I don't remember.

Q Do you have any idea of how long it takes to heat it up?

A When I turn it on?

Q Less than five minutes?

A You want me to guess?

Q No, don't guess. Just let me ask you this. You indicated you relied on it, correct, sir?

A Yes.

Q When it heats up to the right temperature, it has a light so everybody knows it's ready, is that correct?

A Yes.

Q And you saw that on the machine that you looked at, right?

A Right.

Q Now one of the things you tried to do, Dr. David, is to measure the temperature underneath the blanket or the perforations and where the air comes down, right?

A No, I believe I measured on top of the blanket.

Q You attempted to measure on top of the blanket and not underneath the blanket?

A Correct.

Q So the ladies and gentlemen of the jury would want to

know the temperature involved that coming through these perforations on the blanket you had measured that temperature underneath the blanket, correct?

A I don't follow your logic. I measured on the perforations, whatever side you want to call it.

Q Well the perforations are on the bottom side of blanket against the patient, right, sir?

A Right.

Q And so what you're telling the jury is that you measured on that side to see how hot the blanket got?

A Correct.

Q Okay. Now when you did the measurement of the heat coming out of this blanket, it wasn't heating, was it?

A It was heating. It wasn't heating to maximum.

Q When you took that measurement, the air coming out of that blanket was 98.6 degrees Fahrenheit, correct, sir?

A Which is hotter that the room environment.

Q Would you agree with me that 98.6 Fahrenheit is the temperature for a person that they consider to be within a normal range?

A Correct.

Q And you yourself, personally, when you had this Bair Hugger you didn't attempt to study the effect of the warming unit on the airflow in your laboratory, did you?

A No, it wasn't my target. I have the device, as I said

before, for the reason of understanding convection, the ability to clean it and the interaction between airflow from outside the device to where the blanket and the patient is. So that was what I achieved.

Q You actually but the blanket to the corrugated hose and attempted to measure the air temperature, correct?

A I'm not sure what you're trying to suggest. I didn't attempt it. I measured it. I have a clinical biomedical engineering protocol. And I put several temperature sensors at marked points and I photographed in my report showing exactly and I measured the temperature. And as I said, the device did not get to max temperature above the room temperature.

Q And you know from reading the instructions for use manual what is the ideal temperature for the air coming out of the blanket and what it should be. You know that, don't you, sir?

A I believe in the manual ...

Q It's a lot higher than 98.6 degrees Fahrenheit, isn't it, sir?

A Well if you translate it to centigrade it would be 42 degrees which is going back to Fahrenheit it would be 105 I believe.

Q Okay. And so the only thing you were able to measure coming out of that Bair Hugger that you tested was to 98.6 Fahrenheit, is that right, sir?

A Right.
Q And that was, sir, after 30 minutes of operation of that particular machine, wasn't it?
A Correct.
Q So it - let me just make sure we get all this. First of all, this device that you tested and looked at - I should say looked at had 5,260 hours on it, right?
A Well I examined it. Now I'm looking at it. But I examined it. I took it apart, measuring, checked the equipment and tested it so it's more than that.
Q I understand. And my question simply was it had 5,260 hours on it, right?
A A number like that yes.
Q And there five default codes, right?
A Whatever my report says.
Q And the air coming out of that blanket did not heat up to any higher than 98.6 degrees after 30 minutes of operation, is that correct?
A If that's in my report, that's correct.
Q And your testimony is that you were measuring the temperature of that air coming right out of the holes or the perforations as you've described, right?
A Correct.
Q Now I want to talk to you a little bit about the risk-benefit analysis that you described for this jury. Are you

suggesting to the jury that intraoperative warming is never appropriate in the operating room?

A I never said that.

Q Are you suggesting to the jury that intraoperative warming with the Bair Hugger is never appropriate in the operating room?

A What clearly, I said is that using the Bair Hugger to warm patients is a risky and dangerous situation. That's what I said.

Q So you're not telling the jury that the Bair Hugger should never be used in the operating room, are you, sir?

A Correct.

Q And so one of the things that we know is that you've got to look at the risks that the patient comes into the surgery with to make a determination about their comorbidities, their propensity because of those comorbidities to get a surgical site infection. That would all become relevant to the weighing of the risk versus the benefits for a doctor, wouldn't it?

A In essence, what I'm saying is that it's more the comorbidity of the patient but more of the function. So if you want to warm a patient with the Bair Hugger that is not going to surgery, does not have an open wound, there should not be a problem with infection or with pathogens flying through the device and the blanket. But if you want to use it in orthopedic surgery then my statement is clear that this is a dangerous

device.

Q So are you telling ladies and gentlemen of the jury that you took into consideration in Ms. O'Haver's case her comorbidities and her risks with regard to surgical site infections?

MR. FARRAR: Objection, Your Honor. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: Dr. David isn't offering opinions about Ms. O'Haver. I made it very clear in the beginning that he's not seen her medical records. He's offering no opinion about her diagnosis. It's general causation also.

MS. PRUITT: Your Honor, first of all the Court's already ruled that the comorbidities could come in and we discussed it with Dr. Bowling. Second of all, when this expert is telling the jury that the risk outweighs the benefits they're entitled to know if there are other risks that he wasn't considering when he made the determination to tell the jury that the risk outweighed the benefits. That's all I'm exploring. That's cross-examination.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So my question, Dr. David, is you didn't in your opinion about the risk outweighing the benefits, you didn't take

into consideration Ms. O'Haver's comorbidities and her propensity to potentially develop a surgical site infection, correct?

A Absolutely correct. That's not what I'm doing. I'm not a physician and I don't have the expertise to deal with comorbidities. I'm a biomedical engineer and I'm looking at how this risk and the methodology are fused and I looked at that. It doesn't matter if it happened at 98 or 105 because the principle of operation and the functionality of moving out the air is important, not what the temperature on the bed was.

I don't have all of her medical records. This was covered earlier today. Nor did I try to find comorbidity because it's not my field. I'm a biomedical engineer.

Q But you would agree with me, Doctor, you didn't take that into consideration. We established that. But you would agree with me that a surgeon and an anesthesiologist that are working on a patient doing a total knee replacement can consider those factors and do consider those factors in making their own assessment as to what device should be used in a particular procedure, correct?

A Well first of all the anesthesiologist will put the patient to sleep. He will not work on a knee or toe. This would be an orthopedic surgery. So both of them, the anesthesiologist and the orthopedic surgeon have all the rights and obligations to make sure that they use equipment that is

safe for the patient.

Q Now let make sure I understand that you said. Are you suggesting to the jury that an orthopedic surgeon makes a determination as to the warming device?

A I don't think we mentioned anything about decision relating to the warming device. You said about use. And you were telling me that the anesthesiologist is making the decision about a toe and some surgery which is not correct. It's an orthopedic surgeon who is performing that.

Q Okay. So your understanding in giving your opinions to the jury is that who runs the machine and makes the determination on the core body temperature of a patient while they're in surgery?

A I think there is a corroboration in the operating room. The anesthesiologist has the responsibility to keep the patient comfortable, pain-free and that's part of warming the patient to the comfortable environment. The orthopedics is worked with the patient and continuously communicates between them to see that the patient is comfortable.

Q And so is a correct for me to say, Dr. David, that since you've not reviewed any of the medical records of Ms. O'Haver, you don't know whether she was hypothermic at the beginning of this surgery or during the beginning of this surgery or not, do you, sir?

A Well once again, it is not my field to know or not to

know so there's no purpose for me to look at medical records. My field is the hazard analysis, the risk assessment and the construction of the medical equipment.

Q Let's go there for just a moment. So just so we understand, you're not a medical doctor, are you, sir?

A No, nor do I play one on TV.

Q And you're not going to give any opinions that would be in the field or the scope of a medical doctor, are you, sir?

A Correct.

Q And you're not an expert on computational fluid dynamics, are you, sir?

A I don't think I said that I am.

Q I'm just establishing where we are here. And you're not an epidemiologist, are you, sir?

A I'm not.

Q You're not an anesthesiologist, correct?

A Correct.

Q What you have your doctorate degree in is a doctor of education, correct?

A Correct. Actually, educational psychology.

Q Educational psychology, right.

A Yes.

Q Now I want to talk to you for a moment about the probability testimony that you gave to the jury earlier today. Do you know what the average range is for a total knee

replacement infection? Do you know what that is?

A No, I don't.

Q Do you know whether that percentage of patients that are diagnosed with a knee infection has gone up or down between 2007 in 2014?

A Correct, I don't know.

Q Do you know whether the number of total knee replacements has gone up in this country for total knee replacement surgery?

A I do not know.

Q Do you know whether the sale of Bair Hugger blankets has continued to rise during those years?

A I do not know.

Q Now when you're talking about probability, it would be helpful to know what the typical infection rate is for people that undergo a total knee replacement surgery, right?

A Helpful for whom? Not for me.

Q But it would be a fact that certainly a doctor would consider, right?

A You'd have to ask a doctor.

Q Well if you were - if you were using the products you would want to know whether the infections have gone down or up during a period of time where the sales of the product had gone up, wouldn't you?

A I don't think that the doctor is sitting in his office

trying to figure out how many units were sold and if the increased the percentage rate of infection or not. They care about the patient and the procedure.

Q And the standard of care, right?

A Right.

Q Now I want to ask you little bit about the warning that's been referred to on this 200-device if I can figure this thing out. Do you know that this warning was designed for this device that was used preoperatively, correct?

A Correct. I don't know what you're pointing at.

Q Counsel asked you what the warning said on the 200-device, do you recall that testimony?

A Yes.

Q And you said there was a warning on it, right?

A Right.

Q Now this machine was used preoperatively, right, not in the OR?

A Correct.

Q And do you know that they were warning nurses and doctors not to put the blanket on top of an open wound? Do you know that's what the warning is about?

A I don't remember exactly but you might be right.

Q And you know, Dr. David, from what you said that when this blanket is used inside the operating room, nobody is putting it directly over the surgical site or the wound, are

they, sir?

A That would be a yes. When you're operating in an area you can't put a blanket over it.

Q Now you talked to the jury a little bit about bacteria coming through out of this machine through the hose and potentially out of the blanket. Do you recall that testimony?

A Yes.

Q And you yourself when you were looking at this product did not measure underneath the blanket with an agar plate to see whether any bacteria was coming out of this blanket, did you, sir?

A That wasn't my aim for my study. My aim was to understand the structure of the device, how it warms air, where it's coming in and where it's going and can you clean it.

Q But it would be important for your first prong, which is that - you told the jury that there's stuff in here and potentially stuff in the hose that's been cultured out, right? Somebody in one of these studies said that?

A Yes.

Q But you relied on those type of studies, right?

A Right.

Q Now have you seen anything, sir, where someone hooked the hose to the blanket and put a medium agar plate underneath the blanket and measured, let it run for so many minutes and then watched to see whether any bacteria grew?

A Well some studies about the end of the hose before it's connected to the blanket. So there is evidence to show that bacteria is being blown out from the Bair Hugger to the blanket.

Q And my question is simple, sir. Have you seen any study where somebody has done that and been successful and shown that bacteria was being grown as a result of air coming out of that blanket?

A I think that this would be difficult to get an institutional review from the hierarchy permission to do that because it's unethical if you see material coming, you should prevent it, not allow it.

Q Well without a patient being involved it's been done. You know that. There are scientists that have done that very thing and haven't you reviewed their studies?

A I don't recall.

Q So if there are studies that exist where scientists have actually placed an agar plate underneath this blanket and let it run and then took the plate, put it in the cabinet and watched for bacteria to grow on it, they were unable to culture any bacteria out of that. You're not aware of those studies?

A If you want to show me the study I will take a look at it.

Q Well right now I'm just asking are you aware of such studies, sir?

A No.

Q Did you cite them in your report?

A No.

Q Would you agree with me, sir, that in evaluating the issue of bacteria coming out of this blanket and potentially getting onto the patient's skin, that if there were such studies that those would be studies that would add information for you?

A They would be good studies. But, again, I'm saying that it is interesting me to see how the study can be constructed and still get an approval of the hospital to do something with a human subject.

Q I think I made it clear they weren't using a human study. We are putting an agar plate under this blanket while it's turned on when the light shows it's heated, right? Putting it under there for a period of time and taking the plate and putting it in the refrigerator or wherever you put them and watching for bacteria to grow. Those have been done, did you understand that?

A I understand that the studies where samples were taken from the end of the hose before it's connected to the blanket were conducted and shown. The blanket is replaced patient by patient. The hose is continuously used between patients. So there's a big difference between measuring at the end of the hose, showing that materials coming out and add one more segment of the blanket. that does not make a difference.

Q Okay. So you're telling the ladies and gentlemen of the jury that because there's a study that shows somebody swabbed around something in there and drew something out of this hose that it doesn't matter whether somebody's able to demonstrate that there's actually bacteria coming out of the perforations? You're saying that doesn't matter?

A I believe that what I said is that the evidence of the studies show that bacteria is coming out of the end of the hose that is continuously used between patients. Before it's connected to the disposable blanket that is changed with the patient is a strong evidence to show that this is a dangerous device.

If you have a study that says you know what, once I put the blanket, everything is fine. I wonder why it's out there on the marketing brochures?

Q Dr. David, do you know the size of these perforations in this blanket?

A I believe I read the articles published in the medical journal that there a thousand holes on the blanket.

Q Do you know the size of the perforations on the blanket?

A No, I don't.

Q Do you know the average size of a bacteria?

A Yes.

Q Tell me what the average size of the bacteria is

please.

A It's 100 micrometers.

Q 100 what?

A Micrometers.

Q Micrometers. That's not the same thing as one micron, is it, sir?

A It's the same thing.

Q So you're telling the jury that one micrometer is the same as --

A Actually, it's 10, 10 micrometers.

Q 10 micrometers is the same as one micron, right? Is that your testimony?

A No, what I said is that it's 10 microns. If I translate it to you it's 10 microns.

Q Now you've been talking to the jury about a study today that involves viruses. And they can reflect in their notes but you know a virus is much, much, smaller in most cases than a bacteria, right, sir?

A Correct.

THE COURT: Ms. Pruitt, would this be a good breaking time?

MS. PRUITT: It would, Your Honor.

THE COURT: Okay, good answer. Guys, we're going to recess for the day. I'll ask that you be back at 8:30 tomorrow.

(INSTRUCTION READ.)

Have a great evening. We'll see you back tomorrow morning at 8:30.

(COURT IS IN RECESS AT 5:00 PM.)

PROCEEDINGS

October 4, 2022

THE COURT: Good morning. Welcome back. I hope you had a good evening. We'll continue with the testimony of Dr. David. Sir, I'll remind you that you remain under oath. Ms. Pruitt.

MS. PRUITT: Thank you, Your Honor.

CONTINUED CROSS EXAMINATION BY MS. PRUITT

Q Do you have that big notebook up there. Good morning, Dr. David.

A Good morning, Counsel.

Q You've got that big notebook up there. If you'll look at tab 3 for me in that notebook. It's your report. I want to cover something that you said in your report. While you're looking for it, this report is prepared about what your opinions are going to be in this case that you are testifying in, correct?

A Yes.

Q Yes to the answer to the question I asked?

A Correct.

Q Would you turn to page 6 of your report please. And if you'd look at the bottom of the last paragraph for me. I'm reading there "When evaluating medical devices for patient risk the investigator starts by understanding the device's function,

its operation and the environment of use." Did I read that correctly?

A You did.

Q And you agree with that when you're evaluating medical a device with a patient risk you start by understanding the function, the operation and the environment of use, correct?

A I do.

Q Now we talked a little bit yesterday about the environment of use and I want to finish that up. Do you know the name of the facility where Ms. O'Haver's surgery was performed?

A No.

Q You aren't familiar with the layout of the operating room where her surgery occurred, right, sir?

A Correct.

Q You don't know what other equipment was in the room, the operating room the day of her surgery?

A I do not.

Q You don't know how the equipment and the tables were set up for her surgery, do you?

A Correct.

Q You aren't familiar with the ventilation system in Ms. O'Haver's operating room, are you, sir?

A Correct.

Q And you don't how many people were in the operating

room during Ms. O'Haver's surgery, do you, sir?

A Correct.

Q And you don't know which people came in and out of the operating room during the surgery, do you, sir?

A I do not.

Q But, I think we established just yesterday that, in fact, you are not here to give opinions about the cause of Ms. O'Haver's infection in this case, are you?

A Correct.

Q Now I want to talk about the McGovern study for just a moment. We're going to talk about it a little bit today. You would defer to the author in their study and the fact that their study did not establish that the Bair Hugger device caused the increase in infection risk, right?

A For what purpose?

Q Excuse me?

A Defer for what purpose?

Q Let me ask the question again. You would defer to the author's opinion in their study if they found that their study did not establish that the Bair Hugger device caused an increase in infection risk, correct?

A In the conclusion, yes.

Q So in the McGovern study, you're aware, aren't you, Doctor, that the author of that study said that their study did not establish that the Bair Hugger device caused an increase in

infection risk, you're aware of that, right?

A No.

Q You're not aware that's what the McGovern study says?

A No, they talked about three point, an almost four-point increase.

Q We'll look at that just a little bit later. Do you know who the authors of the McGovern study were?

A By name, no.

Q Do you know that one of the authors is a fellow by the name of Mark Albrecht?

A You're asking me if remember the names of the co-author, no, I don't.

Q It's true, isn't it, Dr. David, that in the McGovern study they were looking at a comparison between a device called a Hotdog and the Bair Hugger, right?

A Right.

Q And are you aware that Mark Albrecht was an employee of Augustine Medical and worked for a gentleman by the name of Scott Augustine?

A No, I'm not aware.

Q And are you aware that Scott Augustine developed the Hotdog and that is a competitor for the Bair Hugger device, did you know that?

A I'm not sure. I know that he developed it and he has offered it as device to be used in the operating room.

Q And you know his company sells the Hotdog device. His current company sells the Hotdog device, right?

A I don't know if that's his company.

Q And you've told the jury that one of the ways you can warm a patient is by conductive warming in the OR, right?

A Correct.

Q And so, Doctor, you don't know the information that Albrecht was working for Scott Augustine?

A The standard in the scientific publishing industry is every conflict is supposed to be disclosed. So if it is a fact that needs to be included in the publication there would be a statement at the end of the paper saying a person such and such is employed by this company and the device that's involved in the study.

Q So you're talking about a conflict of interest statement, correct, sir?

A No, I'm talking about a financial interest statement.

Q If you have a financial interest in studying something you're supposed to reveal that in the study, is that correct, sir?

A Correct.

Q Did you see any such revelation where Mark Albrecht said I'm employed by Scott Augustine and we sell - Scott Augustine's company sells the Hotdog? Did you see that anywhere in the study?

A I'm not sure. I don't know when he was employed, when he was not employed. It's all a function of justifying this statement or noting it for the statement. So my answer to the question is I didn't see one and I may not need to see one.

MS. PRUITT: Your Honor, may we approach.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, he's not answering the question. He's not answering the question.

THE COURT: I'm not going to give him the speech. The objection is overruled. You may proceed.

MS. PRUITT: Thank you, Your Honor.

(RETURN TO OPEN COURT.)

Q We're going to come back to McGovern and put the study up in just a few minutes.

A Sure.

Q Now you would agree, Dr. David, that you do not have the expertise to implement infection control practices, correct?

A It depends where.

Q Do you recall when you were asked that question in your deposition and you said "I do not believe that I have the expertise in infection control practices."

A Inpatient care area, that's right.

Q Yes, in patient care area. In the area providing care to patients you did not have the expertise to implement

infectious control practices, correct?

A Correct.

Q Now you talked to the jury little bit yesterday about the FDA. Dr. David, do you consider yourself - let me just ask it this way. You've never been an employee of the FDA, have you?

A Actually, yes.

Q Consulting work. I'm talking about having a job there that you go to work there every day. Have you ever been employed in that regard?

A Well I served as a consultant, I was considered to be a government employee.

Q Have you worked in the Office of Device Evaluation?

A No, I don't believe so.

Q Have you worked in Office of Compliance?

A Office of?

Q Office of Compliance?

A No.

Q You're experience with the FDA is because of your consulting role that you've described, right?

A I don't know if it's a consulting role. It's an advising role. I'm an advisor in the FDA that challenges expertise from the field.

Q Have you ever been consulted in any of your FDA panels to give an opinion on whether a device was adulterated or

misbranded?

A I'm scanning 20 years and there may be a case like that. I'm not sure.

Q Would you take a look at your deposition. The date - it shows the date of August 1, 2017. Can you turn to page 189 please? And that is at the first tab.

A Yes.

Q Yes?

A What page?

Q 189.

A 499?

Q 189.

A I'm there.

Q On the top the first line on page 190. I'm going to put this up for the jury. You were asked this question.

MR. FARRAR: Your Honor, it's inappropriate.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: What's your objection?

MR. FARRAR: It's inappropriate. You have to ask him ...

MS. PRUITT: I've already asked him a question.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q If you look at line 23 on page 189. You were asked

the question, "Have you ever been a consultant in any of these panels with respect to whether a device was adulterated or misbranded?" At the top the next page, "Answer: No." Did I read that correctly?

A You did.

Q And that's the answer you gave under oath that you gave in this deposition in August, 2017, correct?

A Correct.

Q Have you have ever had any input into any FDA compliance decision?

A I don't understand the question.

Q Let's look at your deposition page 189, sir, lines 20 and 22.

A I'm there.

Q I'm starting with line 20. "Question: Have you ever had any input into any FDA compliance decision?

Answer: No." Did I read that correctly?

A You did.

Q That's the answer you gave to that question when you swore under oath to tell the truth in August, 2017, right, sir?

A Correct.

Q Have you ever inspected a manufacturer on behalf of the FDA?

A No.

Q Have you ever been involved, sir, on behalf of a

company responding to an FDA statement that a device was adulterated or misbranded in the FDA's view?

A I did not.

Q And you don't in the course of your regular employment ever determine that devices are adulterated or misbranded in accordance with FDA regulations, do you, sir?

A And when you say employment, I take it you mean the Texas Medical Center for over 25 years. I can't answer you. I can't recall one way or the other.

Q Did you answer that question when you gave your deposition in August of 2017?

A No.

Q Let's look at page 192. Starting at line 10 I'm going to read the question.

"In terms of the term adulterated or misbranded application of the statute, would you be applying a federal statute or regulation in the course of your work?

Answer: No, I'm not involved in the legal profession." Is that what you stated?

A Correct.

Q That's still your answer today?

A I'm not involved in the legal profession.

Q Adulterated or misbranded are in accordance with the FDA regulations, right?

A Is I just answered before, I don't remember one way or

the other.

Q Now you are aware that the FDA will communicate with the company if they feel the company's device is either adulterated or misbranded?

MR. FARRAR: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: I'm not sure what the FDA has to do with the FDA's question and what the FDA would do with a device.

MS. PRUITT: Your Honor, this witness said the device was misbranded. I'm asking him about that.

THE COURT: The objection is overruled.

MR. FARRAR: He never testified about this device being misbranded. He never testified to that at all.

THE COURT: This might be relevant. The objection is going to be overruled.

(RETURN TO OPEN COURT.)

Q Dr. David, you are aware that the FDA will communicate with a company if they feel that the company's device is either adulterated or misbranded, right?

A That's their responsibility, that's right.

Q And you're aware that they do in that communication by sending something out called a warning letter, right, sir?

A Correct.

Q And you have seen warning letters as a result of your work in hospitals, right?

A Correct.

Q In any work for this case you did not find any warning letter from the FDA to Bair Hugger or 3M or Arizant regarding the Bair Hugger device, did you, sir?

A I did not.

Q And you know, sir, that the Bair Hugger device is still on the market today, correct?

A It is.

Q So based on what you have reviewed, we know that to your knowledge the FDA has never issued a warning letter regarding the Bair Hugger, correct?

A Correct.

Q And so the FDA has not expressed an opinion that it thought the Bair Hugger was misbranded or adulterated, correct?

A That's correct.

Q Do you know the FDA's position on the Bair Hugger warmer?

A No.

Q So you don't know - do you know whether the FDA has sent any letters out to healthcare providers regarding the Bair Hugger?

A I don't.

Q So no one has shown you?

MR. FARRAR: Your Honor, may we approach.

THE COURT: Yes.

(BENCH CONFERENCE.)

MR. FARRAR: I'm objecting to her showing the 2010 letter.

MS. PRUITT: I'm not putting it in. I would only use this as demonstrative. This is simply cross-examination. It's relevant because to his opinion because he was never shown it and he hasn't seen it.

THE COURT: My position would be the content of it would be in question so the objection is sustained.

(RETURN TO OPEN COURT.)

Q Now Dr. David, in 2008 you started your own consulting business, right?

A Correct.

Q One of the things you do in that business is serve as an expert witness in cases like this one, right?

A Correct.

Q And you've given testimony, sir, in other jurisdictions about 26 times between 2012 and 2018 according to your report in this case, right?

A That was a long question. I heard 26 times and 2018. Can you break it down for me?

Q Sure. Between 2012 and 2018 you said in your expert report that you've given testimony about about 26 times, right,

sir? Let's take a look at it cause I don't want to be putting words in your mouth. Take a look at your expert report please. It's on page 52 and 53.

A Excuse me, what page?

Q Fifty-two and 53.

A I'm there.

Q So there are two pages there, Dr. David, that lists the testimony that you've given on behalf of your consulting company and it's 26 times between 2012 and 2018, correct? You can see there the dates in the date column.

A I will take your word for it.

Q So you don't have any reason to dispute the list that you submitted and you put in your expert report, right, sir?

A Correct.

Q That establishes that 26 times as a consultant you have given testimony in litigation, right?

A Yes.

Q And 19 of those 26 times you testified on behalf of the plaintiff, correct?

A If you want me to count, I'll count.

Q Do you have any reason to dispute that 19 of the 26 times you testified for the plaintiff?

A If that's in the record, I accept it.

Q And in between your deposition in June of 2022 you had given an additional 10 depositions, haven't you?

A Between 2000.
Q '17 and at the time you gave your deposition, you had given an additional 10 depositions, right, sir?
A I don't see that anywhere.
Q You testified to that in your deposition, do you recall that?
A No, I don't.
Q Do you think 10 is right if you gave that answer in your deposition?
A If the deposition is correct.
Q And you testified, sir, in over 10 different states, haven't you?
A Ten different states are you asking me?
Q Yes, sir. You have the chart there in front of you.
A Before 2016, okay.
Q You testified in Minnesota, right?
A Yes.
Q Washington?
A Correct.
Q Texas?
A Correct.
Q Missouri?
A Correct.
Q North Carolina, is that correct?
Q Florida?

A Correct.
Q California?
A Correct.
Q Kansas?
A Correct.
Q Illinois?
A Correct.
Q And, Oregon?
A Correct.
Q And you testified in those cases and you were being paid 19 of the 26 times by plaintiff's lawyers in those cases, correct?
A You're asking me if I got paid. Yeah, like everybody else.
Q The answer is yes, right?
A Yes.
Q Before this litigation began you had never operated a Bair Hugger device prior to that?
A I don't recall whether I did or not. I was responsible for over 22,000 medical devices. Some of them I dealt with on a daily basis, some on a weekly basis, others maybe once a year. So with that kind of volume of devices I do not remember this one as far as the Bair Hugger or not.
Q So you don't recall whether you ever turned on the Bair Hugger device prior to this litigation, do you?

A That's what I'm saying.
Q So before this litigation you never inspected the Bair Hugger device either or like you did in this case?
A That would be correct.
Q Now, Dr. David, prior to this litigation the only place that you had seen a Bair Hugger device was in a patient's room, is that correct, sir?
A Again, I do not recall over so many years if I've seen the Bair Hugger in a patient's room, outside the patient's room, in delivery, I'm not sure.
Q Let's look at your deposition on August 1, 2017, sir. Go to page 18, lines 4 through 8 please.
A I'm there.
Q The question was asked "Do you recall having any sense at the time you saw them for why they were in an operating room?" Your answer: "I mentioned it was in patient rooms. I didn't say operating rooms." Did I read that correctly?
A You did.
Q And we've established that you never discussed the Bair Hugger system with anyone at Texas Children's or at St. Luke's where you worked - while you worked there, correct, sir?
A No, I don't believe I ever discussed it. I don't remember.
Q Take a look - take a look at page 19 of your deposition please, lines 19 through 24, line 21 in the middle.

"Question: Do you recall any conversation during your time working in any hospital about Bair Hugger devices?

Answer: No." Did I read that correctly?

A You did.

Q And you don't recall ever making an evaluation or decision about the Bair Hugger device, correct?

A Correct.

Q Now I want to talk for a few minutes about the studies because you spent some time talking about studies yesterday, okay?

A Okay.

Q And you included a list of studies in your expert report, didn't you, sir?

A Correct.

Q And that list of studies has about 12 or 14 studies in your report, correct?

A The article is what it is. I didn't count them.

Q And that includes the Routh study from 2019?

A I don't remember.

Q Have you seen the Routh study from 2019?

A I don't remember the study.

Q Are you saying you don't remember the studies?

A Yes, you're taking a list I don't remember. I saw so many studies I don't remember the Routh study. If you show me, I can answer your question.

Q You don't remember a Routh study? If the answer is I don't remember, just say that.

A I just did.

Q If you didn't include it in your report, Dr. David, you're saying you didn't look at it, right?

A No, I'm not saying that.

Q If it's not in your report you didn't rely on it, right, sir?

A Right.

Q Do you know if you relied on the Routh study from 2019?

A Let me see it I can answer it.

Q We'll find it in your report. Let me finish about these other studies. Did you review the Moretti 2009 study?

A We can go down the list. Unless I see the study and refer to my report, I don't remember.

Q That's fair. Let's talk about the studies. You did know about some studies when you gave your testimony yesterday for the ladies and gentlemen of the jury, didn't you?

A The studies were presented to me.

Q Yes. Before they were presented to you did you have time to review them and read them?

A When I wrote my report, yes.

Q Let's talk for a moment about the Legg study from 2013. Do you remember discussing the Legg study with the jury

yesterday?

A Do you mind handing me a copy of it?

Q I'd be glad to. Trial Exhibit 2710, defendant's trial exhibit. Counsel went over the study with you yesterday. It's probably still up here in front of you. Did you get a copy of it when you were testifying yesterday?

A I tell you what. There were so many details I don't care to remember.

Q So there's the Legg study. Now this is not a study, Dr. David, about looking at bacteria in a surgical wound, is it?

A Correct.

Q It's not a study looking at bacteria at all, is it?

A The study is looking at the effect of forced air patient warming and the unidirectional flow in the operating room during orthopedic surgery and the dysfunction of that. The disruption included in this article talks about particles. And particles are carrying bacteria to ...

Q We're going to talk about that in a moment. But this particular study was not looking at bacteria when they did the study, was it, sir?

A Well as I just said, they're looking particles and particles may carry bacteria.

Q This is not a study with the same OR set up as is used in an actual surgical procedure, is it, sir?

A Correct.

Q In fact, they used helium bubbles with a smoke machine in the study, didn't they?

A This is a simulated set up, correct.

Q And part of the study's finding is this study does not show that forced-air warming increases the risk of infection, right?

A Correct.

Q Let me just put the study up.

MS. PRUITT: Your Honor, for demonstrative purposes it's already been put up.

Q Exhibit 2710 where it's highlighted here. "This study does not show that forced-air warming increases the risk of infection." Did I read that correctly, sir?

A Yes, you read it correctly. The disruption of airflow around the surgical site was the emphasis of this study and they have proof there was a disruption.

Q Now you also talked with the jury yesterday about a study from Albrecht or an article in the press from Albrecht in 2010, do you recall that?

A No.

Q I'm going to hand you what's marked as Defendant's Trial Exhibit 2713.

MS. PRUITT: Your Honor for the record ...

MR. FARRAR: Your Honor, this is what we talked about yesterday.

THE COURT: Ask a foundation question.

Q Have you reviewed this study, sir?

A I do not recall reviewing it.

Q Do you know the title of it is *Forced-Air Warming Blower. An Evaluation of Filtration Airborne Contamination Emissions in the Operating Room*. Did I read that correctly?

A You did.

Q Can you turn to last page, page 7 of 8, sir, and look at the left-hand column in the paragraph that starts "Nevertheless."

MR. FARRAR: Your Honor, no foundation's been laid.

THE COURT: The objection is sustained.

Q Now you also told the jury yesterday - you brought up potential sources of this preliminary study, didn't you, sir?

A Yes.

Q Do you recall that?

MS. PRUITT: Your Honor, this is trial Exhibit 2557.

MR. FARRAR: No objection.

THE COURT: 2557 will be used for demonstrative purposes.

Q Will you look at page 5 of 6, Doctor. "The study has several limitations. Most notably this preliminary study is not designed to link these devices to surgical site infections."

Did I read that correctly? It's up on the screen. I'm asking if I read that correctly, Doctor.

"This study has several limitations. Most notably this preliminary study was not designed to link these devices to surgical site infections." Isn't that what it says?

A Correct.

Q Thank you. Now you talked to the jury yesterday about that. Do you recall that discussion?

A Yes.

Q And have you reviewed the letter to the editor sent by Memarzadeh from the National Institutes of Health?

A No.

Q You haven't read it?

A It's not a scientific paper, not a research paper that I reviewed and I did not.

Q So you read the article, you read the list?

A I briefly scanned it. It's not a recent study.

Q So you don't know whether the article describes exactly what the National Institutes of Health did when they set up the computational fluid dynamics, do you, sir?

A As I said, I said this is one person's opinion.

Q That's not the question, sir. My question is you don't know whether the letter described the computational fluid dynamics study that was done by National Institutes of Health, do you, sir?

A If you'll let me answer, I will give you the evidence I'm aware of.

MS. PRUITT: Judge, could you instruct the witness to answer the question?

MR. FARRAR: Your Honor, the question wasn't a yes or no.

THE COURT: I want you to listen and only answer that question. If plaintiff's counsel needs any additional clarification of anything he'll have the opportunity to redirect you. Can you repeat your question?

Q I will. In the letters to the editor do you know whether - describe the steps that were taken by the National Institutes of Health to set up computational fluid dynamics process?

A You say it's a letter so I'm just briefly scanning it. I don't remember that detail.

Q So you don't know?

A I don't know.

Q Now I'll represent to you that Oguz and Avidan or not listed on your list - your reliance list or in reports, sir. Have you ever shown either Oguz or Avidan evidence studies?

A I cannot respond without seeing those.

Q My question simply is were they ever shown to you or did you read them?

A I'm not sure.

Q The first one is Oguz.
A I'm not sure because I did a literature search.
MS. PRUITT: This is the Defendant's Trial Exhibit 2103, Your Honor.
A No, I don't believe I read this.
Q So for the record the title of this article is *Airborne Bacterial Contamination During Orthopedic Surgery. A Randomized Controlled Pilot Trial.* And the first author is Rueben Oguz. Did I read that correctly?
A You did.
Q And you haven't seen this study, have you, sir?
A Correct.
Q Now I want to show you another one and ask if anyone has shown this to you or if you've seen it. The title of this study is *Convection Warmer Is Not Just Hot Air* and the lead author is M.S. Avidan. Did I read that correctly?
A You did.
Q Have you seen this study entitled *Convection Warmer Is Not Just Hot Air* by Avidan?
A I believe I did.
Q You believe you saw it?
A Yes.
Q Take a look at page 1075 of this study.
THE COURT: What's the exhibit number?
MS. PRUITT: Defense Trial Exhibit 2700.

Q Look at the discussion in the second paragraph the last sentence, sir.

MR. FARRAR: Still no foundation, objection to foundation.

THE COURT: Overruled.

Q Second sentence, second paragraph. "When the experiment was repeated with the use of the recommended blanket" ...

A Where are you?

Q Under discussion, second paragraph down, second sentence. It says "When the experiment was repeated with the use of the recommended blankets contamination of sampled air was no longer detected." Did I read that correctly, sir?

A Yes.

Q And you know that Avidan is a study, sir, that has to do with testing for bacteria after the hose is connected to the blanket, right, sir?

A If you'd give me a moment to read it.

Q I'll move on. Did I read that sentence of the study correctly, sir?

A Yes.

Q Now you talked with the jury yesterday and was shown a study by counsel called the Lange study. Do you recollect that?

A Yes.

Q And do you know that this study, the Lange study

looked at surgical site infection following various kinds of surgery, right, sir?

A I would like to see the study to refresh my memory.

MS. PRUITT: Your Honor, did I give you a trial exhibit number?

THE COURT: You have not as of yet.

MS. PRUITT: This has already been admitted for demonstrative purposes and the number is Plaintiff's 2216.

Q And my question was this study looked at surgical site infections following various kinds of surgeries, didn't it, sir?

A Correct.

Q Dr. David, you discussed the study with the jury yesterday, do you remember that?

A Honestly, no.

Q Let's look please –

MS. PRUITT: Your Honor, I'm going to publish this. It's already been put up for demonstrative purposes.

THE COURT: Any objection?

MR. FARRAR: No objection.

Q Let's take a look at the table at the bottom of page 2. And this table was looking at surgical site infections. It tells us a sample number. It tells the surgical site infection number and the details. Do you see that?

A I do.

Q And if you look down to ortho, sir, the sample number was 39. Do you see that?

A I do.

Q And there were no recorded surgical site infections with orthopedic surgeries, were there, sir?

A Not on this table.

Q And not in this study, right, sir?

A I would like to review the study first.

Q You don't know. When you talked to the jury about this study yesterday you don't know whether it showed any surgical site infections for orthopedic surgeries?

A Yesterday it was in my memory. Today I don't remember so if I can read it again refresh my memory.

Q In table 2 it says orthopedic surgeries, zero surgical site infections, doesn't it, sir?

A Correct.

Q Thank you. Now do you remember talking with the jury about the Protect study yesterday?

A Yes.

MS. PRUITT: And this is Defense Trial Exhibit 2574 for the record. This has already been published for demonstrative purposes.

THE COURT: Any objection, Counsel?

MR. FARRAR: No, Your Honor.

Q Do you see in the summary at the top here where it

says "Background moderate intraoperative promotes myocardial injury and surgical site infections and blood loss whether aggressive warming to a truly normothermic temperature near 37 degrees and proves the outcome remains unknown." Did I read that correctly?

A You did.

Q Do you know that the study was not measuring whether normothermia was important or whether it would indicate it, right?

A I think it did.

Q What the study was doing was suggesting how aggressive the warming therapy needed to be, not whether it should be used at all. Isn't that what the study did?

A Correct.

Q Now, Dr. David, in your research in this case you did not find any study that compared the risk of infection between the Bair Hugger and another device, did you?

A I think we went over those today and yesterday and there was a comparison between the Bair Hugger and the conductive mechanism.

Q At the time you gave your deposition August 1st of 2017, did you find any studies that suggested the risk was not different between the Bair Hugger device and another type of patient warming device?

A In 2017, I don't remember.

Q Let's refer to your deposition testimony, sir. Turn to page 283.

A I'm there.

Q Please look at line 2 through 6. I asked the question "Did you find any study that suggested the risk was not different between the Bair Hugger device and another type of patient warming device?"

And you said "No, I did not." Is that your answer under oath in August of 2017?

A Correct.

MR. FARRAR: (Inaudible) completeness question and answer. May we approach.

(BENCH CONFERENCE.)

MR. FARRAR: It clearly modifies that, the full answer to the question.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So look at line - page 283 lines 2 through 6 please, sir.

A Okay.

Q I'm reading "Question: Did you find any studies that suggest that the risk was not different between the Bair Hugger device and another patient warming device?

Answer: No I did not." Did I read that correctly?

A You did. And that's 2017.

Q Now you told the jury you needed to had McGovern to answer some of my questions, right?

A Right.

Q So I'm handing you a copy of the McGovern study, Defendant's Trial Exhibit 2707. Look at the list of authors, they are to the left. Do you see Mark Albrecht as the author we talked about earlier?

A I do.

Q He was the gentleman that I was referring to as a second author on the study. That's what this reflects, right?

A Correct.

Q If you look at the end of the study, page 8 of 8. Under supplemental material do you see where it says, "The author or one or more of the authors have received or will receive benefits for personal or professional use from a commercial party related directly or indirectly to the subject of this article."? Did I read that correctly?

A You did.

Q And you don't have any personal knowledge that Albrecht worked for Scott Augustine and his company sells the Hotdog, right?

A Right.

Q But you do know that this study was using the HotDog device and the Bair Hugger device, right?

A Correct. You're aware this study has two portions.

One is a simulated study ...

MS. PRUITT: Your Honor, there's not a question pending.

THE COURT: Wait for the next question, Dr. David.

Q Look at page 6 of this study please, sir. I'm going to put it up on the screen so the jury can see it. It's highlighted here for you to read along with me.

"However, one must consider the effects of surgical lighting, drapes, personnel, ventilation, all of which create the localized disturbance of airflow that aid in the formation of convection currents." Did I read that correctly?

A Correct.

Q If you'd turn to the next page, page 7, sir. I'm going to put it up as well.

"This study does not establish a causal basis for this association." Is that what it says?

A It does.

Q You agreed earlier this morning that you would defer to the authors about whether this study establishes a causal basis for this association," correct?

A I agree.

Q Now even - let's look at the next column please. "Even minor differences in factors such as draping, procedural practices and theatre dress are likely to have large effects on

both floor level and under drape contaminant levels in the formation of convection currents." Did I read that correctly, sir?

A You did.

Q And you also know or do you that since Albrecht was the second author, do you know that Albrecht had been asked about the study and questioned about the study?

MR. FARRAR: Objection, hearsay.

THE COURT: Overruled at this point.

A No.

Q Has anyone shown you Albrecht's testimony that what he thinks about the McGovern study?

A No.

Q You're familiar with the fact that when comparing the Bair Hugger to the HotDog there were changes made in the antibiotics and the blood clotting drugs that were being used in this study, right? You know that?

A As I was telling you, this study has two functions. One is comparing the Bair Hugger and the HotDog device and is simulated. And the other part of the study is looking at over 1,400 patients prospectively to see the outcome and those parts that you just mentioned are cofounded in changes in patient care routinely.

Q My question is very simple. You know that in the McGovern study there were differences in the antibiotics and the

blood drug that were used by the patient in that study, correct? Do you know that?

A That's what the study says.

Q And are you aware that that's a confounding factor with the results of this study, correct?

A Yes.

Q And not only the study says that but have you ever read the International Consensus of 2018 with regards to surgical site infections in orthopedic procedures?

A I don't recall if I did.

Q You don't recall that you've ever looked at the 2018 consensus?

A That's what I said.

Q No one has shown it to you?

A You keep saying shown. Literature is something I review myself.

Q Did you find - have you looked to find the 2018 International Consensus when you did your research?

A Maybe I did. I don't remember.

Q As you sit here today are you aware of what the consensus statement said about the evaluation of the McGovern study?

A The McGovern study specifically?

Q Yes.

A No, I don't.

Q Are you aware that one of the authors in the McGovern study said if you take into account ...

MR. FARRAR: Your Honor, hearsay.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. FARRAR: It's hearsay.

MS. PRUITT: It's the testimony of Mark Albrecht and am simply asking him if he's aware.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q Now would you agree, Dr. David, that an operating room contains many devices that are not sterile meaning that may have bacteria present on them?

A Yes.

Q And you told us during your deposition that you had seen orthopedic surgeries in progress, right?

A Correct.

Q You have said actually, sir, that there could be so many drills and saws being used in the OR that it's like a spare parts garage, right?

A I remember that.

Q And you know from seeing this orthopedic surgery that they use drills and saws, correct?

A Correct.

Q They use cautery devices, correct?

A Correct.
Q And a cautery device or a Bovie are used either or in an orthopedic surgery, right, or both?
A It's two names for the same device, yes.
Q And a cautery device creates heat because what it does is it creates heat, correct?
A In principal, yes. It's very localized, very temporary, lasting seconds.
Q You said, Dr. David, that it might shock some people to see how much physical activity is taking place in the operating room, correct?
A I agree with you.
Q Some of the equipment, the drills and the saw are electrical and could cause particles to be released fly into the air, correct?
A That's reasonable.
Q At times you said you can see those parts, isn't that right?
A I don't believe I said that.
Q Let's look at her deposition testimony, page 226, lines 6 and 7.
A I'm there.
Q Line 6 the question was "You can see them" referring to the particles released by these devices.
The question was "You can see them?"

The answer was "At times you can see them." Did I read that correctly?

A You did.

Q So you agree that the air itself in an operating room is not sterile, don't you, sir?

A I agree. Also, I know that in an orthopedics procedure the environment you just described is much more controlled and less hectic.

Q My question was you agree that the air in an operating room is not sterile, correct?

A The air is not sterile.

Q And you would agree that people in the operating room are not sterile, correct?

A No, I don't agree with that.

Q Let's look at your deposition please, sir. Page 220, lines 11 and 12. And your answer is in line 17.

"Would you agree that people are not sterile?

Answer: I agree with that, yes." Did I read that correctly?

MR. FARRAR: Objection, she didn't answer the right question.

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: I don't think it's appropriate make to make your objection from there. If you have an

objection just come up here. Your objection is?

MR. FARRAR: That she skipped the question-and-answer and answered her own question.

MS. PRUITT: I'll withdraw.

THE COURT: Okay.

(RETURN TO OPEN COURT.)

Q Let's read the whole thing, Doctor, starting with line 11. I asked the question, "Would you agree that people are not sterile?"

And you said "Do you mean as producing offspring?"

And I said, "No, I mean as producing contamination, bacteria or contamination."

You said "I agree with that, yes." Did I read that correctly?

A That's part of the topic because it goes on to say that "the individual having on outside layers is sterile."

Q We're going to get that. But my question is you would agree that people in an operating room are not completely sterile, are they, sir?

A They don't need to be sterile because they've got a garment on that isolate them.

Q So you're telling the jury that because they have an outside garment on them that these people are sterile with that garment on, is that what you're telling the jury?

A Well it goes together with the surgical cap, with the

mask, with the gloves, with the shoes covered, with the hand washing, yes.

Q Let me ask it for the record to be clear. You're telling this jury that because someone has on the clothing that you wear in an OR that that makes that person sterile?

A To the surgical field, yes.

Q A surgeon walks through the nonsterile field part of the OR to get to the sterile field, right? You know that?

A Right.

Q And his clothes could be initially or her clothes could be initially sterile but once they touch a nonsterile object they are no longer sterile, are they?

A Well a surgeon knows very well not to touch any unsterile surface.

Q Well when they come in the OR, sir, do you know they walk through a door and walk into the OR in a nonsterile area with a gown on, with their gloves and their boots on and their mask on, you know that, don't you, sir?

A You're wrong. You were not there and you're not describing it correctly. A surgeon walks into the OR and does not have gloves on. He just scrubbed his hands in a special sink very, very carefully using also in addition to soap Betadine solution.

Q That wasn't my question, sir. My question is a doctor walks through a nonsterile part of the OR to go to the sterile

field, doesn't he or she?

A He does not have gloves on. He reaches the sterile area. Then a nurse who has already been sterilized hands him his gloves.

Q I didn't ask that question, Doctor.

A I'm trying to help you to understand the facts.

Q Well I think the jury can understand. We should ask an orthopedic surgeon that question since you are not one, correct?

A It has nothing to do with the profession. Being in the operating room you will see. I've been in the operating room many hours and observed.

Q My question is simple. The surgeon, he or she walks through a nonsterile portion of the OR to get to the sterile field. Simple yes or no?

A Yes.

Q Dr. David, your work in hospitals involves considering both the benefits and risks of medical technologies, right?

A Yes.

Q Is so if you were making a decision as to whether the purchase of a particular device would be relevant you consider both the risks and benefits of the device, right?

A Correct.

Q And do you agree, Dr. David with the benefits of normothermia, right?

A That's what the literatures say.
Q It's also in the guidelines, right? Are you familiar with the CDC guidelines?
A I am.
Q And that they recommend and talk about the benefits of normothermia, correct?
A Correct. But this is a line of questioning that should be given to the surgeon.
Q Okay, we'll ask the surgeon. You're not aware of whether Ms. O'Haver became hypothermic after she entered the surgical suite, are you, sir, because you haven't looked at the records?
A I did not look at the records, that is correct.
Q And you agree, Doctor, that patient warming during surgery is a very important part of maintaining a patient's condition following surgery, right?
A In some cases. In other cases, it can be prewarming. The patient populations such as this paper say that is not required.
Q Let's look at your deposition, sir, on page 202, line 24 to 203, line 14. Tell me when you're there.
A I'm there.
Q The question "What did you review related to patient warming prior to your work in this case?
Answer: Patient warming is a very important part of

maintaining patient condition during surgery, following surgery or during trauma." Did I read that correctly?

A You did.

Q Nowhere in your deposition, Doctor, do you ever mention obese patients, do you, sir?

A In 2017 probably not.

Q And you agree, Doctor, that there are many studies that discuss the benefits of preventing hypothermia, correct?

A Correct.

Q Whether a patient is obese or not if they become hypothermic there are benefits making sure you get them into normothermia or get them to a normal temperature, correct?

A That's what the literature says.

Q Now you discussed your opinions yesterday a little bit with the jury about the filter in the Bair Hugger. I want to talk with you about that for a moment. Have you yourself ever tested filters such as the one on the Bair Hugger for their efficiency?

A That was not a part of my examination.

Q Okay. My question is have you ever done it? Have you yourself ever tested filters such as the one on the Bair Hugger for their efficiency?

A It didn't because I didn't need to.

Q I didn't ask if you did. What I asked was have you yourself every tested filters such as the one on the Bair Hugger

for their efficiency?

A I don't believe so.

Q And outside of this litigation, Doctor, you as an individual haven't provided any expertise with respect to filters and filter efficiency as part of your professional responsibility, have you?

A No, I don't believe that to be true.

Q You don't agree with that?

A I do not.

Q As part of your professional role have you ever been evaluating or selecting filtration for an operating room?

A I'm not in the position to make a selection. I am a member of the Architectural Design of Operating Rooms, Laboratories and Intensive Care Units and Rooms for Patients.

Q That's not my question, sir.

A Where filters are being put is an important part of the airflow. And I was part of that discussion.

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, my question was what part of your role involved evaluating or selecting filters. His answer was no. He's not really answering my question.

THE COURT: I don't necessarily - I've given the instruction. I don't know that there's anything else I can

do about it. I can give that instruction if you want.

MS. PRUITT: Can we take a break and you ask the lawyers a question.

THE COURT: Yeah, I'm going to go ahead and take a break.

MS. PRUITT: I can go on, Your Honor.

(RETURN TO OPEN COURT.)

THE COURT: Guys, we're going to go ahead and take our morning break. We're going to break until 10:15.

(INSTRUCTION READ.)

We'll break until 10:15.

(BREAK AT 9:53 AM.)

(RETURN AT 10:16 AM.)

THE COURT: We will continue with the cross-examination, sir. I remind you that you remain under oath. Ms. Pruitt.

CONTINUED CROSS EXAMINATION BY MS. PRUITT

Q We were talking about filters before the break. The Bair Hugger warmer has a filter on it, correct?

A Correct.

Q It's always had a filter on it?

A Correct.

Q And that filter is called a Merv 15 filter. Are you familiar with the entities that regulate filters that they have

standards for efficiencies and filters?

A Yes.

Q And you've heard of an entity that does that by the name of ASRA?

A Yes.

Q And are you aware that ASRA says that for bacteria, not for bacteria, but for particles they range in size from .31 to 1 micron - for particles that range in size .31 the Merv 14 filter the Bair Hugger has a 75 to 85 percent efficiency. Did you know that?

A From .3 to 1, yes.

Q And did you know that for particles the size of one micron to three microns that the filter Merv 14 is 90 percent efficient, did you know that?

A Yes.

Q And did you know that for particles in the size range of 3 to 10 microns the Merv 14 filter is more than 90 percent efficient, did you know ASRA has met those findings?

A Yes.

Q And that's the kind of filter that this machine has, right?

A Correct.

Q Now you also know that the FDA does not require a filter on the Bair Hugger, you know that, right, sir?

A I don't think FDA ...

Q My question was simple, sir. Do you understand that the FDA does not have any requirements that a patient warming device has a filter? That's correct, isn't it, sir?

A I don't want to argue with you but the FDA does not get into the design of medical products.

Q Are you aware of any FDA regulations that states that the filter must be part of the design?

A The FDA regulation says the device needs to be safe and risk-free.

Q Are you aware of any hospital standards requiring patient warming devices to have filters?

A No, hospitals expects the devices to be safe.

Q In fact, are you aware of any other device in the operating room that has a filter other than the Bair Hugger?

A Sure.

Q What else has a filter?

A Dialysis machine, cardiac surgery, bypass machine and those are the ones that come to mind. I'm sure they've got more.

Q Ms. O'Haver didn't have a heart surgery, did she, sir?

A I didn't look at the records.

Q You know she didn't have heart surgery, don't you, sir?

A It's my duty to tell you I didn't look at the records.

Q So if she didn't have a heart surgery that machine

would not of been in the OR, would it, sir?

A It can be in the OR and not being functioned.

Q Non-functioning, right?

A Right.

Q And she didn't have dialysis during the surgical procedure, correct?

A I didn't look at the records.

Q Okay. Are you aware of any piece of equipment in the OR room that's being used in hip and knee joint replacement surgery that has a filter other than the Bair Hugger?

A Probably the suction machine.

Q Probably the suction machine?

A Correct.

Q Anything else?

A The evaporators would have a filter. On the spur of the moment that's what comes to mind.

Q You are aware, sir, that ORs in this country that provide unidirectional flow use a Merv 14 filter as well?

A I think they're using HEPA filters.

Q So you don't know whether OR rooms in this country use Merv 14 filters?

A No. My answer is a HEPA filter is used in orthopedic surgery.

Q So the testimony that you're giving to the jury is Merv 14 filters are not being used in ORs, that these use HEPA

filters, is that right?

A They're not used in ORs. They're using HEPA filters, correct.

Q Do you know, Doctor, with regard to the filter that the EPA states that filters rated Merv 13 through 16 are suitable for controlling all bacteria, did you know that?

A No.

Q So you don't have any knowledge about what the EPA says about Merv ratings between 13 and 15, do you, sir?

A If I did need to find out I probably would look it up. Right now, I don't know.

Q You also know, sir, that there's been one study done, one where they looked at a comparison between a device, a forced air warming device that had HEPA filter and a forced air warming device that did not. You're aware there's one study that looked at that comparison, right?

A If you will show it to me, I'll take a look.

Q Have you ever read the Curtis study?

MR. FARRAR: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: The Curtis study compares the Mistral versus the Bair Hugger. Yesterday the Court on the Mistral said it's unfair to build a comparison between devices.

MS. PRUITT: I'm not going to be asking about devices. I'm just going to asked if he knows the study. I think he's going to say no.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q Do you recall if you read any study where they compared a HEPA filter on a forced air warming device with the devices that did not have a HEPA filter? Are you aware of any as you sit here?

A No.

Q Now you discussed with the jury some devices yesterday that were conductive warming devices, correct?

A Correct.

Q A conductive warming device is something that is electrical in the OR, right?

A Right.

Q The devices are either under the body of the patient or sometimes in the mattress, correct?

A Correct. It can also be outside the OR, not just in the OR.

Q Let's focus this discussion on in the operating room, okay, sir?

A Okay.

Q And so you told the jury yesterday that all devices have hazards, correct?

A Correct.
Q And that's true of these conductive warming blankets that I've just been discussing, correct?
A Correct.
Q One of the hazards of using a conductive warming device is thermal injury, correct?
A I said that all devices have some level of hazard.
MS. PRUITT: Can I ask the doctor to answer my question please.
THE COURT: Doctor, answer the question please. We're trying to get through this. Listen very careful to the question. Ms. Pruitt, ask your question again.
Q My question is with the conductive warming blanket there is risk of thermal injury, correct?
A Correct.
Q And thermal injury then it can burn somebody's either backside, their leg, their buttock, their shoulders. That is one of the hazards associated with conductive blankets used in the OR, correct?
A When used incorrectly possibly.
Q Thermal injury is a risk of burning, correct, sir?
A Tissue injury, yes.
Q And that's a form of burning, correct, sir?
A It can be a form of burning, yes.

Q Would it be correct for me to say, Dr. David, that the study - if the study is not listed in your report that you didn't rely on it in formulating your opinion?

A That would be true.

MS. PRUITT: Thank you. I have nothing further, Your Honor.

THE COURT: Counsel, would you approach.

(BENCH CONFERENCE.)

THE COURT: So we have an hour and a half before Dr. David needs to leave. Do you guys still want 30 minutes and 30 minutes? I foresee this possibly being an issue so I just kinda want to be ready.

MR. FARRAR: Would you just split the times?

THE COURT: Forty-five and 45?

MS. PRUITT: That's fine.

(RETURN TO OPEN COURT.)

REDIRECT EXAMINATION BY MR. FARRAR

Q Good morning, Dr. David.

A Morning, Counsel.

Q The jury has heard the truth, the whole truth and nothing but the truth. You've heard that saying before?

A Oh, yes.

Q I talked about that. You were asked the questions about the McGovern case and about if one of the authors worked

for a competitor, somebody who works for the manufacturer of the Hotdog, do you remember that?

A Yes.

Q That man's name is Mr. Albrecht. Did you know that Mr. Albrecht was a statistician?

A No.

Q He just crunches the numbers?

MS. PRUITT: Objection, Your Honor, calls for speculation.

THE COURT: Sustained.

Q Did you know that?

A No, but I saw his ...

MS. PRUITT: Same objection, Your Honor, speculation.

THE COURT: The objection is sustained.

Q You understand - I think you told us yesterday but just to make sure. You're an editor of a journal, correct?

A Editor-in-chief.

Q What's the name of the journal?

A Local Global Engineering Journal.

Q And from time to time do you get articles that are submitted for publication where there's a potential conflict pointed out?

A Yes.

Q And you note it in your article?

A It has to be noted and that's the obligation of every journal to correct such information.

Q So the truth is Mr. Albrecht was an author. The whole truth is the conflict was noted?

MS. PRUITT: Your Honor, I'm going to object. I've already shown this to the jury and they know that I've shown it to them. To suggest that I wasn't telling them the whole truth is inappropriate and I object and I ask the question be stricken.

THE COURT: The objection's overruled. You may answer.

Q The whole truth is the conflict was noted in the article, correct?

A Correct.

Q And just so I understand, if it's noted in the article did the editor-in-chief know about it?

A Absolutely.

Q Did the peer-reviewers know about it?

A No.

Q The peer-reviewers don't but the editor-in-chief does?

A Yes.

Q Did anybody who reads or relies upon the article know about it cause it's right there for them to see, correct?

A Correct.

Q On McGovern, one other quick thing. You talk about

confounders. Are there confounders or potential confounders?

A In his article there was a potential confounder.

Q And that's also disclosed and discussed in the article, correct?

A Yes.

Q For the readers to evaluate, correct?

A Yes.

Q More importantly, for the peer-reviewers to evaluate, right?

MS. PRUITT: I'd object to the leading question.

THE COURT: Sustained.

Q Do the peer-reviewers evaluate the potential confounders?

A Yes.

Q It's in the article?

A The peer-reviewers are looking at the content so they will have to review them.

Q As the editor-in-chief of a journal you're familiar with the term bias, correct?

A Of course.

Q If an author of an article is being paid $5,000 a day by company is that a potential bias?

A Yes.

MS. PRUITT: Objection, leading.

THE COURT: Overruled. You may answer.

A If the company is noted in the article, it is.
Q If an article is sent to the company to make changes and revisions to, is that a potential bias?
MS. PRUITT: Same objection, Your Honor, he's leading the witness.
THE COURT: Overruled.
A That would not be a scientific example.
Q If the lawyers for the company emailed the researchers and asked him to make revisions, is that a bias?
A Of course.
Q If the company is funding the study that's not disclosed, is that a bias?
A Yes.
Q You're aware that there was no bias disclosed in the letter to the editor in Memarzadeh, correct?
A I don't think that I saw it.
Q You were questioned in your deposition and you didn't get to read the second question and answer. I want to give you a chance to the tell whole truth. So if you go to page 283 please?
A I'm there.
Q So the truth is on page 236 and the question was "Did you find any studies that suggest a risk was not different between the Bair Hugger device and another type of patient warming device?" And your answer was?

A "No, I did not."
Q The whole truth and the next question is "Did you look?" And your answer was?
A "I believe that I did look at the literature and did not have someone do double-blind studies on two different products. But they came close to is what I have here and that is the McGovern after removing the Bair Hugger and using something else. It's clearly a clear indication of the improvement in the rate of infection when the Bair Hugger was not there."
Q And your answer was there's a clear indication of improvement in the rate of infection when the Bair Hugger's not there and you referred to the McGovern study?
A Yes.
Q That is nothing but the truth?
A Correct.
Q You talked about the filter little bit. You're aware of what 3M said regarding efficiency of the filter?
A Yes.
Q What was that?
A That it is a HEPA filter.
Q That is not the truth, the whole truth and nothing but the truth. That is false, correct?
A Correct.
Q You were - we discussed the I call it the Stanford

study from 2011. The authors are - the part that I want to show you. This is Exhibit 1712.

MS. PRUITT: What's the exhibit please?

MR. FARRAR: Exhibit 1712.

THE COURT: Any objection?

MS. PRUITT: No.

THE COURT: It can be published for demonstrative only.

Q These same investigators confirmed that HEPA filters in use as recently as 2013 were operating at efficiencies of 61.3 -93.8 percent, well below established standards. That's the truth?

A Correct.

Q Regardless of what other filter is on their, Dr. David, is it a fact, a known fact by researchers, 3M and everybody that the hose in the machine has bacteria in it?

A Yes.

Q So whatever filter it is it clearly isn't working, right?

A Right.

Q You were asked some questions about the before your research and listening to Mr. Van Duren were you aware that obese patients didn't get hypothermia during surgery?

A No.

Q That's something you researched in this case, correct?

A Correct.

MS. PRUITT: You Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: He's talking about obesity. We never did. This man is not a physician. He's just repeating what other doctors have said and he's not qualified to do so.

THE COURT: He seems to be just repeating the same because you're relating something. The objection is sustained.

MR. FARRAR: Can I talk about obesity issues?

MS. PRUITT: Your Honor, he brought up obesity. I did not ask him that. He gratuitously brought it up in his answer for this very reason and I'm good object. It's a brand-new opinion and he's not qualified to give it.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q You were asked yesterday about, Dr. David, a couple of questions I wanted clarification. You were asked if in your opinion the Bair Hugger should not be used in the OR and you said no. Do you remember that?

A Yes.

Q I'm going to ask you a little bit more precise question. Is it your opinion the Bair Hugger should not be used

in orthopedic joint surgery?

A It should not.

Q And that's a different environment for use - is that a different environment for use than just any surgery?

A It is an environment.

Q What kind of susceptibility?

A The deep joint infections are known to be an easier target for infection in this type of implant procedure.

Q You were asked some questions about a study of Avidan.

A Which one?

Q Avidan. It's been published but I put it back up there.

MS. PRUITT: It hasn't been published at all.

Q Do you have the article?

A Yes.

Q Looking at the last paragraph. Do you see where it says, "We also recommend?"

A I do.

Q It says, "We also recommend that microbial filters be changed as specified by the manufacturer and that detachable hoses are sterilized regularly. I microbial filter fitted to the nozzle of the hose could be incorporated into the design of the device to reduce the risk of infection." Did I read that correctly?

A You did.

Q This is a 1997 article, correct?
A Correct.
Q Do you remember yesterday looking at a document from 3M where they were trying to do that exact thing in 2014?
A Correct.
Q If you would go to the summary on the first page. About midway through where it says, "We conclude," do you see that?
A I see it.
Q It says, "We conclude that these warming devices are a potential source of nosocomial infections." Did I read that right?
A You did.
Q That's the whole truth?
A Correct, correct.
Q We talked about an exhibit yesterday but I never put it on the screen but it's been admitted as Plaintiff's 1745. That was yesterday. This is where Mr. Van Duren had said it would be - it would not - I'll just put it up here so we can read it into evidence. We can see at the top this is Al Van Duren 2005. He says, he talks about conducting a large study, an RCT, correct?
A Correct.
Q He says, "I don't think a study like this would be" - "I don't think promoting a study like this would good career

move for me," do you see that?

A I do.

Q In 2006 it would not be a good career move to do the RCT randomized controlled study?

A Correct.

Q We talked about the cost that would be $6 million, do you see that?

A I do.

MS. PRUITT: May we approach, Your Honor.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: My recollection is there was a redaction. I have two objections. I could be wrong but my recollection is ...

THE COURT: What's the exhibit number?

MR. FARRAR: 1745.

THE COURT: It's not redacted.

MS. PRUITT: My second objection is he is getting ready to imply to this jury the budget reason along with the reason for doing something and he's going into the issue of corporate intent trying to make 3M look like - they're intending to mislead. They're intending to do all this.

The Court has already ruled in the motion in limine that the expert - this particular expert cannot get up here

and give opinions concerning motivation, intent or anything else so and that's what this document goes to and I object. It's a violation of the motion.

MR. FARRAR: I'm struggling how to respond to that because that's not just what the document talks about. It talks about how much it costs and how the Lange study was 36 people, no infections. You need at least 3,006 people and it costs $6 million. And I told the jury over and over 15,000 of these were sold today. I would say if they make a dollar on these how much profit does it take.

THE COURT: I don't think it's appropriate for this witness to assess that. The objection is sustained.

MR. FARRAR: She showed Lange, no infections, 36 patients. I get to show Van Duren says to that kind of analysis you need 3,606 patients.

THE COURT: So guess what is the foundation for this witness to testify about this?

MR. FARRAR: He's an editor-in-chief for the journal.

MS. PRUITT: He is using Al Van Duren's email to suggest otherwise. This to me is trying to get Al Van Duren's testimony in through this witness. If you want to talk about what it would take for an appropriate study today, I think that that's appropriate. But this is just a way to get Al Van Duren's testimony in.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q You were asked some questions about the Lange study, the 2022 study?

A Yes

Q I want to ask you a question. I'm going to show this chart. It said there was no surgical type infections in orthopedic. What was the sample size.

A I'd have to read it. I don't remember.

Q Are you looking at 39?

A Oh, I see. Thank you.

Q With 39 patients was there significantly a causation or correlation between forced-air warming and knee joint infections?

A The total times of occurrence is very small. Therefore, this size of population is too small to arrive at a conclusion.

Q Would you need thousands of patients to release that kind of conclusion?

A We're talking about small percentage. You would need definitely hundreds.

Q Yesterday I put up the slide from opening and I crossed out some of the alleged benefits.

MS. PRUITT: Your Honor, may we approach.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. PRUITT: I have not asked him in my cross-examination one question about all these alleged benefits. I haven't gotten into it.

MR. FARRAR: This is the benefits of the normothermia. These are benefits of normothermia.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So these were - the jury was told about the benefits normothermia. And we saw from the Project Protect that those top four are no longer around. But I forgot to get to the fifth one, postoperative shivering. And you have reviewed Exhibit 1668. I believe it's still up there. It's in evidence. It may be under 1777.

A Yes.

Q This is a document that you reviewed and relied on for some of your opinions?

A Correct.

Q It has a section on thermal discomfort.

MR. FARRAR: I'm going to publish it in evidence.

MS. PRUITT: As long as it's demonstrative, I have no objection.

MR. FARRAR: It is in evidence.

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: So arguing between the two of you that is not appropriate. So if you have something you want to say to opposing counsel in that manner you need to come up and approach.

MR. FARRAR: I started to tell you ...

THE COURT: Please don't interrupt me. You need to come up and say it up here. I know we're trying to rush through this but the fact of the matter is I still expect appropriate courtroom behavior.

MS. PRUITT: Sure. Your Honor, the reason I put on the record that it was for demonstrative purposes is because Mr. Farrar kept saying it was an evidence and you admitted this only for demonstrative purposes. I wanted the record to be clear.

THE COURT: What the Exhibit Number again?

MR. FARRAR: 1668.

THE COURT: That was admitted over objection so it's in.

MS. PRUITT: Okay.

(RETURN TO OPEN COURT.)

Q The part on thermal discomfort says, "While it's true that patients dislike thermal discomfort, the paper that you reviewed does not describe a method to monetize this outcome. Please review some willingness to pay and welfare economics

papers that describe how to monetize this outcome." Correct?

A Correct.

Q So what 3M is saying is this one is about making money?

MS. PRUITT: Objection, Your Honor. May we approach.

(BENCH CONFERENCE.)

MS. PRUITT: Again, this a violation of their trying to apply what 3M's motive and intention was and the Court has clearly ruled and he didn't ask to approach. The Court has ruled that this specific witness cannot testify about intention or motive of 3M.

THE COURT: Well that witness did testify about that. That's what Mr. Farrar just said. That's what you just testified to where it was a statement. It wasn't even a question. So the objection is sustained and you're not going to be allowed to display that exhibit in that manner again.

MS. PRUITT: Thank you, Your Honor.

(RETURN TO OPEN COURT.)

Q Dr. David, I'm handing you what's been marked as 1737. Those are the warnings that are on this 200, is that correct?

A Yes.

MR. FARRAR: Plaintiffs would move 1737 into evidence, Your Honor.

THE COURT: Any objection to 1737, Ms. Pruitt?

MS. PRUITT: May we approach, Your Honor.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, this on a different model. This is on the Model 200, not the model 750 that we're here about in this case. They're going to try to suggest this warning about the possibility of airborne contamination should be considered when patients with infected wounds are treated with the Bair Hugger. And we object that it's hearsay and they're comparing a warning on a completely different device that was not even used in the operating room and implying to the jury that somehow that we should be applicable to the 750.

THE COURT: Mr. Farrar.

MR. FARRAR: They had a warning on the devices whenever it said do not use in the OR. I'm not going to have a fair and accurate representation of what's on there.

THE COURT: The objection is overruled. 1737 will be admitted and published to the jury.

(RETURN TO OPEN COURT.)

THE COURT: 1737 is received.

MR. FARRAR: No further questions, Your Honor.

THE COURT: Re-cross.

RECROSS EXAMINATION BY MS. PRUITT

Q You've read the instructions you used with the Model 750, didn't you, Doctor?

A I did.

Q And 3M told the people that reading those instructions for use that they needed to change the filter, didn't they?

A Certain frequency, yes.

Q And the frequency was every six months, right?

A Correct.

Q And that was in the instructions for use, correct?

A Correct.

Q Now you talked to the jury little bit about these corporate documents. I would like for you to turn to your expert report. That's tab 3 in that please, sir

A I'm there.

Q Look at the section that says "Document produced by 3M." It goes onto the next page, correct?

A What page?

Q It's page 46 and 47 of your report, sorry. Tell me when you're there please, sir.

A I'm there.

Q Now I counted how many documents - how many 3M corporate documents you had reviewed last evening and I counted 64. I'm not asking you to count them. Would you disagree with me if I represent that the documents produced by 3M was 64 in

number that you looked at?

A I wouldn't argue.

Q You wouldn't argue?

A I wouldn't argue.

Q Do you know how many corporate documents were produced to counsel by 3M?

A No.

Q Did you ever ask to look at any additional documents that were produced by 3M?

A Everything I asked for I received.

Q So these are the only documents that you received from counsel to review that are 3M documents, correct?

A Correct.

Q And are you aware that on the HEPA filter issue that there was another corporate document that talked about competitors and what they were doing with regard to the Bair Hugger? He talks about the HEPA filter. We don't have a HEPA filter. We've never had a HEPA filter and we don't want that to be in the public. Did anybody show you that?

A No.

Q Now you talked to the jury that the Lange study. You told them yesterday that it was something that should be relied on. But today you answered the question from Mr. Farrar that there was no infection in the orthopedic procedures and you said it's not powered and it shouldn't be relied upon. Isn't that

you just said?

A That it shouldn't be relied upon.

Q Yes, sir?

A Yes.

Q That's what you just told this jury, that because of the sample size the Lange study should not be relied upon, correct?

A For that particular issue of infection rate for infection rate, that's correct.

Q And you saw the chart, sir, that all of those sample sizes for all of those surgical site infections were a small sample size, didn't you, sir?

A From 78 to below that number, yes.

Q That's a small sample size, aren't they, sir?

A They are.

Q But you told the jury yesterday about that, that because there were four infections that somehow that was the result of the Bair Hugger. And I pointed out that in orthopedic surgeries there were no infections. And that is the truth, isn't it?

A I don't think they are quoting correctly.

Q Let me break it down. Are you telling this jury now after relying on the Lange study yesterday that now when it's used to show that there were no infections in orthopedic surgery that it shouldn't be relied upon? That's what you're doing,

right?

A No, that's incorrect. I said specifically for the infection rate that table looked at infection rate causation. That's too small of a sample.

Q And so that's what the study was looking at was the infection rate in different types of procedures, right, sir?

A No. The study has a purpose of looking at the operating room air disruption.

Q So are you telling the jury that they should rely on parts of Lange that you wanted to rely on but not to rely on other parts that show there are no surgical side effects as an orthopedic surgeon?

A I think it's a normal conclusion, yes.

MS. PRUITT: Thank you, sir. That's all have.

THE COURT: May this witness by excused by the plaintiff?

MR. FARRAR: Yes, Your Honor.

THE COURT: By the defendant?

MS. PRUITT: Yes.

THE COURT: Thank you, sir. You may step down. Counsel for plaintiff, you may call your next witness.

MS. ZIMMERMAN: May we have just a minute to organize?

THE COURT: Sure.

MR. TORLINE: Judge, can we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. TORLINE: Mr. Emison wants to start playing Van Duren's deposition. The issue is we've got four of them we need to play. And I think we need to play them, given the circumstances, we need to play them consecutively so that all the evidence is heard.

MR. EMISON: Your Honor, we've addressed this already last week. You said we didn't have to play them back to back to back so the jury was forced to watch all four of those and could have a break.

THE COURT: What are you proposing in terms of playing them then?

MR. EMISON: I'm proposing to play a 41-minute deposition of Mr. Van Duren. That should take us to the lunch break or a slightly late lunch break and then to plaintiff Katherine O'Haver on the stand and then play another video.

THE COURT: So here's what I'm going to do. I think what we need to say is that Mr. Van Duren has several videos of his depositions.

MR. TORLINE: There's four.

MR. EMISON: We're not going to play the 2017.

THE COURT: So you guys will play that in your

case?

MR. TORLINE: There's designations. We've spent days going through these designations, Judge.

THE COURT: I'm not inclined to make them play a deposition if they don't want to play it. If you guys want to do that in your case in chief then obviously you can do that.

What I would just announce to the jury is that there are a couple of different depositions. The first one's going to be played today or now. And then we're going to take a break and possibly hear live testimony and then go from there just so that they know that there is the potential for more than one depo Mr. Van Duren to be played. Any objection?

MR. EMISON: Not at all.

THE COURT: From the defendant? Are you gonna take this up over lunch?

MR. EMISON: Yes.

MR. TORLINE: Yes.

(RETURN TO OPEN COURT.)

MR. EMISON: Your Honor, plaintiff will play the videotaped deposition of Van Duren taken on January 25, 2022 subject to the Court's rulings.

THE COURT: So ladies and gentlemen, there are multiple days, not that you guys are going to listen, but

there are multiple depositions of Mr. Van Duren. So just so you know, you may be hearing additional depositions from him later on. But right now, they're going to play the first one which is about an hour and 40 minutes.

I will tell you that I have some things set over the lunch hour so we're going to go a little past 12:30. So we will conclude this deposition and then we'll break for lunch.

If at any point during this deposition you guys need to take a break, just raise your hand and get my attention and we can take a break. I'm not handcuffing you to your seats for the next hour and 40 minutes. So let me know if you guys need to break. Counsel, you may proceed.

MR. EMISON: Thank you, Your Honor.

(DEPOSITION OF AL VAN DUREN WAS PLAYED FOR THE JURY.)

THE COURT: We'll go ahead and break for lunch. Why don't we just get started at 2:00 to give you all a little bit more time and for me to do things that I have scheduled.

(INSTRUCTION READ.)

We'll get started at 2:00. Thanks so much.

(LUNCH BREAK AT 12:51 PM.)

(BACK ON THE RECORD AT 1:40 PM.)

THE COURT: We are on the record outside the presence of the jury. The Court has before it a motion as

it relates to the deposition of Andrew Chan that would qualify as a defendant in this. Mr. Blackwell, what additional record would you like to make as it relates to your motion?

MR. BLACKWELL: Just briefly, Your Honor. We will largely rely on our papers. It's pretty straightforward. It's clear enough that in August of 2015, the lawyer directed CFD with certain personnel at 3M by a Dr. Chan. The ability of the plaintiff to engage in discovery around the CFD has been found to be improper given that the attorney-client privileges and work product privileges and the material was reviewed by the MDL which found it to be privileged. A special master reviewed it also.

The plaintiff objected to the special master's finding of privilege which I think was a Special Master Order Number 3. And this Court overruled the objection so it's been found to be privileged.

At the same time the plaintiffs have access to all the data that was included. And what they're seeking to do here now is to be able to play for the jury deposition testimony from Mr. Chan that would have an adverse inference that there is some secret CFD done by 3M that presumably is unfavorable to 3M and that has been covered up by the lawyers. And that would be how our attorney-

client privilege and work product privileges would play out. We believe that's an improper use.

And if that's not what they're doing, essentially pointing out that testimony that ultimately ends in a recognized privilege by the attorney-client privilege, it's not probative. It doesn't help to prove or disprove any fact of consequence of the case and it's not particularly relevant.

And in any event, the risk of this sort of adverse inference is outweighed by anything that might be deemed probative.

So Your Honor, for all those reasons we believe that no part of the video should be played because there's nothing in it that's otherwise in the case.

THE COURT: Thank you, Counsel. Does the plaintiff have anything to take up in this regard?

MR. EMISON: I will, Your Honor. So a couple of things about what Mr. Blackwell said. The dispute was Special Master Shurin involved conclusions that were withheld about the CFD. There was no discovery dispute at all whatsoever. I think it's an 18-page report that Mr. Chan was one of the authors. It sets forth all of the data, what they did.

We deposed Mr. Chan but there was not a single objection on the basis of attorney-client privilege or

attorney work product. So the fact of the assertion with this about attorney-client privilege or attorney work product isn't exactly accurate.

What happened was and why this is probative is that 3M did an internal CFD computational fluid dynamics study at the direction of its legal department and didn't tell its clinical department about that. So that supports our negligence and punitive damages claims in that legal is directing the research, not the clinical team. And whatever this concluded it was relevant to the clinical folks and they had no idea.

The other reason it's relevant is because Chan's boundary conditions support Dr. Elghobashi's computational fluid dynamics. So it's directly relevant to the counter whatever cross-examination position we have taken with regard to Dr. Elghobashi.

With respect to the adverse inference, it's entirely proper to make an adverse inference about this. May I approach, Your Honor.

THE COURT: Yes.

MR. BLACKWELL: May I have a copy of whatever you're giving her?

MR. EMISON: This is called a Nursing Administrators. I've searched the Westlaw last night. I looked at defendant's case and I can't find anything

directly on point regarding the assertion and really what this is attorney work product. They conducted a litigation test. They provided us the data about that but they withheld the conclusion.

The corollary of what this is like is when a defendant in a civil case asserts a Fifth Amendment privilege against self-incrimination. And very clearly the United States Court, the United States Supreme Court has held that an adverse inference may be made when a civil defendant asserts the Fifth Amendment privilege against self-incrimination. And they say that the prevailing rule is that the Fifth Amendment does not forbid adverse inferences against parties to civil actions when they refuse to testify in response to probative evidence against them. That is like what's happening here.

There's probative evidence against 3M that it conducted - that is evidence Mr. Issa has talked about that already in deposition designation testimony played to the jury. It is in evidence. They conducted a computational fluid dynamics test. They are failing to respond with what that conclusion is for that test.

And the MAI specifically allows the jury to consider the evidence and the reasonable conclusions that can be drawn from the evidence. And Missouri case law clearly permits counsel to argue those inferences to the jury.

jury should do. We are allowed to comment on the witness's credibility and counsel "is allowed to argue the evidence and all reasonable inferences from the evidence during closing arguments." That's from State versus McFadden.

The other thing I'll point out is that 3M's expert Dr. Abraham was given portions of this data and was, according to Mr. Chan's testimony, at part of the work that was done as far as setting up.

MR. BLACKWELL: Your Honor, I'm just seeing this case for the first time but I don't think it is even - the highlighted portions here from Mr. Emison simply referred to the parties' assertion of a privilege and not the fact that the Court has recognized the privilege.

The very heart and life of attorney-client privilege and work product privilege are the protections they provide. If it says that a privilege is recognized but it's at your peril because the opposing party can stand up in court, tell the court, tell the jury that the court has recognized your lawful work product privilege or attorney-client privilege and then the jury is allowed to draw an adverse inference at the urging of counsel, it undermines the very purpose of the privilege.

And I want to correct Mr. Emison in one respect too because he started off I think deliberately - I do think so saying this was driven by the legal department of 3M when

we know it was driven by outside counsel who then spoke with legal counsel at 3M. And as Special Master Shurin found we cited cases right in our brief on this particular issue that as a whole and some of which are from Missouri, Your Honor, on the protections provided by the privilege.

It's a protection against having to disclosure also protection against the party urging adverse inferences because the court has recognized the propriety of the privilege. At which point if he stands up in front of the jury and makes these arguments through Dr. Chan playing testimony that either we have to be negatively impacted by the adverse inference or we have to end up waiving all privilege just to defend ourselves. That's a source we would not want to be put in by the plaintiff's counsel.

What plaintiffs told Special Master Shurin - this was roughly not even a week before we started trial is that they needed to question Andy Chan over documents and things that were not subject to the attorney-client privilege. That's what they claim to have wanted in this.

What they want to play and I don't know if Your Honor has seen the designations. I think Your Honor probably has but they're not a lot. But the Court can readily see all of them but really to bring up things that are either relevant and substantive to this case or still irrelevant but asking the jury to draw an adverse inference.

And the fact that other experts they will say that our own expert on CFD has also seen the data, they have the data. It has been pointed out before they have their own substantial equivalent as the special master acknowledged in Elghobashi, Dr. Elghobashi's CFD. So it's highly prejudicial to us. The probative value if any at all is simply slight.

THE COURT: Okay so I'm going to want to have additional time. I thought I would be able to rule at this point but I want to read the case that Mr. Emison provided and I will issue my ruling prior to the conclusion of today.

MR. BLACKWELL: Your Honor, do you need the page and line?

THE COURT: I've got all of that. I've got all of that electronically. Thank you though.

MR. EMISON: May have 10 seconds to respond?

THE COURT: Ten seconds.

MR. EMISON: The data has been admitted already in this case as evidence. Most of the cases cited by 3M are forwarded and unreported.

THE COURT: Noted.

MR. BLACKWELL: If we may, Your Honor. We just saw this case so I have any response to it.

THE COURT: Briefly when we get to that point.

Let's switch gears and let's talk about Scott Augustine. I know that Ms. Pruitt asked me and my questions are about Exhibit 99 and Exhibit 103. 99 is the study that was conducted by Mr. Augustine. And then the 103 is the affidavit it looks like from the District Court of Minnesota.

So what is plaintiff's objection as it relates to those designations? And you've heard the argument from the plaintiff.

MR. EMISON: Is there a copy of those I can see? I don't remember what that is off the top of my head, Your Honor.

THE COURT: Which, the exhibits or the designation?

MR. EMISON: Both.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: So we are back on the record outside the presence of the jury for Scott Augustine's 2018 deposition. For instance, really, I think all of the designations as suggested by the defendant there is an objection as it relates to Motion in Limine 32, Motion in Limine 33 and then the pretrial motion as a relates to Augustine. Any further record from the defendant - from the plaintiff is a relates to your objection?

MR. EMISON: To the designations or specifically to these exhibits?

THE COURT: The use of those exhibits cause they go hand-in-hand. If I'm going to allow the designations, I'm going to allow the exhibits.

MR. EMISON: So yes. The issue with this is there's a couple of factors. But primarily on the affidavit and on this exhibit involving the study that was conducted by Dr. Augustine is not relevant in this case because there is not a single expert that is relying on this case for either the plaintiff or the defendant. Nobody has found it to be reliable and nobody has relied on it in their opinions.

We now have heard from all of our liability experts. None of them - we would not hurt anybody when talking about this.

Maybe 3M's experts but if they inject back to their case they ought not to be able to impeach Scott Augustine about this which gives him the second part. Scott Augustine is not part - Scott Augustine is a fact witness in this case called by 3M and every one of the depositions. The rule in Missouri is you cannot impeach your own witness. So that's entirely improper. He's not been declared to be adverse. He says negative things occasionally about 3M. He also says negative things about

plaintiff's case.

The Augustine deposition talked about the benefits of maintaining normothermia, but the fact that he says something against the Bair Hugger doesn't make him adverse.

If I were to witness a car crash at a red light and a party called me and said who ran the red light and I said you did, that does not make me adverse to them. That makes me a fact witness with a bad fact for their case. That is all Scott Augustine is in this case, Your Honor.

MR. BLACKWELL: In this case, Your Honor. Your Honor knows very well who Scott Augustine is with respect to the Bair Hugger. The plaintiffs have already in this trial put on at least two witnesses who have that one particular document, crazy town for example, that they want to show in front of the jury that shows 3M has considered, for example, filter alterations or modifications. And they told the jury that it's because 3M was concerned about some risk of infection when the truth was it was because of the types of things that Dr. Augustine had been saying and the very types of things that are reflected in the study, this fraudulent study.

And plaintiffs ought not to be able to perpetuate when this was reliance material, for example, Dr. Jarvis and then run away from it and suddenly it's not relevant as though it didn't occur.

There's no question about that Augustine is adverse to 3M. He tried to get us to pay him extraordinary sums of money to buy at the front end of this before he started undertaking the very studies that the plaintiff's lawyers are focused on with particles and smoke. Dr. Augustine or his confederates are behind virtually every one of them.

And, in fact, Your Honor, there's an email. I won't go on about this too long because we don't have time. But there's an email from Dr. Augustine where he acknowledges he couldn't culture any bacteria coming out of the blanket so now let's then focus on particles and everything because we know what those results will be and the rest of its history. That's what we've been hearing here in this trial.

It's a fraudulent study and it just so happens Nassau Hospital called him out in an affidavit that this was false. He got it published in a journal that he paid for and they called out the fact that it was false.

It kind of ties our hands in the trial that they're able to make characterizations about factually what 3M was thinking, why did this or that in some of its documents and we can't tell the jury the truth because we're responding to the antics of Scott Augustine and not to the concerns about there being surgical site infections or the risk of them.

THE COURT: So I believe that I said at the time of the pretrial conference that with this specific report that I was only going to allow it if it was relied on by other experts. So my ruling will remain the same and I will make rulings in the motions in limine consistent with that.

I will tell you that I don't believe, Mr. Blackwell, that the information or the evidence that's been presented to the jury has been presented in a manner in which you've referenced in terms of painting you in a light that doesn't allow you to fairly defend yourself.

I will tell you that if the evidence begins and is presented in a different manner and I feel as though that 3M is having to defend itself with its choices based upon the accusations by Mr. Augustine, I'll revisit that because I'm sensitive to that, the dynamic of that. So I want you to know that I'm listening for that.

And if you feel as though or if you want me to revisit that then approach and we can take it up again. Thank you.

MR. EMISON: May we take up the issue of exhibits?

MR. TORLINE: We do have objections and it may take a bit.

MR. BLACKWELL: There is one housekeeping matter. Ms. Pruitt was unable to return.

THE COURT: Very good. I hope she's feeling better. I could tell she was not doing well during that last deposition that was played. So hopefully she gets some relief. All right guys, so my hard stop time would be at the latest 5:30. You guys think if we recessed at 5:00 that we can take those issues regarding the exhibits from 5 to 5:30?

MR. EMISON: As long as there's no issue in offering them in front of the jury tomorrow.

THE COURT: I don't see that there's an issue.

MR. TORLINE: I think it's just better to get going.

(JURY IS RESEATED AT 2:00 PM.)

THE COURT: You may be seated. Okay, welcome back. We'll continue with the presentation of the plaintiff's evidence. Counsel for the plaintiffs you may call their next witness.

MS. ROGERS: I'd call Ms. Katherine O'Haver to the stand please.

KATHERINE O'HAVER,

having been first duly sworn upon her oath by the Court, testified as follows:

DIRECT EXAMINATION BY MS. ROGERS

Q Please introduce yourself to that Judge and jury.
A Hello. My name is Katherine O'Haver.
Q Is it okay if I call you Kathy?
A Yes.
Q How about if I'm not as given a single study this case?
A That's great.
Q We've heard quite a few. And how do you feel if I told you I'm not going to use this device and I'm not going to put anything up there on the screen, is that okay?
A Works for me.
Q Kathy, I just want to start off asking who in this world is important to you?
A My family, my friends.
Q When you talk about family and friends, why are they important?
A Because that's what life is all about being with your family and friends and enjoying yourself.
Q When you say things like enjoying yourself, was there a time period before the infection in 2016 where you enjoyed yourself with your family and friends?
A Yes.
Q What kinds of things would you do with family and friends before 2016?
A My family used to have lots of gatherings and we would

go camping ever year over Memorial Day camping at Mark Twain Lake. I don't know if you all know about that. My boyfriend and I love to fish as well as my brothers, walking. We loved to walk our dogs. I love to play with my grandchildren. They're very important to me.

Q Those things that you were able to do before 2016, are you able to do the same things today?

A Not the majority of them, no.

Q I want to ask you about yesterday. Were you able to appear in court yesterday?

A No.

Q Why weren't you able to appear?

A I was in way too much pain.

Q Were you able to sit through another day in court?

A I don't believe I could have.

Q Did you make the decision ultimately to stay home?

A Yes, I did.

Q Do you feel better today?

A I do.

Q Kathy, have you ever testified at a trial before?

A No, never testified before.

Q Are you nervous?

A I'm very nervous.

Q Do you understand it's okay to be nervous?

A I do.

Q So when testifying, do you understand that when you testify you have to talk out loud so that the Judge and the jury and the court reporter can hear everything that you're saying?
A I'm doing my best.
Q Do sometimes you have issues with talking?
A I do.
Q Can you describe those issues to me?
A Sometimes I get to where I can't talk. I stutter, can't get the words to come out.
Q Are you going to do your best today to get those words out?
A I am.
Q Do you understand that you can answer every single question at your own pace?
A Yes.
Q And do you understand that if you can't get the words out that it's perfectly acceptable for you to ask the Court for a break?
A Yes.
Q Kathy, where do you live right now?
A I live in Columbia, Missouri.
Q Who lives with you there?
A My boyfriend and two sisters.
Q What's your boyfriend's name?
A Darrell.

Q Now at this house you live at with Darrell, you said and his two sisters?
A Yes.
Q How long have you guys lived there?
A We've lived there about six months.
Q Prior to living there where were you living?
A We were living in our own home but it was sold.
Q When you say we, whose we?
A Darrell and I.
Q And the house you live in now with Darrell, is that a temporary arrangement, Darrell and the sisters sorry. Is that temporary or is that permanent?
A It's temporary till we find a place.
Q When looking for a place are there certain things you're looking for for a home that's suitable for you?
A Yes.
Q What's the number one feature for you?
A A place I can get around in without having to use stairs.
Q Have you found that yet?
A No.
Q Kathy, I want to take you back to 2016. In 2016 where were you living?
A I was living in Oak Grove, Missouri.
Q Who were you living with at that time?

A My mother and my niece.
Q And did you have a job at that time?
A I did.
Q Where were you working?
A And worked for the Oak Grove School District.
Q So you lived in Oak Grove with your mom and you were working at the Oak Grove School District?
A Yes.
Q Were you still in a relationship with Darrell this time?
A Yes.
Q I'm going to ask about that. How long have you been with Darrell?
A Over 20 years.
Q Was Darrell employed at the time?
A Yes.
Q Where was he working?
A He was employed in Columbia.
Q So you weren't able to live together because of his employment?
A Yes.
Q I want to stay in 2016 for a minute. During 2016 were you ever experiencing pain in your left knee?
A Yes.
Q Did you eventually go see a doctor about that?

A Yes, I did.
Q Dr. Gregory Ballard? And did Dr. Ballard treat your pain?
A Yes. He tried to do it with a steroid injection and that was only temporary pain relief I should say.
Q So the steroids didn't work?
A No.
Q Ultimately, did you talk to Dr. Ballard about that?
A I did.
Q And were there any suggestions about what you should do with that?
A He said really one of my options if I chose to do it was to have a total knee replacement.
Q Did you make that decision to have a total replacement?
A I did.
Q When was that surgery?
A November 29th of 2016.
Q And where did that surgery take place?
A In Centerpoint Hospital in Independence, Missouri.
Q Was Dr. Ballard the surgeon that actually performed that surgery?
A Yes, he was.
Q Prior to going into surgery did Dr. Ballard or anybody from the staff give you instructions on how to prep yourself for

surgery?

A They did. The day before and the morning of I was instructed to use a special soap to clean myself all over.

Q And did you follow those instructions?

A Of course.

Q Do you have a memory of any other instructions they may have given you?

A No, I don't recall.

Q So did you end up going then to Centerpoint on that November 29, 2016 date for that surgery?

A I did.

Q Do have a memory of how long you were in the hospital after knee surgery?

A I don't recall exactly but I believe it was over week.

Q Do you know why you were there for the extended time?

A I had - I believe I had some issues with my throat.

Q Was it caused by the intubation?

A Yes.

Q And do you remember what kind of treatments you received for your throat?

A I don't recall.

Q During that time that you were there do you remember the nurses or the doctors, did they give you any antibiotics while you were in the hospital?

A Yes, I was on antibiotics I believe the whole time I

was there.

Q And they'd come into your room and give you the antibiotics to take, is that a yes?

A Yes.

Q Did you hide the antibiotics like under your pillow or did you take them?

A No, I took them.

Q So you took all the medication they told to take, is that right?

A Yes.

Q Now eventually were you discharged from the hospital?

A Yes, I was.

Q Where did you go after you were discharged?

A And went back to my mother's house.

Q That's the house in Oak Grove?

A In Oak Grove, Missouri.

Q At the time, how old was your mother at that time?

A She 78 now so she would have been 72 years old.

Q Was she able to give you any kind of assistance to help you during your recovery?

A Oh, no.

Q Did you have someone come into your house to give you assistance to help?

A I did. I had a home health nurse.

Q And do you remember when that home health nurse

started to come into your house?
A I believe it was the morning after I got home.
Q How often would that person come?
A Either every day or every other day. I'm not positive on that.
Q When you left the hospital was your surgical site on your knee, was it bandaged up?
A Yes, it was.
Q And when you went home did you ever change the bandages when you first got home?
A No.
Q Is that something the home health nurse would do?
A The home health nurse is the only one that did anything to my knee.
Q And so would they do things like take your vitals?
A Yes.
Q And was it a he or she?
A She.
Q Would she look at the bandage?
A Yes.
Q Would she change the bandage?
A Yes.
Q When she was changing those bandages were you able to take a look at your surgical site?
A Yes.

Q During that first few days after got home do you remember seeing anything that caused you any concern about your surgical site?

A No.

Q If you had would you have mentioned it to her home health nurse?

A Yes or she would've seen it.

Q When you left the hospital did the doctors go over with you or any of the staff things to look out for when it comes to infection?

A Yes.

Q Do you remember those things?

A Pretty much it was to watch out for swelling, redness around the incision area or fever, any type of fever.

Q And just so I understood your testimony, you didn't see those things in that first week after you got home, is that correct?

A No, I didn't.

Q When you got home from the hospital were able to take any baths?

A No, I wasn't able to.

Q Can you tell me how were you able to clean yourself clean?

A The only way I was able to wash was just with a washcloth and wash my body.

Q Now about around December 14th, do you recall going back to Dr. Ballard's office?
A Yes, I did.
Q Do you recall, did you have the staples removed at that time?
A Yes.
Q Did Dr. Ballard do that removal or was it somebody else?
A It was his assistant I believe.
Q When you were there and the staples were getting removed, at that point did you notice anything unusual about your surgery site?
A No.
Q After the staples were taken out, did anything cause you concern about your surgery site?
A Not that I recall.
Q And do you every recall seeing any blood or drainage coming from the top of your incision?
A A few days later, yes, I did.
Q And then did you mention that to anybody?
A I did. I mentioned it to my home health nurse. And that day when she came, she could see through the bandage the bleeding and drainage.
Q Did you eventually go back to Dr. Ballard's office?
A Yes.

Q Do you have any memory of how long, how many days it was between when you had the staples removed and when you went back to Dr. Ballard's office?

A I believe it was five or six days.

Q When you went back to Dr. Ballard's office, was the drainage and the bleeding still going on?

A Yes, it was.

Q What happened when you went back to his office?

A When I went back they of course unbandaged it, cleaned it, put stitches back in it because it was you know bleeding and draining. And I believe they covered it up again if I remember right.

Q Did you get another prescription for anabiotics?

A I did.

Q During the time period from when you were discharged from the hospital up until that point, were you taking all medications as prescribed?

A Yes.

Q To the best of your knowledge, did that include antibiotics?

A Yes.

Q Did your knee - do you remember were you still having your knee wrapped after you had the stitches put in?

A And believe I was but I'm not sure on that.

Q And at some point did your leg start to worsen, Kathy?

A It did. It began swelling. It was feverish and it also started turning colors to the point where it caused a lot of concern.

Q Did you tell your home health nurse this?

A I did and she noticed it as well.

Q Did you eventually go back to the hospital?

A I did.

Q Do you recall what date that was?

A I don't remember the exact date. I know it was toward the end of December.

Q Did your home health nurse direct you to go the hospital?

A Yes.

Q And if I told you that was on December 31st, would you have any reason to disagree with me?

A No.

Q On December 31st she recommended you go back to the hospital, is that right?

A That's correct.

Q And did you go?

A No.

Q Why didn't you go that day?

A I think I was just kind of in disbelief of what was going on and I didn't realize how bad it was.

Q Was Dr. Ballard at the hospital that day, do you know?

A No, he wasn't.
Q Is he someone that you were comfortable with?
A Yes and that's another reason. I knew Dr. Ballard was in California. He was on vacation.
Q So that was December 31st?
A Yes.
Q Did you eventually go the hospital?
A The next day.
Q So the very next day you went to the hospital on January 1st?
A It was very discolored, very painful.
Q When you went back to the hospital on January 1, can you tell me what happened?
A I don't remember exactly. I know that they admitted me. That's really all I recall of that day.
Q Okay. Did you recall anything happening the next day?
A I had to go back in for another surgery.
Q That was on January 2nd?
A Yes.
Q And how are you sure it was January 2nd that day?
A It's one of my son's birthdays.
Q That's why you remember that day?
A I do.
Q Do you recall the name of the surgeon that performed your second procedure?

A It was Dr. Collins. I don't remember his first name.
Q Okay. Do you have - in your own words can you describe to the jury what you understood to have happen that day?
A I just from the signs and symptoms I was having an infection and having to have another surgery for the infection.
Q Do you know what Dr. Collins did during the surgery?
A I didn't at the time, no.
Q Do you know now?
A I do now.
Q What is it that you know about that?
A I know that he had to cut my leg back open and go in and clean out the infection and clean around my prosthetic knee or knee replacement.
Q After that happened, after you had your surgery, were you discharged from the hospital?
A I was discharged but I wasn't going home.
Q You didn't get to go home after the surgery?
A No.
Q Where did you go?
A I had to go to a rehab place.
Q Is that - do you know why you were sent to the rehab facility?
A Because I was unable to walk properly and just a lot of mobility issues.

Q Were you receiving anabiotics as well?
A I was.
Q How did you receive those antibiotics?
A IV.
Q You had to get IV antibiotics. Did you also receive physical therapy?
A I did.
Q Tell me how many days were you in the rehab facility?
A Forty-five days.
Q In that 45 day time period did you have family or friends that were allowed to stay with you?
A No.
Q When you finally got discharged - well tell me, was it a difficult stay at that rehab facility?
A It was very difficult. I was very lonely. I was very concerned about what was going to happen to me.
Q When you left the rehab facility after about 45 days then did you get to go home?
A Yes, I did.
Q Was that at your mom's home or was it somebody else's home?
A No, I actually had to go to my brother's home in Oak Grove because there was no steps in his home.
Q About how long did you stay at that house?
A Two weeks.

Q So you had the surgery on January 2nd. Eventually you were discharged. Forty-five days at the rehab center and another two weeks away from your house?

A Yes.

Q Now after two weeks of being at your brother's house, were you finally able to get back home?

A No.

Q Where did you go after that?

A I had to go back to the hospital.

Q And why was that?

A Because I had a stroke.

Q What was the date you had that stroke?

A It was on March 3rd and my other son's birthday so I remember that.

Q So March 3rd. Is that 2017?

A Yes.

Q You suffered a stroke and were taken back to the hospital?

A Yes.

Q Now I want to talk to you about the physical - the injuries you suffered as part of that stroke. Can you tell me what physically happened to you as a result of suffering that stroke?

A I wasn't able to walk. I wasn't able to talk. I was pretty much unable to do anything at that time when I first

suffered my stroke.

Q Will you tell me which side of the brain your stroke occurred on?

A I remember they told me I had two blood clots on the left side of my brain and it affected my right side.

Q So the issues you had physically were to right side, right arm and leg, is that right?

A Yes.

Q Now I know you testified earlier that you have some troubles with stuttering, but would you agree that your speech has come back?

A It has but I still have problems.

Q With talking little bit?

A Yes.

Q What about your memory? Has your memory been affected by this?

A Yes, very much.

Q I want to talk to you about the right side. Would you call it a short-term right side paralysis?

A Yes, I would.

Q Did eventually that resolve itself?

A It did after a lot of physical therapy in hospitals and rehab facilities.

Q Do you feel like you got back to 100 percent on your right side?

A I do.
Q About how long after the stroke do you feel like until you got back to 100 percent on that right side?
A I'm not positive on that. I would say it was probably a year or so.
Q Short of 100 percent, so a percentage less than that, what percentage were you where you think you could have been able to function better physically, what would be the time period after a stroke before you felt that way?
A I was actually up out of my wheelchair I believe where I could transfer myself onto my bed within about nine months.
Q Do you think there's a time period that short of that 100 percent - and, again, I'm not talking about you left knee. I'm talking about just the right side where you think you could have been able to work short of that year or so afterwards?
A I believe I could've went back to work at that time at least part-time.
Q At the nine-month time period?
A Yes.
Q Now the issues with your speech, do you think that they would have prevented you from going back to work?
A Not at all, not with my job.
Q The issues with your memory, would that have prevented you from going back to work?
A No.

Q We talked about work a little bit. When you - before you had the knee replacement where were you employed?
A Oak Grove School District.
Q And was that at the elementary school?
A I actually worked for the early childhood center.
Q And what was your title there?
A I was in janitorial services.
Q When did you start working there?
A Sometime in 2013 I believe.
Q Was what your shift at the janitorial service at the early childhood? Was that an overnight shift or was it during the day or late evening?
A I worked from 2:30 in the afternoon to 11 at night.
Q Was school in session when you got to go there?
A They were just getting out pretty much.
Q Can you tell me what kind of things did you do as a janitor there?
A Everything from dusting the shelves off, bookshelves and stuff to buffing the floors.
Q With a big machine you walk around buffing the floors?
A Yes.
Q Did you have to do that after the kids were gone?
A Yes.
Q Kathy, did you like your job there?
A I loved my job.

Q What did you love about that job?
A Being at work, number one. I worked all my life since I was 15, being around the children, being around friends. It made a lot of friends there and I just loved being there. I looked forward to being at work every day.
Q What was your income when you were working there?
A I'm not sure of my income, 12 something an hour I believe.
Q Twelve to 13 an hour?
A Yes.
Q Was it a full-time job?
A Yes.
Q Was that all year round?
A Yes, it was.
Q Were there different things you would do in the summer that you didn't do in the school year?
A Yes.
Q What were those?
A In the summer time we'd take like all the desks out. We'd do deep cleaning all the desks, the chairs. We waxed all the classrooms. If there was carpeting, we shampooed it. We painted. We did a lot of things.
Q Since your infection in your left knee, have you been able to do any of those things?
A None of them.

Q Have you been able to return to work at all?
A No.
Q Do you attribute that to your left knee?
A I do.
Q And is it your testimony that you feel you recovered from the stroke?
A I recovered from the stroke.
Q Enough to work?
A Enough to work.
Q Have you ever had a desk job?
A No, I worked in restaurants most of my life. I worked at the school in Oak Grove.
Q What kind of education do you have?
A I graduated high school.
Q And since then you've always had the type where you were on your feet, right?
A Every day.
Q Since 2016, have you been able to do any jobs that require you be on your feet?
A No.
Q Kathy, how old are you?
A Sixty.
Q Did you have any plans at the time that you had your surgery and the knee infection to retire?
A I had no plans for retirement at all.

Q In fact, how long would you've worked if you could've worked?
A Till the wheels fell off. I would've worked as long as I could. I enjoyed being out working.
Q Did you have to give up your job with the school district?
A I had early retirement.
Q Is that because of the infection?
A Yes.
Q Now I asked you at the beginning of this and we mentioned Darrell. What's Darrell's last name?
A Barnes.
Q You said he is your boyfriend?
A Yes.
Q I understand you guys have been together 23 years?
A Yes.
Q And have you and Darrell lived together in the past?
A Yes
Q You lived together in the past. You live together currently. But there was a time period where you were living with your mom while you were working in Oak Grove, is that right?
A I worked in Oak Grove.
Q Can we tell the ladies and gentlemen of the jury - describe the relationship with Darrell.

A He's just kind of a happy-go-lucky guy. We met working at a restaurant. I was a bakery manager for Perkins restaurants in Columbia, Missouri. I started out and I was transferred to Columbia, Missouri where Darrell worked and he was one of the line cooks. And the rest is history pretty much. We're fishing buddies. We're camping buddies. Would love to do all that stuff that I can no longer do. I tried and I can't do them.

Q And to ask you specifically, prior to the infection in 2016, what are things that you and Darrell would do together?

A Camping, fishing. We used to take our dogs to the park and run them and walk them. We'd go to concerts, dancing, just a lot of things that a lot of people take for granted.

Q Now Darrell hasn't been in the courtroom since this case started, has he?

A No.

Q And that's not because he doesn't support you, is it?

A No, not at all.

Q In fact, is he here today?

A He is.

Q And he's sitting outside?

A He is.

Q And you understand he can't be in here because the Court doesn't allow witnesses to be in here?

A I understand.

Q Now the things you were able to do with Darrell before the infection, have you been able to do those things?
A No.
Q Have you been able to go camping?
A No.
Q Have you tried?
A I tried but I couldn't do it. I couldn't help with setting up the cam or doing any of those things that I used to do with him.
Q What about fishing? Tell me about have you guys tried to go fishing?
A We have tried. However, I was an avid fisher woman and I used to walk all around the lake with him and fish and bait my own stuff. However, now the extent of it, I sit in the chair and maybe fix fishing lines and stuff.
Q It's difficult for you stand up on that uneven ground?
A It is.
Q Would you go swimming whenever you guys would go camping and fishing?
A I used to all the time.
Q And have you been able to do that?
A Not at all.
Q And why is that?
A I just can't - I have no strength in my legs to do anything like that anymore.

Q Has this affected your relationship with Darrell?
A It has in some ways, yes.
Q Can you tell me how?
A I've become very dependent on Darrell for a lot of things which bothers me because we were 50/50 before. I feel like I put a lot of pressure on him to do the things that I no longer can do.
Q I want to talk about that for a minute. Before the infection when you and Darrell would live together, did you guys share the chores?
A We did.
Q And di you have the chores you would do and the chores he would do?
A Not really. We just kind of - if something needs to be done he would do one thing and I would do the other so it was done.
Q How much time - just talking about you before the infection, how much time do you think per day you would have spent on chores?
A Probably two or three hours.
Q What kind of chores would you do?
A Everything from dusting the furniture to sweeping and and mopping, laundry, outdoors, whatever we needed to do outdoors in the yard.
Q In that time period when you were working in Oak Grove

and living in Oak Grove with your mom, would you do chores there?

A I did.

Q Was the same two to three hours per day?

A Pretty much, yes.

Q Now since the infection are you able to do any household chores?

A No.

Q If you do any chores - can you do any chores?

A I can.

Q What kind of things can you do now?

A Like we've got rolling chair and I roll around the house dusting furniture and just little things like that.

Q Can you do any chores that require you to get on the floor?

A No, not all.

Q Why is that?

A Because I can't get down on my knee.

Q Could you get back up after you got down?

A I wouldn't be able to.

Q The chores that you try to do now does it take you longer?

A Yes.

Q Like estimate twice as long, how long, how much longer?

A Probably three times longer. A chore that I used to be able to do in maybe an hour or whatever would take me a day sometimes now depending on the pain.

Q Going back to Darrell for a second, what does Darrell do for a living?

A He is a chef.

Q And before the infection would you and Darrell cook together?

A We did all the time.

Q Were you his sous chef?

A I was his sous chef, yeah.

Q Did you enjoy that time in the kitChan together?

A I did.

Q And since the infection, are you limited with the ability to help Darrell in the kitChan?

A Very much.

Q Can you tell me what kinds of things can you do now?

A Pretty much now when I meal prep I sit in the chair and I might cut vegetables or marinate meat or whatever.

Q And is that still fun?

A Not like it used to be.

Q Has you not being able to do things outdoors with Darrell, has that affected your relationship? Has not being able to contribute affected your relationship?

A Very much.

Q The same thing, feeling like you're depending on him?
Q You mentioned that you have some memory problems, right?
A Yes.
Q You do remember two dates, January 2nd being the date of your second surgery on your knee that was because that's one of your son's birthdays?
A Yes.
Q And when you had a stroke that was another son's birthday?
A Yes.
Q I hate to ask you, when is your third son's birthday?
A September 2nd.
Q So we've passed it this year?
A Right, right.
Q So you have three adult children?
A Yes, I do.
Q Do you have any grandkids?
A I do.
Q How many grandkids do you have?
A I have five beautiful granddaughters.
Q You live in Columbia you said, right?
A Yes.
Q Do any of your granddaughters live around you?
A Yes.

Q Who are those grandchildren?

A I have three granddaughters that live around me, two that live within 25 minutes of my home. And they are Calissa who is 13 and Delaney who just turned four in May. And then my other granddaughter that lives around me is about 40 minutes away and that's Riley and she's eight years old.

Q I want to focus on and I'm not trying to ignore the granddaughters who don't live near you. How far away are those granddaughters?

A One of them lives in Berry, Illinois which is a ways. I wouldn't be able to make the trip you know comfortably at all. And the other one is in Hannibal, Missouri.

Q Is it fair to say you get to spend more time with the first three granddaughters you mentioned?

A Yes, it is.

Q Tell me, are they active in any kind of events or activities, things of that nature?

A They're very active.

Q Do you get to go watch them?

A No, not like I want to.

Q Why is that?

A I attended a couple of Riley's - she was wrestling last year. But, however, the first one I went to wasn't very crowded so I was able to sit on the front row and be comfortable. The second one was very crowded to the point where

I was sitting two rows up and I couldn't even get down to go the bathroom or anything because I was afraid I would fall because there was people everywhere.

And I just don't do good in crowds because I'm afraid I'm going to fall or get knocked down because of the instability in my knee.

Q Have you ever had to use a wheelchair at any of these family events?

A I have. I've been to some football games of my nephews. I had to go to my oldest nephew's graduation in a wheelchair. There's been a couple of other events and had to go to in a wheelchair because I knew I wouldn't be able to walk.

Q So you mentioned Riley. What about Calissa?

A Calissa is my 13-year-old granddaughter. She's in gymnastics. She's great. However, I got to watch her, you know, a little bit when she first started. Now I'm unable to attend her events because I'm just not able to do it.

Q Now Delaney is four?

A Yes.

Q And that is from someone who has a four-year-old that's a tough age?

A It is.

Q Tell me what things you do with Delaney?

A Really about the only thing I can do with Delaney is read books with her. I'll sit in her room on her bed and play

with her and it really bothers me because she wants me to get down on the floor. What granddaughter doesn't what their grandma to get down and on the floor and play Barbies with them the do things like that, go outside and play kickball with her. I did attempt one time to sit in a chair and play ball with her. And she said, grandma why can't you get up but I couldn't do those things.

Q Is it tough for you?

A It's very tough. Other grandparents are able to do all these things, take her to Disney World and do those things and I can't make those memories with her. I'm not able to do it.

Q Kathy, how would you describe your personality before you suffered that infection that you had in 2016?

A I was happy-go-lucky. I really was.

Q Do you feel like you're not quite that same person now?

A I know I'm not that same person.

Q I'm just going to ask you, Kathy, you take medication for depression?

A I do.

Q Do you take it as prescribed?

A Yes.

Q An do you believe that you suffer from depression?

A I know I do.

Q Do you believe that part of its because of the pain you're suffering associated with your left knee?
A Yes.
Q Is it your testimony that your quality of life has reduced since you to suffered that infection?
A Very much so.
Q If you could quantify that, what would it be?
A I'd say my quality of life was at 80 to 85 percent before. I don't know if I'd even put it at 20 to 25 now.
Q A pretty big reduction, Kathy. Sitting here today, how is your leg?
A I'm in pain.
Q Do you have issues with swelling?
A I do.
Q Do you have issues with pain?
A I do.
Q Do you have skin issues?
A I have.
Q And are those issues - are those issues the things that prevent you from doing the things that you used to do?
A Very much so.
Q Can you even go grocery shopping anymore?
A No.
Q If you do go grocery shopping, do you have to use a wheelchair?

A I have to use the electric cart. If there's no electric cart available, I can't do it.

Q Can you cut the grass?

A No.

Q Can you plant flowers?

A No.

Q I mean what - can you tell the jury - ladies and gentlemen of the jury what is your day-to-day life like now?

A I pretty much get up early in the morning because I don't sleep very well, not only because the depression but because of the pain. I get up the morning, go down and watch the news, sit around all day pretty much, try to do what I can.

Q Can you take a bath?

A I can't take baths anymore because I can't even sit down in the tub. I can't get my knee - I can't get up. If I try to get in the tub, I can't get out.

Q Are you currently undergoing any kind of physical therapy?

A Not at the present.

Q Have you recently?

A Yes.

Q Do you know the timeframe of that?

A All I remember was it was snowing last time I had physical therapy so it was last winter.

Q Do you do physical therapy when a doctor prescribes it

for you?

A Absolutely.

Q Now you walk today with the use of a cane?

A Yes.

Q Do you always have to use a cane?

A Always.

Q Are there times that you have to use a walker?

A There's times I use my walker and my wheelchair.

Q Are there any times - I'm talking about now. Are there any times now where you can safely walk without assistance?

A No, not at all.

Q Now are you getting pain meds for your knee?

A I am. However, I don't like to take any narcotics because I'm afraid of that adding to the risk of me falling. So generally I'll take like extra strength Tylenol and I do have a prescription as well but it's not enough.

Q So you're not taking narcotic pain medication?

A Oh, no.

Q Now do you know Dr. Bowling?

A Yes.

Q Did have an opportunity to meet Dr. Bowling in this case?

A I did.

Q And did he examine your left knee?

A He did.
Q Do you have any complaints about his examination?
A Oh, no.
Q Did you got out to see him or did he come here to see you?
A And went to North Carolina to see him.
Q Did you get on a plane to fly out there to see him?
A Oh, no.
Q Are you afraid of flying?
A I'm very afraid of flying.
Q So how did you get there?
A I was driven there.
Q Was it a long car ride?
A Very long. We took a lot of breaks.
Q Was it painful?
A Is was very painful.
Q But you got there?
A I got there.
Q Did you - when you went to see him in North Carolina did you go straight to his office or did you detour?
A Went straight - no, actually I've always wanted to see the ocean. The ocean was right behind his office. So the driver took me down so I could see the ocean.
Q When you say that, did your driver physically assist you?

A Yes.
Q Into the sand?
A Yes.
A He walked me all the way down to the water and back up. By the time I got back I basically collapsed because I was so tired and hurt so bad.
Q Kathy, is this how life is for you now after this infection?
A Every day.
Q You need assistance in just walking down to the ocean?
A Yes.
Q During this case you also spoke with one other person, Dr. Stan Smith, do you recall that?
A Yes, I do.
Q And he's the economist that's going to help calculate the damages for lost wages and benefits, household chores and your quality of life. You understand that, right?
A Yes.
Q And you were asked some questions by Dr. Smith or his office?
A I was. I don't remember them all but I was asked questions.
Q I'm going to ask him if you do remember some of these. Were you asked about your employment?
A Yes.

Q Did you give him the same information that you gave the jury here today?

A I did.

Q Did he ask you about household chores?

A He did.

Q Did you give him the same information that you gave the jury here today?

A Yes.

Q And about the quality of life. Did he ask those questions?

A He did.

Q Were you able share with him those things that came to your memory - that came to your brain at that time about how your life has been affected by this infection?

A I was.

Q Kathy, is your life after the infection anywhere close to the life you had before?

A Nowhere near, not at all.

MS. ROGERS: I have no further questions, Your Honor.

THE COURT: Cross-examination.

MR. BLACKWELL: Yes, Your Honor.

CROSS EXAMINATION BY MR. BLACKWELL

Q Good afternoon, Ms. O'Haver.

A Good afternoon.
Q Ladies and gentlemen. Ms. O'Haver, you and I have never formally really met, have we?
A No, sir.
Q Good afternoon again.
A Same to you.
Q They say if you talk to anybody long enough you learn certain things you have in common?
A Yes.
Q And you and I have some things in common. First, you talked about having that job where you had to work the big buffer on the floor buffing floors. I've had that job from 11 PM to 7 AM at Kmart when I was coming up. And we're also both 60 years old, did you know that?
A Well, I do now.
Q I'm going to ask you some questions about your injury, your claim in the case. I want you to understand that nothing I'm going to ask you is meant to either be harassing or embarrassing, okay?
A Okay.
Q I'm only asking certain things because it might be facts that need to be brought out for the jury and that you and I can then discuss. Is that all right?
A Yes.
Q Now I wanted to show you I have this big binder. I

didn't want to just give it to you first because it might've been intimidating. But I want to hand it up to you because there might be certain things and records and other things that I want to talk to you about and want you have it with you up there, okay?

MR. BLACKWELL: May I approach, Your Honor.

THE COURT: You may.

Q So that's your deposition?

MR. BLACKWELL: Just one moment, Your Honor.

Q I'll hand you also just some copies of some of the records in there. Ms. O'Haver, counsel was talking with you quite a bit about what she's describing as your life before the infection as opposed to after the infection. Do you remember that discussion?

A Yes.

Q I want to talk about how your knee was doing before the surgery on her left knee. So at the time that you would have gone and had that surgery, you did have at that time what your doctors described as degenerative joint disease, right, in your left knee?

A I believe that's what he called it. I don't recall for sure.

Q But he pretty much admitted that the left knee had worn out at that point in time and you're going to get it replaced?

A I don't remember for sure.
Q Well was it fair to say the reason that you were getting a left knee replacement in the joint was because that left knee was already in a lot of pain because of the damage in that knee?
A I was in a lot of pain, yes.
Q You mentioned that the doctor had given you steroidal shots in that knee and they didn't work, right?
A Yes.
Q So I'm talking here before the surgery on the left knee there were things that you liked to do. I don't doubt that you liked to hike, you liked to camp, you had a job that required you to be able to move around. All those things were harder with that pain in your knee?
A Not as bad as when I actually had the surgery, no.
Q But it was bad enough that you needed to get the left knee joint replaced, right?
A Eventually.
Q Now let me just set the stage a little bit more too just about some other days. Now, obviously, we're here now, all of us are here because the lawyers have filed a claim on your behalf against 3M. You know that?
A Yes.
Q And you know that I'm here speaking for 3M in trial?
A Yes.

Q And the lawsuit that was filed in November of 2018?
A I don't recall the date.
Q But sometime later in 2018?
A Okay.
Q Now at the time you would have gotten involved with this lawsuit, you didn't know at that time even what the Bair Hugger was, did you?
A No.
Q You didn't know what it was or what its purpose was in a surgery, right?
A Never even heard of it.
Q Can you tell the jury when and how you learned what it is?
A I learned from my attorney and I don't remember when.
Q But apart from your attorneys, you hadn't done any independent research, anything on your own part to learn about anything called a Bair Hugger, had you?
A No, I had no reason to.
Q Now we're here talking about the pains in your left knee. You had previously had pains in your right knee, right?
A Yes.
Q And you'd had a previous replacement of the right knee joint?
A Yes.
Q Now do you know if the Bair Hugger was used in that

surgery?

A I don't have a clue.

Q Was it the same Dr. Ballard that performed your right knee surgery on July 8th of 2014, wasn't it?

A That sounds about right.

Q To be clear, that's the opposite knee from the one we're talking about now?

A Yes.

Q And the doctor had told you with respect to the right knee, that in the right knee you had right knee degenerative joint disease in the right knee?

A I honestly don't remember.

Q But you remember that the right knee was hurting something awful too?

A Yes.

Q So roughly two years after the joint replacement on the right knee you end up having surgery on the left knee also?

A Yes.

Q And that surgery we talked about was November 29th of 2016?

A Yes.

Q Same Dr. Ballard?

A Yes.

Q Now in terms of what you understood going into that surgery on the left knee, did Dr. Ballard talk to you about any

of the risks of the surgery on the left knee?

A I don't recall him talking to me about that.

Q Could you look in your binder. If you'd look at tab number 9. If we could have 2647, page 20. Do you recognize this as one of your medical records?

A It has my name on it. I really haven't read my medical records.

MR. BLACKWELL: Your Honor, the parties stipulated to the medical records and we'd offer Exhibit 2647.

MS. ROGERS: Judge, I have no objection.

THE COURT: 2647 is received.

Q Can you read there, Ms. O'Haver? You can see it also on the document in front of you. Can you see that okay?

A Yes.

Q It says, "Surgery discussed notes. Risks include but are not limited to infection, damage to the blood vessels or nerves, blood clots, pulmonary embolus, postoperative pain, persistent pain, persistent swelling, limitation of range of motion, need for future left knee surgery, adverse reaction to anesthesia, component loosening, death and unforeseen vascular events. Benefits include but are not limited to decreased pain and improved function of the left knee."

And those are notes represented to you from Dr. Ballard. Do you see those?

A I'm not sure where the note is but I read it up there.
Q So if you look on page 20. Look at the numbers at the bottom. Are you with me there?
A Yes.
Q So here is it's discussing some of the risks involved. And I just discussed and we read that altogether with the jury. One of the risks that was mentioned was, for example, component loosening. From the time you had the left knee surgery and the implant put it, you don't recall Dr. Ballard or anyone telling you that you actually had loosing of the component in the knee, did you?
A No.
Q So with these in particular, do you recall signing something that's called a consent? Did you provide a consent?
A I don't really recall that specifically. I know I signed a bunch of things.
Q If you would look then, Ms. O'Haver, at Tab number 4 and that's 2638, page 36.
A What page? I'm sorry.
Q I you'd look at tab number 4 and page 36.
MS. ROGERS: Your Honor, may I approach.
THE COURT: You may.
(BENCH CONFERENCE.)
MS. ROGERS: I would lodge an objection for relevancy because I don't know how this informed consent

would be relevant to any of the issues in this matter.

MR. BLACKWELL: It certainly provides notice that there are certain risks that are inherent in the surgery that in itself that would be consistent with any surgery kind of this type. There's certain risks inherent and related to the Bair Hugger usage or anything else.

THE COURT: The objection's overruled.

(RETURN TO OPEN COURT.)

Q Were you able to find page 36 on Number 4?

A Yes, I've got it.

MR. BLACKWELL: Again, we do offer Exhibit 2638, page 36 of 38.

THE COURT: 2638, pages 36 of 38 are received.

Q Perhaps you don't, Ms. O'Haver but you can see here your signature on the informed consent form?

A I see my signature.

Q But the point here really is that before a surgery was undertaken the fact that there was a risk of infection was something that your doctor discussed with you?

A I don't remember him discussing that with me.

Q So if you take a look at your deposition which is in the other binder. Maybe this will just refresh your recollection, page 152. Are you on page 152, Ms. O'Haver?

A Yes, I am.

Q If you'll look down at line 24. If you'll look down

at line 24 and then read over to the next page line 4 and see if it refreshes your recollection. Are you able to read that?

A I'm able to read it, yes.

Q So let me ask the question again. Now you understood there was a risk of infection going into surgery, didn't you?

A Oh, that's with any major surgery, yes.

Q Now I talked about Dr. Ballard giving you an injection in your left knee. And that was about two months before the surgery on the left knee, wasn't it?

A I'm not sure how long it was but possibly yes.

Q Now I think you discussed that even after the injections in the left knee you were still having pain and swelling. This was before the surgery. So you've had the injections in your left knee. Even with the injections you're still having pain and swelling. This was out ahead of your replacement surgery, right?

A I remember having pain, yes.

Q So at the time of your surgery on December - I'm sorry, November 29th of 2016, you didn't know it then but you know it now that the Bair Hugger was used in that surgery, right?

A Yes.

Q And so when you were finally discharged from the hospital on December 9, 2016, after your left knee replacement you had a physical therapy machine to move your knee around,

something called a continuous passive motion machine?

A Yes.

Q Do remember that CPM we'll call it?

A Yes.

Q When you started using that CPM machine you started having drainage from your knee, do you remember that?

A I don't remember exactly when it started draining or bleeding. I'm sorry.

Q No worries. If you would turn in your deposition to page 184.

A Okay.

Q If we look at line 18, starting there at line 18 over to the next page at line 9. We've asked a series of questions and answers.

"Question: That CPM is that the continuous passive motion machine that you've been talking about?

Answer: Uh-huh."

Do you remember having drainage from the left knee stitches?

Yes, I believe that's when I started having drainage.

Answer: I believe it continued but I'm not positive on that time.

Exactly. But you remember it started when you started using the CPM machine?

I don't remember that either."

Q But I read the testimony from your deposition accurately. We just read it together?

A Right.

Q Your deposition was in June of this year, right?

A Yes.

Q Now you had your staples removed a few days after your discharge. The staples were removed on December 14, 2016?

A Yes.

Q Now after you had the staples removed and then attempted with the continuous passive motion machine, you started having drainage again? Do you remember that?

A I don't remember the exact time when it started or anything.

Q If I could have you then look at your book with the tabs, your other one at tab 15. What I'm really attempting to do, Ms. O'Haver is just trying to come up with a timeline for some of this with the jurors so they have some idea of what's happening.

A I understand that. At the time of my deposition I wasn't sure of dates because of my memory, sir.

Q No problem, Ms. O'Haver. That's why I'm wanting you to focus on some the records.

A What page did you say?

Q I said 15. And for the record it's Defense Exhibit 2655 and it will be page 37.

MR. BLACKWELL: And, Your Honor, I would offer Defendant's Exhibit 2655, page 37.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2655, page 37 will be received.

MR. BLACKWELL: Request to publish, Your Honor.

THE COURT: You may.

Q You can see in front of you or on the screen. "Patient had staple removal. Then the patient got home and attempted CPM she started having drainage." Do you see that?

A I see that.

Q "She stopped CPM and has rested since. However, drainage continued." And then do you see where it said "New dressing was applied."?

A Yes.

Q So it was the day following this that you called Dr. Ballard's office because with this drainage you were bleeding really bad. And the strips they call Steri-Strips they had fallen off. The tape on your skin had fallen off from the drainage and bleeding from the injury, correct?

A I believe so.

Q But you do recall that you reached out and called Dr. Ballard when the wound was bleeding?

A I do remember calling his office, yes.

Q And do you recall in calling him that he started you on antibiotics?

A Yes.
Q And during this time when you were on the antibiotics you were still having drainage from the wound?
A Correct.
Q And the drainage was such that you decided not to do anymore of the therapy until the incision had healed?
A Anymore what, sir?
Q Anymore of the physical therapy?
A Oh, correct.
Q You decided to hold off on that until the wound healed? A I believe I was advised to do that.
Q So then it would've been on December 19th, five days after the staples had been removed that you went back to see the doctor and your doctor then put sutures or stitches and a dressing on your left knee, right?
A Yes.
Q So it had been five days after the doctor removed the staples, but it was four days after the knee had started to bleed?
A That's what it says. I don't remember for sure.
Q No worries. It's about that time period.
A It's in that time period.
Q So then it was sometime thereafter. So the knee has been sutured up on December 19th. And that after December 19th that you resumed the physical therapy again using the continuous

passive motion machine per Dr. Ballard's instructions, right?

A I don't remember.

Q Let's take a look at the record. If you look at tab 15. For the record it's Exhibit 2655, page 61.

MR. BLACKWELL: Your Honor, this has been admitted. It's 2655.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: So I just want to make sure the record's clear what's getting admitted. So I think in the past you said 2655, page 37. So you want it in in the entirety? I just want to make sure. All that have thus first on 2655 is page 37.

MR. BLACKWELL: This is fair. I'll cite the page number.

MS. ROGERS: Thank you, Judge.

(RETURN TO OPEN COURT.)

MR. BLACKWELL: Your Honor, I'd offer 2655, page 61.

THE COURT: Any objection to 61?

MS. ROGERS: No, Your Honor.

THE COURT: 2655, page 61 is received.

MR. BLACKWELL: Request to show the jury, Your Honor.

THE COURT: You may.

Q And so we see here a record or note, Ms. O'Haver, for the date of the visit on December 21st, 2016. And you can see here in the narrative notes, "Patient has ice pack on knee when PTA arrived today." That's the assistant that you had. "New bandage from surgeon's office is clean and dry today after being changed on Monday. Again, patient on therapy exercises today including supine exercises for mobility only." And supine means exercises on your back. Do you remember doing exercises on your back?

A Yeah, I believe so.

Q It says, "Good joint mobility remains with AP mobs. PROM is limited by pain, tightness and moderate guarding." But then do you see the highlighted section where it says "Returning to CPM usage as prescribed by ortho surgeon."

A Yes, I see that.

Q The ortho surgeon would've been Dr. Ballard at the time?

A I'm not sure if Dr. Ballard was there or not. I don't remember.

Q But you can see on this date December - you can see from this record that's when you would've resumed CPM per Dr. Ballard's instructions?

A That's what it says.

MR. BLACKWELL: May I approach, Your Honor.

(BENCH CONFERENCE.)

MR. BLACKWELL: I wasn't sure if Your Honor was looking for a stopping point for an afternoon break.

THE COURT: Since we didn't get started until 2:10 let's go until about 20 till four, another 15 minutes.

MR. BLACKWELL: Fine. Thank you.

(RETURN TO OPEN COURT.)

Q So moving forward I want to show you a record that's at tab 15. It relates to a December 27th, 2016 office visit and your infection. So if you could turn to tab 15.

A Okay. I believe I'm still on there.

Q Page 71.

MR. BLACKWELL: Your Honor, I would offer the same Exhibit 2651, page 71.

MS. ROGERS: Your Honor, I have no objection.

MS. ROGERS: Counsel has noted it's not just the exhibit. So I'm not objecting to last one being admitted with the purposes of their narrative that the top. I'm okay with the record being displayed, Your Honor. Anything further than that's inappropriate.

THE COURT: Any response? I don't know. I'd have to take another look at it.

MR. BLACKWELL: The slide is right on the record, Your Honor. Maybe it's a caption but it's from the record.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MS. ROGERS: Judge, when I look at the record doesn't have self or whatever you have the top but it looks like narrative. That was my point. So it's not displayed just the exhibit which I have no objection to. It would just need anything additional he would put up there.

MR. BLACKWELL: The caption does come out of the record. But, Your Honor, if we may display the slide but if there's an objection, I could replace it with my caption but it's all coming out of the records.

THE COURT: So the one that should be displayed is what is reflected in the exhibit and the page number. So with that direction.

MR. BLACKWELL: Then it may be we need to take a moment for me to do that.

THE COURT: What was that last one, 71?

MR. BLACKWELL: Yes, Your Honor

THE COURT: Why don't we go ahead and we'll recess for 15 minutes or so and we'll go from there.

MS. ROGERS: Thank you, Your Honor.

(RETURN TO OPEN COURT.)

THE COURT: Okay, guys, we're going to take our afternoon recess. We'll take about a 15-minute recess and we'll get started at 3:45.

(INSTRUCTION READ.)

We'll get started at 3:45.

(BREAK AT 3:27 PM.)
(RETURN AT 3:48 PM.)
THE COURT: You may be seated. We will continue with the cross-examination of Ms. O'Haver. I'll remind you that you remain under oath.
MR. BLACKWELL: Thank you, Your Honor.

CONTINUED CROSS EXAMINATION BY MR. BLACKWELL

Q Ms. O'Haver, are you ready?
A Yes.
Q When we took the break I was in the midst of introducing an exhibit, again, Exhibit 2655, page 71. To save time, Your Honor, I'd offer pages 78 and 84.
THE COURT: Any objection to 2655, pages 71, 78 and 84?
MS. ROGERS: Your Honor, I have no objection.
THE COURT: 2655, pages 71, 78 and 84 will be received.
MR. BLACKWELL: Request to show it, Your Honor.
THE COURT: You may.
Q So I want to give you a moment to see this entry. Ms. O'Haver, you can see it on the screen or in your binder. Let me know when you're ready. So Ms. O'Haver, look at the narrative note. This is a note from your physical therapist. And in this note from your physical therapist she is noting that "The

patient had had a follow-up appointment today with the surgeon's office. On this date no staples removed and patient states that office believes she may have an infection."

Do you see here where the physical therapist is noting that you told her that Dr. Ballard's office believed that you have an infection on December 27th, 2016?

A I see the note, yes.

Q Now on the next day if we pull up slide 9, that would be on page 78. On the next day there's no visit made. Again, this is the physical therapy visit from Spectrum Home Health. "Patient would prefer to hold on therapy until seen by nursing due to high amount of edema and infection." Edema is swelling in your knee?

A Yes.

Q So here on the next day, December 28th you prefer not to do any physical therapy due to the swelling in your knee. Do you see that?

A I see it, yes.

Q And then if you'd look at slide 10 which is on page 84. So on this date which is December 31st, this is over two weeks after the wound had opened up on December 14th, you see here where your home health nurse noted that there's fever, drainage and red streaks going downward your knee?

A Yes.

Q Do you see that reference?

A Yes.
Q It was on that day that the nurse advised you go to the ER, do you see that?
A Yes.
Q She advised you to go to the ER. "Patient go to the ER." It says, "Patient refused." Do you see that?
A Yes.
Q What did you refuse to go to the ER at that time?
A I believe at that time Dr. Ballard was out of town and I wanted to see Dr. Ballard. He did my original surgery.
Q Let's move forward then to January 1st because on January 1st you actually did decide to go to the ER, the next day on January 1st?
A Yes.
Q And you'll see a reference to that on Tab 5 and that would be record 2639. It's at page 112. Exhibit 2639, page 112.

MR. BLACKWELL: We would offer, Your Honor, Exhibit 2639, page 112.

MS. ROGERS: Your Honor, no objection.

THE COURT: 2639, page 112 is received.

MR. BLACKWELL: May I request to show it.

THE COURT: You may.

Q Do you see where I'm looking here, Ms. O'Haver, in paragraph number 1. Can you see it on the screen?

A Yes.

Q It says "The patient is medically stable for surgery at this time. We'll do blood sugars again. Her last hemoglobin A-1 C was 6.4 percent. She will obviously need to stop smoking to promote more reliable healing. We will start her on empiric antibiotics post-surgery so as not to interfere with intraoperative cultures." Do you see that?

A Yes.

Q Before the surgical procedure took place where they were putting the stitches in your doctors advise you to be more vigilant about blood sugars?

A Yes.

Q To stop smoking?

A Yes.

Q And both of those together would promote more reliable healing?

A Yes.

Q Now you actually had the irrigation and drainage wash out procedure on January 2nd, 2017 where they came in and washed out the wound. When you had that do you recall that a Bair Hugger device was used during that procedure too to address your infection, the Bair Hugger was used?

A I really don't recall.

Q If you'd turn to tab 5 again in your records. This is Exhibit 2639.

MR. BLACKWELL: We would offer 2639, page 277.

MS. ROGERS: Judge, may we approach.

THE COURT: You may.

(BENCH CONFERENCE.)

MS. ROGERS: I would object to the relevancy of this infection Bair Hugger document. I don't think it's related to any cause of action in this case.

THE COURT: Counsel?

MR. BLACKWELL: It's simply showing that the Bair Hugger was used in the surgery also as part of her medical history relevant to the case. The Bair Hugger is central to the case.

THE COURT: The objection will be overruled. I'll allow limited inquiry but I won't allow a great deal of inquiry. Can you give me that page number again? I apologize.

MR. BLACKWELL: 277.

(RETURN TO OPEN COURT.)

THE COURT: 2639, page 277 is received and may be published.

Q So can you see this on the screen? I simply wanted you to see here on this record, Ms. O'Haver, from January 2nd you can see here reference to the Bair Hugger machine being used in the upper body blanket. Do you see that highlighted?

A I do.

Q So and I take it with the Bair Hugger usage on January 2nd your doctors didn't report any issues with respect to usage of the Bair Hugger?

A I don't know.

MS. ROGERS: Objection.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MS. ROGERS: It's hearsay asking her to talk about what doctors would have told her about the Bair Hugger after her infection.

THE COURT: The objection is sustained.

MR. BLACKWELL: That's the only question I had.

(RETURN TO OPEN COURT.)

Q So if we fast-forward now. It was about six weeks after you'd had the irrigation and drainage on January 2nd. About six weeks after that sometime in February you stopped taking antibiotics for the left knee wound?

A At that time period. I don't remember the exact date.

Q But and if I represented to you that's about six weeks, I want you to assume that for purposes of my question that it was about six weeks following the January 2nd irrigation and debridement that you stopped taking antibiotics for the left knee. Is it true that you haven't been treated with antibiotics for the left knee since that date sometime in February of 2017 when you stop using antibiotics for the left knee?

A I don't know on that.
Q So you don't recall one way or the other if you had to take antibiotics again after that date?
A I don't.
Q Do you recall that since you stopped taking antibiotics sometime in February of 2017, no doctor - you're not aware that - let me strike that. You haven't had any other reports or doctors' visits from that time where a doctor said you have an infection in your knee?
A I'm not sure on that. I have been to the doctor about my knee.
Q Sure. You've gone to the doctor about your knee because you had a knee replacement surgery?
A Right.
Q I'm asking specifically about the infection. Do you recall visiting a doctor about the infection in your left knee since you stopped taking antibiotics sometime in 2017, February of 2017?
A Not that I recall.
Q Now you do recall speaking with Dr. Ballard about your knee, the surgery, the infection in the future?
A Yes.
Q Now Dr. Ballard didn't tell you that the Bair Hugger caused your infection, did he?
MS. ROGERS: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. ROGERS: I'm going to have to object as TO hearsay, Your Honor.

MR. BLACKWELL: What did you say?

MS. ROGERS: Hearsay. He's asking what Dr. Ballard told her.

MR. BLACKWELL: About the awareness of her infection for purposes of medical treatment. This is an essential issue in this case.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q Is it also true, Ms. O'Haver, you haven't asked any of your treating doctors why they feel you developed your infection, have you?

A No.

Q In fact, did you tell us in your deposition that you linked the Bair Hugger to your infections after you spoke with attorneys?

A That's correct.

Q So I want to talk to you a bit about the condition of your left knee between the surgery and then the time you had the stroke.

A Okay.

Q Now would it be fair to say that after you had the

washing out procedure on your knee on January 2nd, 2017, your left knee was improving, wasn't it?

A No.

Q You were able to walk occasionally within two weeks of the washing out procedure, weren't you?

A Yes, for a very short distance.

Q If you would look at Tab 12 which is Exhibit 2650, pages 9 and 10.

MR. BLACKWELL: Your Honor I'd offer Exhibit 2650, pages 9 and 10.

MS. ROGERS: Your Honor, I have no objection.

THE COURT: 2650 will be received, pages 9 and 10.

MR. BLACKWELL: Request to show it, Your Honor.

THE COURT: You may.

Q I want to first, Ms. O'Haver, have you look at pages 9 and 10 and see here on the screen. So I represent to you that what you see if you're looking at the screen, Ms. O'Haver is your record from January 13th, 2017.

A Yes.

Q And do see here in your rehab notes, its notes that "Walks occasionally. Walks occasionally during day but for very short distances with or without assistance. Spends majority of each shift in bed or chair." Do you see that?

A Yes.

Q And if you'll look down, scroll down. Do You see here also where it says "No limitations. Makes major and frequent changes in position without assistance."?

A Yes.

Q And then one more here. "No apparent problem. Moves in bed and in chair independently and has sufficient muscle strength to lift up completely to move. Maintains good position in bed or chair at all times." Do you see that?

A I see the record, yes.

Q And do you remember me asking you whether you were walking more frequently within a short time of your washing out procedure?

A Yes.

Q Let's look at your tab 12, page 5. This is from January 27th. Can you see that?

A Yes.

Q This is from January 27th of 2017. The record notation from the rehab notes. "Walks frequently. Walks outside the room at least twice a day and inside room at least once every two hours during waking hours." Do you recall roughly around January 27th as it states on this record that you were kind of getting up and moving about frequently as indicated in the rehab notes?

A That's what it says. I don't recall but that's what it says.

Q Again, if you look at Exhibit 2688, that's your tab 18. I want to talk to about whether your knee was improving over this time period. So if we look at Exhibit 2668, tab 18, pages 59 through 61.

A I'm sorry.

Q Pages 59 through 61.

MR. BLACKWELL: Your Honor, I'd offer Exhibit 2668, pages 59 through 61.

MS. ROGERS: Your Honor, I have no objection.

THE COURT: 2668, pages 59 through 61?

MR. BLACKWELL: Yes.

THE COURT: 2668, pages 59 through 61 are admitted and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So this is a record dated February 1st, 2017. Ms. O'Haver, you can see it in front of you or up on the screen. And do you see where it says, "History of present illness. Patient had left total knee arthroplasty November 29, 2016. Patient states surgery went well. Patient feels knee is improving."

A That's probably how I felt at that time.

Q You're saying that's probably how you felt in February of 2017 that the knee was improving?

A I don't know if it was improving or not but that's what I said.

Q That's how you felt?

A Yes.

Q And we see here under "Examination for ortho. Document Review: x-ray visual images independently reviewed of knee show well-positioned total knee implants."

And then one other section. "Knee: On physical layout examination of left knee, the patient has a well healed anterior midline incision."

Do you recall discussing that with Dr. Ballard?

A I do not.

Q So if your medical records are indicating that you were moving independently and that your - at least you felt that the knee was doing better, the pain had improved within six weeks of the washing procedure that took place, do you have any reason to disagree with what's in your records?

A No.

Q So if you'll turn your attention Ms. O'Haver, to Tab 14. It's another record. Again, we're just figuring out a timeline, you and I discussing this for the jury. This is Exhibit 2653 and its page 1.

MR. BLACKWELL: Your Honor, we would offer Exhibit 2653, page 1.

MS. ROGERS: Your Honor, I have no objection.

THE COURT: 2653, page 1 is received.

Q Now what I'm showing you from your records, Ms.

O'Haver is a February 14th, 2017 record. And this is a visit with Kelly Skinner. Do you remember Kelly Skinner?

A No.

Q Do you remember visiting with an infectious disease person?

A I do

Q I'll present to you that was Kelly Skinner.

A I don't remember her.

Q Well can we look at the history of the present illness. Can you make it a little bigger on the screen too? "Patient discharged January 6, 2016 on Cipro 500 milligrams and vancomycin" and it gives a dose of medicine that you see there?

A Yes.

Q At a time period for it. But then you see in the next that it says, "ABX." It says, "Antibiotics will be completed on February 18th, 2017 and she's scheduled go home February 19th, 2017." And if you look at the next line it says, "When she is feeling well." Do you see that?

A Yes.

Q "She is ambulating independently and pain has improved." Do you see that?

A Yes

Q And it says, "Range of motion has improved." Do you see that also?

A Yes.

Q And the record indicates she's not using pain medication as often, yes?
A I see it.
Q And you see it says, "No drainage from the wound."?
A Yes.
Q And, I guess it does also note as you can see, "It has been a little red and she feels warm but has is been consistent since her discharge." Do you see all that?
A Yes.
Q So the records indicate you were discharged from rehab then on February 18th of 2017, don't they?
A Yes, it does.
Q And they indicate that your antibiotics will be completed as of February 18th, 2017, right?
A Yes.
Q And you don't recall having any other prescriptions after this period of time for antibiotics your left knee, right?
A No, sir, I don't remember.
Q When you were discharged from the hospital, do you recall that you were discharged with no home health services? Do you remember that?
A I believe that's correct.
Q So as of March 1st, 2017, you were getting around independently, right?
A What do you mean independently?

Q As in you didn't need outside assistance to get around?

A I believe I was using a walker.

Q But it was during this period of time in March of 2017, you're feeling that your knee was doing better?

A Yes.

Q Now if we were to look at a progress note from Dr. Ballard. If I can get you look at tab 18. And this is a progress note from Dr. Ballard on March 1st of 2017. Exhibit 2668, pages 62 to 64.

MR. BLACKWELL: Your Honor, we would offer Exhibit 2668, pages 62 to 64, Dr. Ballard's progress notes.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2668, pages 62 to 64 are admitted and may be published.

Q Before we talk about that, if you'll hold on just a second. Before we talk about it, this date March 1st, 2017, was roughly two days before your stroke, right?

A Correct.

Q And so let's take a look at the records, the progress notes from Dr. Ballard. So we see here you report references your total knee arthroplasty November 29, 2016. The date of this is March 1st of 2017. And do you see here the reference from Dr. Ballard where it says, "She states that her knee is doing well." Do you see that?

A Yes.

Q "Patient will have some pain at night when sleeping."

A Yes.

Q Then we go down further there's and ambulatory status referenced in there. It references "Ambulatory status as independent." Do you see that?

A Yes.

Q And then there is an examination session in the report. So I want you to follow along with me particularly, Ms. O'Haver, down to the part where they reference the knee and the examination. It's about midway down on the right. "Knee: On physical examination of the left knee, the patient has a well healed anterior midline incision. Sensation and motor continues to be intact. The patient can obtain full extension and can flex the knee to approximately 120 degrees." It says, "The knee is stable to varus-valgus and stress."

Then there's a reference to the x-ray. Do you see where it says, "X-Ray: The patient's left knee demonstrates well positioned total knee arthroplasty implants."?

A Yes.

Q "There are no signs of early loosening or hardware failure."

A No.

Q The fact is you've never had an issue with the hardware loosening or failure in the left knee, right?

A It depends on what you define as failure.
Q As in they have to take it out.
A Oh, no.
Q So I want to switch gears again, Ms. O'Haver, and talk about the stroke that you had in March. And now it is not your understanding from your medical care and/or treatment that the stroke was in some way related to the infection in your knee, was it?
A I'm sorry, can you repeat that.
Q The stroke. It's not your understanding from your care and treatment from your doctor that the stroke was somehow related to the left knee?
A Correct.
Q Correct that it was not?
A Right.
Q Now so you were discharged from rehab on February 18, 2017. So then about a week and and a half after got home from the rehab and after the washing procedure you suffered the stroke?
A Yes.
Q March 3rd, 2017?
A Yes.
Q And you told us a bit about the stroke on the right side of your head?
A Left side of my brain but it affects my right side.

Q So do you recall if it was a right cerebellum stroke?
A It's a proper name. I don't know.
Q Whatever the fancy name is. You just remember the fact that it was your right side?
A Right.
Q You never learned why you had a stroke, true?
A I don't believe so.
Q Now it took you some time to recover from that stroke, didn't it?
A It did.
Q Now it's because of the stroke that you went through rehab in an inpatient facility for about a month. That is from March 3rd to roughly April 4th of 2017?
A Yes.
Q Was it at St. Mary's Rehabilitation Center that you went?
A Yes.
Q So I want to talk to you for a few minutes just on how the stroke would've impacted you. Now you recall that you were not able to walk for a period of time after that stroke and had to do use a wheelchair?
A Correct.
Q Because of the stroke, you kind of had learned to walk again?
A Yes.

Q So in addition to the struggles with the walking from your stroke you had weakness on your right side after the stroke too, didn't you?

A Yes.

Q And it was the stroke that affected your memory too?

A Yes, it is.

Q And you talked to us about that some this afternoon, that used to have challenges with your memory even today?

A Daily.

Q But those really got started with the stroke?

A Correct.

Q And you also told us that since the stroke you have some challenges with your speech?

A Yes.

Q And even today?

A Yes.

Q Now so roughly two months after the stroke, at least for two months after the stroke you struggled to do a lot of your normal functions of everyday life from feeding, bathing yourself, even going to the bathroom?

A I did.

Q That lasted for two months after the stroke?

A I'm not sure of the time period but I know it was a while.

Q You wouldn't argue that if I say two months? You

wouldn't take issue with it?

A It was probably around that period of time, yes.

Q Now you spoke with counsel a little bit about depression and anxiety.

A Yes.

Q And you were discussing it from the standpoint of the implant, the knee surgery in 2016 and the infection. But the fact is depression is something you've struggled with for a long time?

A My depression really started four or five years before that?

Q Right. So it's been - were you taking medication for for the depression even before the November of 2016, do you remember?

A I don't remember that, sir.

Q Do you recall at some point though you started taking Xanax?

A Yes, I did.

Q And just for the ladies and gentlemen, what's the Xanax for?

A I'm not sure exactly what it's for but I know that it's depression or anxiety.

Q And so whether it's depression or anxiety, it's for that sort of thing. It's for depression or anxiety or something like that?

A Correct.
Q Now Ms. O'Haver, I'm going to go to a new subject and talk about your work history now that you spoke with counsel a little bit about. Now you and I both graduated from high school in 1980. That's when you graduated, right?
A Yes.
Q It at that point in time you started to work in nursing homes, right?
A Actually, I worked in a restaurant first.
Q Fair enough. But most of the 80s though you worked in nursing homes?
A Correct.
Q And after that, after the 80s you worked a number of different kinds of jobs?
A Yes.
Q Some paid more than others?
A Yes.
Q Casey's General Store paid like $7.75 an hour I think I saw?
A I don't remember their wages.
Q How about the Country Inn and Suites? Do you remember working there?
A Yes.
Q It paid somewhere around nine bucks an hour?

A I believe that's in the area, yes.
Q Now you told us at the time that you had your knee surgery - well frankly, when you had both your knee surgeries, at the time you were working as a school custodian at Oak Grove School District?
A Yes.
Q That's a job you started in 2013?
A Yes.
Q And you were at that job - that is the job at the Oak Grove School District when you had your stroke in March, right?
A No.
Q No?
A Nope. I didn't work after I had the knee surgery.
Q You were asked some questions about having met with an expert who talked about your work history as far as the economics?
A Yes.
Q Was that a Dr. Smith?
A I believe that's right.
Q Do you recall in your last time while working at the Oak Grove School District did you make around $17,000 in the last year?
A I'm not sure on that.
Q You'd defer to whatever's in your records?
A I'm sorry.

Q You'd have to defer to what's in your records?
A Correct.
Q Do you know who Dr. Bruce Scully is?
A Yes.
Q Who's Dr. Scully?
A He was my physician for a while when I lived in Oak Grove.
Q Was he your physician then after Dr. Ballard or was Dr. Ballard just the surgeon?
A Dr. Ballard was just the surgeon.
Q I want to talk with you about some of your records with Dr. Scully. If I could have you turn to tab 10 in the binder. This is Exhibit 2648, page 1.

MR. BLACKWELL: Your Honor, we would offer 2648, page 1.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2648, page 1 is received and you may publish.

MR. BLACKWELL: Thank you, Your Honor.

Q We talked earlier about some of the problems that you had walking after the stroke.
A Yes.
Q And it took you some time to learn to walk again. Do you remember that?
A Yes.

Q This is a progress note dated May 11, 2017. Progress note from Dr. Scully. I wanted to look at that together. It's page 1 behind your tab 10. So we look at the history of present illness. Do you see that reference to depression screening? Do you see that?

A Yes.

Q Do you see in here where it says, "Using electric wheelchair." And then it talks about some of the challenges you were having after the stroke whether it was going to the bathroom or feeding or dressing or grooming, bathing. It says, "Even in a cane and walker were insufficient." Do you see that?

A Yes.

Q And it references "Weakness to the right upper body." And this is a - actually it's a May 11, 2017 record from Dr. Scully, right?

A Yes.

Q It indicated that due to the stroke you're struggling with basic life functions kind of things?

A Yes.

Q Do you see in this record from Dr. Scully at this time, he doesn't make a record of knee pain, is there?

A I've never read my medical records, sir.

Q But you don't see it there as you look at it?

A I don't see it on that one.

Q So if we look at the other ones, I'll have you look at

tab 13 which is Exhibit 2651, page 40.

MR. BLACKWELL: Your Honor, we'd offer Exhibit 2651, page 40.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2651, page 40 is received and you may publish.

MR. BLACKWELL: Thank you, Your Honor.

Q This record is again July 17, 2017. The history of the present illness. It says, "Stroke: She had a stroke on March 3rd because she had blood clots in her brain. Notes that no left side deficits because the stroke affected her right side."

A Correct.

Q It notes that you at this point are mainly wheelchair-bound, right?

A That's what it says.

Q And if you look at that record, did you see any report of knee pain in that record?

A No, I don't.

Q Let's look forward to July 20th, 2017. If you look at tab 13 in your binder Exhibit 2651, page 36.

MR. BLACKWELL: Your Honor, we would offer 2651, page 36.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2651, page 36 is received and you may

publish.

MR. BLACKWELL: Thank you, Your Honor.

Q So we look here on the screen this exhibit says "History of present illness. States continues to have pain in her tailbone after her fall months ago. Taking prescription meloxicam daily and takes Tylenol." This represents here that you had a fall months ago. Do you remember having a fall?

A I don't remember what month it was.

Q And it references that you're having pain in your tailbone, right?

A That's what it says.

Q Did you see any reference in this record to pain in the knee?

A No.

Q We're going to move forward to August 29th of 2017. August 29th and that will be Exhibit 2651, your tab 13, Exhibit 2651, page 33.

MR. BLACKWELL: We would offer, Your Honor, Exhibit 2651, page 33.

THE COURT: Any objection Counsel?

MS. ROGERS: No, Your Honor.

THE COURT: 2651, page 33 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So we can look here at the history of the present

illness. This is from your Family Medicine Clinic. It notes here the time you're 55 and you had a cough. You'd had a cough for three weeks and noted that you did have a sore throat as well. It says "No recent sick contacts." But do you see this record in front of you?

A Yes.

Q This record shows no mention of knee pain for the right or left, do you see that?

A Yes.

Q If you come forward to October 9th is also tab 13. Exhibit 2651, page 30.

THE COURT: Which exhibit?

MR. BLACKWELL: 2651. We offer also page 30.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2651, page 30 is received.

MR. BLACKWELL: Request to show, Your Honor.

THE COURT: You may.

Q Do you see the record again October 9, 2017 where you visited Family Medicine Clinic again? You did complain of coughing and wheezing, right?

A Yes.

Q But in this record, again, was there any record of knee pain?

A No. There's no record of it.

Q We're still under tab 13?

A Yes.

Q Exhibit 2651, page 27.

MR. BLACKWELL: We'd offer 2651, page 27.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2654, page 27 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So November 8th of 2017. "55-year-old female, worsening low back pain, states her tailbone pain continues to worsen. States she has more leg pain as well. Has not gone to therapy as she is not felt good enough to go with her cough but feels that she will be better now to go." You see that, don't you?

A Yes.

Q There is discussion of worsening low back and tailbone pain, right?

A That's what it says.

Q Discussion of leg pain?

A Yes.

Q But no discussion of knee pain, right?

A It's not noted in those notes.

Q If you look then in the same tab. Exhibit 2651 at pages 54 and 55 we move forward ti November 22, 2017?

MR. BLACKWELL: Your Honor, we would offer Exhibit 2651, pages 54 and 55.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2651 will be admitted, pages 54 and 55 will be received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So looking here and moving forward in time to November 22nd of 2017. Do you see that?

A Yes.

Q So we can see here in this record the date March, 2017. And says, "Dr. Ratliff for evaluation of her back pain." Do you see that?

A Yes.

Q And it says, "The onset" do you see where it says the onset right above duration? It says, "Onset insidious after a fall."

A I see that.

Q Now, again, you don't say you don't remember having a fall?

A No, I've had falls but I don't remember the dates.

Q Do you recall having falls after the left knee surgery in November of 2016?

A I don't remember dates. If sorry.

Q You don't remember whether it's been before the left knee surgery or after the left knee surgery?

A I'm not positive on this.

Q Okay. So we can see here Dr. Ratliff's notes here on

November, 2017 it says, "Low back low back pain, chronic. Encouraged to go to therapy as patient has not been attending Comprehensive Pain Management Clinic referrals." Do you see that?

A Yes.

Q Do you remember getting a referral to go to Comprehensive Pain Management?

A I believe at one time. I don't know if it was this time.

Q Do you believe in fact you went or why you didn't go?

A I don't remember.

Q But you just don't remember going?

A Right.

Q And here you were encouraged to use padding and a gel donut in the wheelchair, do you see that?

A Yes.

Q Did use that padding or gel donut in the wheelchair?

Q Now this record makes reference to the back pain and tailbone pain but not to knee pain, right?

A Yes, sir.

Q And under the same tab 13 move up to December 15th of 2017. If you look then at page 22.

MR. BLACKWELL: Your Honor, we'd offer 2651, page 22.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2651, page 22 is received and may be published.

MR. BLACKWELL: Thank you.

Q So this is moving us forward in time to December 15th of 2017. "History of present illness." It looks like you are at the doctor again because of this wheezing and troublesome cough. Do you see that?

A Yes.

Q December 15th, 2017. But at this visit there's no complaint about knee pain, right?

A If it's not in the notes, sir, no.

Q So if you would stick with tab 13.

A Yes.

Q Look at pages 18 through 20.

A Okay.

MR. BLACKWELL: Your Honor, for Exhibit 2650 we would offer pages 18 through 20.

MS. ROGERS: I have no objection.

THE COURT: 2651, pages 18 through 20 are received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So still moving to January 10th of 2018. You can see here there's reference with respect to your visit. "Chronic pain. Patient continues to complain of chronic pain in her shoulders and back. She has not been able to

go to physical therapy. Will continue to seek Comprehensive Pain Management Clinic." Do you see that?

A Yes.

Q Do you see there at the bottom "Impression and Plan" where it says, "Encouraged to go to therapy. This patient has not been attending." Do you see that?

A Yes.

Q Now would you agree there's no in indication in this record either of a complaint of knee pain, right?

A Yes.

Q So we've got through roughly records over the course of a year since the time of the stroke. And in the records we've seen, we haven't seen a complaint of knee pain, right?

A Yes.

Q Let's move forward then to August of 2018. If you would look at your Tab 11. We're going to go to August 6, 2018. It's Exhibit 2649, page 1.

MR. BLACKWELL: Your Honor, we would offer 2649, page 1.

MS. ROGERS: Your Honor, no objection.

THE COURT: 2649, page 1 is received.

MR. BLACKWELL: Request to publish it, Your Honor.

THE COURT: And you may.

Q Here we are August 6, 2018. And we can now look again

at the patient's medical history. In this one you see you see the highlighted portion in this one Ms. O'Haver?

A Yes.

Q It says, "Generalized pain due to her multiple surgeries mostly in her left knee, tailbone, left side of her neck. Currently using a walker for ambulation. Can hardly sleep through the pain, can't go up stairs." Do you see that?

A Yes.

Q So August of 2018 we see a complaint you've got generalized pain due to multiple surgeries including the left knee, the tailbone and left side of your neck, do you see that?

A Yes.

Q Would you agree that's the first record we've seen since your stroke that indicates having knee pain?

A That's the first one, yes.

Q And do you recall it was just the first August 6, 2018 that you filed the lawsuit in this case?

A I'm sorry.

MS. ROGERS: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. ROGERS: Judge, he's already inquired as to her - when she filed the lawsuit. She testified she did not know when she filed the lawsuit in 2018. Now he's asking her again about filing her lawsuit. The question

has been asked and answered. Also, it's irrelevant in this case.

MR. BLACKWELL: It's establishing a timeline. There's simply one date and I don't recall that specific question being asked but it's the end of the timeline.

THE COURT: The objection's overruled.

(RETURN TO OPEN COURT.)

Q So we had discussed August 6, 2018. My question for you Ms. O'Haver is do you recall that this lawsuit was commenced in November of 2018?

A I don't remember the date, no.

Q So let's look at a couple more of your records in 2019 and 2020. If you I could get you look at tab 16. This is Exhibit 2659, page 31. Let me know when you're ready, Ms. O'Haver.

A I'm ready.

MR. BLACKWELL: Your Honor, I'd offer 2659, page 31.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2659, page 31 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So now we're at June 20th of 2019. It says, "History of present illness:" And where I'm going to focus your attention is in the last two sentences where it says, "She has

tried to increase her exercise tolerance. Trying to walk without a walker." Did you recall trying to walk without a walker?

A Yes.

Q Do you recall trying to increase your exercise tolerance?

A I always have tried to do that, yes.

Q So at this point though - at this point by this time the lawsuit had been commenced?

A Had been what?

Q Had started?

A Yes.

Q So let's move forward then to December of 2020, December 14th of 2020 if you'll look at tab 16.

A Okay.

Q This is Exhibit 2659, page 1.

MR. BLACKWELL: Your Honor, we would offer Exhibit 2659, page 1.

MS. ROGERS: No objection, Your Honor.

THE COURT: 2659, page 1 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So December 14, 2020, "History of present illness:" It says, "The patient has not felt depressed and has an interest and pleasure doing things recently." Do you see

where it says, "Functional status: able to walk."? Do you see that?

A Yes.

Q And do you see a reference "Up and Go test took less than 30 seconds and patient does not need help with activities of daily living." What is the Up and Go test?

A I couldn't tell you.

Q Because you got up and went?

A I don't know what it was.

Q It says, "Patient exercises three or three or four times per week," do you see that?

A Yes.

Q And so by December of 2020 you are able to walk and didn't need help with activities of daily living according to your record, right?

A Yes.

Q And by this point in time you're starting to exercise, right?

A I pretty much exercised the whole time but that was a record of it, yes.

Q Well if we're coming forth in the timeline from the time you had the stroke, you were in the wheelchair and took you some months to get back on your feet again. From that point time you progressed from the wheelchair to being able to walk without a walker, right?

A I'm not sure of the timeline. I'm sorry.

Q But you remember your progression from the time you had the stroke, it took you a while before you were able to walk again at all, right?

A Yes.

Q That you went from the wheelchair to the walker and then to be able to walk without a walker?

A Correct.

Q I'd like to turn your attention to Tab number 1. And this is Exhibit 2631, page 11. Let's focus on the history section.

MR. BLACKWELL: Your Honor, we would offer 2631, page 11.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2631, page 11 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q If we can pull up slide 34. "History of present illness." Here it says, "Left knee, lower left leg." Do you see where it says, "Katherine is referred for evaluation of left knee pain."? Do you see that?

A Yes.

Q It says, "She's here today because she's never felt that the knee did great, but over the last two months her pain has been substantially worse. She has resorted to walking with

a cane pretty consistently. She has fallen four times." Do you see that?

A Yes.

Q Do you recall falling those four times?

A I do recall it. I don't remember dates though. I'm sorry.

Q No worries. But at this point in time we're in January of 2022?

A Okay.

Q When this takes place. And at this point we are a few years after this lawsuit had started, right?

A Yes.

Q No you had two appointments with Dr. Schultz in January of this year, didn't you?

A I believe it was January, yes.

Q And the first one here on January 10th was for knee pain, right?

A Yes.

Q You told him about your history of stroke and there you talked about problems with your left knee, right?

A I'm not sure that was about the stroke.

Q It's a visit report from Dr. Schultz.

A Okay. What was your question?

Q And so you told him about the history of the stroke and then you talked about problems with your knee, is that

right?

A Yes.

Q And you indicated that your knee had become more painful over the previous two months in November or December of 2021, right?

A That's what the report says, right.

Q And then you noted to Dr. Schultz that you had fallen four times, right?

A Yes.

Q But through your visits with Dr. Schultz, you never got any indication that the hardware in your left knee, the implant, that it was out of place or there was any abnormality in the implant, did you?

A I don't believe so.

Q And were you again referred to go to physical therapy?

A I believe at that time I was, yes.

Q So then if we fast-forward to February of 2022.

THE COURT: Counsel, I'm going to interrupt you. I think we're going to go ahead and recess for the day. We're going to recess for the day. I'll ask you to be back at 8:30. I think that you guys have already - I apologize for not specifically saying it earlier but the courthouse will be closed on Monday. So you won't have any jury service this coming Monday so with that day what you will. So your service will recess on Friday then we'll resume on

Tuesday just you guys know for planning purposes.

(INSTRUCTION WAS READ.)

It is still our intention for you to receive the case for your deliberation sometime next week. So Court is in recess. Have a great night.

(JURY RELEASED AT 4:57 PM.)

THE COURT: Why don't we go ahead and make a record regarding the exhibits from Van Duren's 2017 depo.

MR. BLACKWELL: Would you like me to approach so if there's a question?

THE COURT: Sure. We are outside the presence of the jury. It's my understanding the plaintiff is moving for the admission of certain exhibits from Mr. Van Duren's deposition, is that correct?

MR. EMISON: That is correct, Your Honor.

THE COURT: Mr. Emison, you may proceed.

MR. EMISON: Plaintiffs offer Exhibit 1733 that was marked and discussed in Mr. Van Duren's deposition as Deposition Exhibit 2.

THE COURT: Let's see if there's an objection to 1733.

MR. TORLINE: We do object.

THE COURT: The basis of your objection?

MR. TORLINE: It's hearsay. This is not by Mr. Van Duren. No evidence that he was authorized to speak on

behalf of evidence statements.

THE COURT: So the Court will note that 1733A was admitted. Some portion of it has been redacted and the redacted version was admitted. Mr. Emison, your response to their objection?

MR. EMISON: It has been admitted and this is not hearsay. This a statement of a party opponent. It's work product and an employee of 3M was authorized to do this work in the course and scope of his employment. He authenticated this document. He also read it as part of his work in working for 3M. That is not hearsay. It's a statement by a party opponent.

THE COURT: The objection's overruled. 1733 in its entirety will be received.

MR. EMISON: Plaintiffs offer Exhibit 1734 discussed as Exhibit 3 in Mr. Van Duren's deposition.

THE COURT: Any objection?

MR. TORLINE: Yes, same objection.

THE COURT: Same response, Mr. Emison?

MR. EMISON: Yes, Your Honor.

THE COURT: The objection is noted and overruled. 1734 will be received.

MR. EMISON: 1735. I have that marked as admitted. I just want to clarify.

THE COURT: It is admitted.

MR. EMISON: 1737 which is marked and discussed Deposition Exhibit 6.

THE COURT: 1737 has been received.

MR. EMISON: 1738 which is marked as discussed as Deposition Exhibit 7.

THE COURT: Any objection?

MR. TORLINE: Yes, Your Honor. The same hearsay objections, also lack of foundation. And there's discussion by Mr. Van Duren here about some other studies.

THE COURT: So the Court will receive 1738. But in terms of the attachment to that, that will not be admitted into evidence. So my suggestion would be it looks like there are a couple of PDFs attached here. So in the event that the jury requests those, if those have not been admitted in another manner then that should be redacted.

MR. EMISON: Okay.

THE COURT: But as of now 1738 is in.

MR. EMISON: 1739 is marked and discussed as Deposition Exhibit 6.

MR. TORLINE: Judge, we object to lack of foundation and hearsay.

THE COURT: So I have concerns about 1739 being received in its entirety.

MR. EMISON: Your Honor, this is the page that we discussed and I'd be okay just admitting this page that

was referred to in the deposition as page 20. You can see there's a couple of different page numbers but that's referred to in that small page number there.

THE COURT: It's right down there as well.

MR. EMISON: Oh, that's the wrong page. It's actually 1739-18. And also I believe page 2 was discussed which is my goals to conviction.

THE COURT: Okay so any further objection, Mr. Torline?

MR. TORLINE: No, Your Honor.

THE COURT: So 1739 and we'll call it A which includes pages 2 and pages 18, which I'm referring to the number at the bottom in the middle, that will be received. Those two will be received.

MR. EMISON: Thank you, Your Honor. Next is 1745.

THE COURT: I have 1745 as received over defendant's objection.

MR. EMISON: Thank you. 1746, Your Honor.

MR. TORLINE: Lack of foundation. This is not an email involving Mr. Van Duren and it also includes hearsay.

MR. EMISON: This is an email that bears more things by 3M all syndicated by 3M, produced by 3M, confidential subject to protective order. These are statements by corporate employees as to their course and

scope of their employment.

THE COURT: Similar to 1739, I don't know ...

MR. EMISON: If you want to limit it to the first exchange that we discussed.

THE COURT: Two?

MR. EMISON: Page 2. And even on page 2 I think what was discussed was that dialogue at the top about given the ongoing legal situation decisions were made previously at a high level not to pursue clinical research work on this topic.

THE COURT: It would be that portion of 1746 that is the email dated that was sent on page 2, July 10, 2015 at 10:32 PM, is that correct?

MR. EMISON: That's correct.

THE COURT: Any further objection?

MR. TORLINE: Same objection. Mr. Van Duren didn't write it, didn't receive it. It is lack of foundation.

THE COURT: That objection is noted and overruled. I'm going to allow 1746A in which will be only the first email on page 2.

MR. EMISON: 1747, Your Honor.

MR. TORLINE: Judge, we do object. It's hearsay and it's also discussing the legal issue in Texas. It likely violates the motion in limine and it goes back to

what Mr. Blackwell's issue with the plaintiffs are trying to use a privilege.

THE COURT: So the Court will sustain the objection as a relates to any reference in 1747 about the legal issue in Texas. The Court has found that the statement - the information about the legal issue in Texas is confidential so please do not forward this email. That shall be redacted as well as the - on the second page the last paragraph says, "All suspected part of the claim brought against 3M by a patient in Texas."

So that entire portion of it I would say from where it says, "Russell Olmsted" down, that objection is sustained so that portion should be redacted. Does that make sense?

MR. TORLINE: The 1041 email is redacted.

MR. EMISON: I understand.

THE COURT: Wait, sorry. So just the sentence in the April 4, 2013 1:08 AM, the last full sentence in it that will be redacted, correct. And then on the second page everything from here down. Correct, yes. So I will say 1447A is received.

MR. EMISON: Thank you, Your Honor. 1755 is the next one.

MR. TORLINE Judge, there's also a discussion about hearsay complaints and there's emails involving who are non-3M senders.

MR. EMISON: In opening statement Mr. Blackwell told the jury that not one practitioner has ever contacted 3M suggesting that a Bair Hugger caused a surgical infection. This goes directly to 3M's notice that that statement was false.

THE COURT: The objection's overruled. 1755 will be received.

MR. EMISON: Thank you, Your Honor. Deposition Exhibit 27 which I show is received.

THE COURT: That's correct.

MR. EMISON: 1759 is the next one, Your Honor, which is the 2005 version of a similar memo that has already been received as Exhibit 903.

MR. TORLINE: Same objection, Your Honor. It's a draft. It includes multiple references to other third parties and hearsay.

THE COURT: Is there some portion of 1759 that was specifically referenced in the testimony of Mr. Van Duren?

MR. EMISON: There was. And offhand, I can try to find what it is. But, again, this is largely the same memo as Exhibit 903 which was admitted in its entirety. This is kind of the point of the importance of this that Van Duren was saying the same thing in 2007 in the memo that's already received as he was saying in this memo in

2005. For example ...

THE COURT: It's okay. 1759 will be received.

MR. EMISON: That's it. Oh, the other thing I need to offer just for record purposes, not to go back over the transcripts that we played so the court reporter has that for her record. It's the deposition from February 3, 2022 with Mark Albrecht, Exhibit 2220.

THE COURT: 2220 is received.

MR. EMISON: And 2221 is Al Van Duren, January 25.

THE COURT: Any objection, Mr. Torline, to the Court receiving those?

MR. TORLINE: No subject to whatever objection involves the defense when the designations are noted.

THE COURT: Those are received. Off the record.

(OFF THE RECORD.)

(RECESS AT 5:17 PM.)

PROCEEDINGS

October 5, 2022

THE COURT: Good morning. We are outside the presence of the jury. Did you all have something you wanted to take up?

MR. BLACKWELL: Your Honor, how would you like us to proceed with either the filing or arguing etc. We expect the plaintiffs will rest tomorrow morning at least as we heard yesterday morning. And then thereafter we'd like to file a motion and find out whether Your Honor will have arguments, what you'd like us to do with respect to the submissions or how to do it or if there's any guidance from the Court.

THE COURT: Sure. So you can make whatever motion you think is appropriate at the close of plaintiff's evidence. If you have it in written format I can show that it was filed in open court and received at that time. I'll hear brief argument meaning less than five minutes from both sides. You can also stand on your motion and you can stand on the evidence. So that is typically how I handle those both whether it be motions from plaintiff or from the defendant.

Any further guidance as it relates to that?

MR. BLACKWELL: I don't think so.

THE COURT: Any other issues from defendant?

MR. TORLINE: I've got one, Judge. Yesterday in Mr. Van Duren's deposition there were multiple references to a the Gary lawsuit and the Indiana lawsuit which I think probably violated the motion in limine. We didn't catch it and it got through. There's apparently one reference in the next deposition that I think the parties have worked that out and that has been taken out.

And then in the Michelle Hulse Stevens' deposition there are multiple references to the Court given the ongoing legal situation, questions and answers on that. We would like to do the same for that respectively. At least as far as these depositions, we would like to take that language out.

THE COURT: And I will tell you, I mean if there's an agreement we could do that. I don't think that given the ongoing legal situation that it has been said as an ongoing legal situation and I was mindful of that whenever I reviewed it. And I was mindful when I was reviewing the objections to things like Minnesota. So if something got by me in Van Duren, that was not my intention necessarily.

So I don't think that I will be inclined, the phrase given the ongoing legal situation. If you have specific designations that you want me to take a look at I can do that. And then I can let you know what my thoughts are. I

don't know what plaintiffs response is to this.

MR. EMISON: Plaintiff's response is that needs to stay because in the context of that question it talks about the clinical people at 3M wanting to do a study. But the higher-ups say given the ongoing legal situation you can't do that study.

So that goes directly to 3M's negligence and their putting the company ahead of doing critical safety studies that would let them know whether or not the Bair Hugger is safe and effective or not.

MR. TORLINE: And Judge, I just want to clarify. There's one excerpt on page 258 through 259 where the question was "Okay. Now the legal situation was what? The lawsuits, the lawsuits brought alleging that the Bair Hugger caused surgical site infections?

Answer: Correct, yeah."

THE COURT: Okay. If it's more than one - if it's referencing lawsuits then I would be inclined to take that out because I think that that's consistent when my ruling in the motion in limine. I need to look at them. And so if you have something there that I can take a look at and then I can do that.

MR. TORLINE: Thank you. It's on the back page.

THE COURT: Got it. Okay so as it relates to that I'm going to deny the objection as it relates to 252 -

I'm sorry, 253-23, 256-11 and 12. As it relates to 258-20 and 21 the objection is sustained. And as it relates to 259-1 through and including 3 the objection is sustained.

MR. TORLINE: No, Your Honor.

THE COURT: From plaintiff?

MR. EMISON: For the record, we think that 3M has opened the door in its opening statement talking about how many hospitals use this, 300 million patients using this 50,000 a day, I think that is ...

THE COURT: So I didn't need additional argument.

MR. EMISON: I'm sorry.

THE COURT: So at this point we've just got to ...

MR. EMISON: I misunderstood, your Honor.

THE COURT: Sure and I should have make myself more clear. I apologize. Anything further issues from the defendant?

MR. BLACKWELL: No, Your Honor.

THE COURT: From the plaintiff?

MS. ROGERS: Your Honor, I would just like to address with the Court our response letter to Mr. Torline's letter of September 25th just specifically regarding Dr. Mont's testimony which will be done via Zoom or WebEx.

THE COURT: So it's my understanding that plaintiff wants to have someone present during that

testimony and the defendant objects to that on what basis?

MR. BLACKWELL: Your Honor, we don't intend to have anyone present, not even us, during that testimony. We are treating him as though he's a witness on the stand sitting right here. And if you're aware, there's not a chair for the plaintiffs sitting across from him changing the dynamics of his testimony.

It invites just to be additional problems. We don't plan to have anyone in the room. He will be there in front of a camera. We will be here. He will testify just as though he's on the stand.

And the other sort of dynamics and the problems that give occasion by having a plaintiff's lawyer there in the room doing who knows what. And it's gratuitous and it's not necessary. We're not even going to be there. He's just going to testify on that video on the stand as though he were here in the courtroom.

THE COURT: So one of the concerns that is seems as through plaintiff has which I guess is the phone situation which I intend - I mean, if that's a concern then I can give him an instruction and we're able to see him. So do you think that he's going to be somehow sneaking looking at his phone during his testimony?

MS. ROGERS: Judge, I have had the luxury - I don't know if Mr. Blackwell participated. I actually did

Dr. Mont's deposition and he did often refer to his phone throughout the entire deposition.

THE COURT: This isn't a deposition. This is testimony with a judge that's involved as opposed to just attorneys. And so I'm not going to make a decision based upon someone checking their phone during a deposition. Did anyone tell him to stop doing that or not to do that?

MS. ROGERS: Judge, I don't believe so. I think just made a statement he was going to do it during his deposition. I mean, our concern is that would like to have someone in the room. We did ask him to stop, Your Honor.

THE COURT: I don't find that to be persuasive.

MS. ROGERS: I understand, Your Honor. I don't think it changes the dynamics because if he were to testify live, we would have somebody that's able to be in the room.

THE COURT: And I think that the whole comparing what he's doing now to a courtroom is inapplicable because we have a judge that is present. We have both sides that are present. So that to me is not persuasive either.

The concern that I have and it's my understanding based on your representations that there was going to be somebody assisting him in the event there were any technical issues. How are the exhibits going to be managed because that's the other piece of this that I do have a

concern about?

MR. BLACKWELL: He will be, Your Honor, at a court reporter's office. And the idea is to have the exhibits and things to him ahead of time. And if not, if any plan to get used by plaintiff's counsel, we can put them up where he can see them and respond to them on cross-examination. But we won't be in the room to hand them to him or communicate anything.

THE COURT: So are you wanting someone in the room to hand me exhibits? I'm not going to do that. Either we have someone there that's handing him exhibits from both sides are not. And I just don't know that some type of attorney being there in some kind of hall monitor fashion is appropriate either. At the same time, I guess if you want someone in the room what is that person going to do?

MS. ROGERS: So we have two objectives, Your Honor. The first one, as you pointed out, a hall monitor. But the other issue we're concerned with is exhibits. I have not tried a case over WebEx. I've done several calls with WebEx.

THE COURT: I have so.

MS. ROGERS: We would ask the Court for guidance on some of that. I really don't know how we're supposed to get him all the exhibits in person or how we're supposed to

display them. I think there have been - we expect Dr. Mont is going to say I want to review these exhibits potentially or prior to testimony which may be in a deposition, Your Honor. Those depositions could be wrong. I really don't know how we're supposed to display that and get that to him during our cross examination the way we would in a courtroom.

THE COURT: Depositions thus far have not been displayed to the jury. Depositions thus far - don't interrupt me. Depositions thus far have been used and they can be used in that same manner.

Exhibits, I am interested in that. Like are you going to do a shared screen or are you going to do ...

MR. BLACKWELL: Yeah, the intent is to use a shared screen. And Your Honor, we've had other cases in trials where we've done this and it is certainly doable. We do a few more things ahead of time and the rest we do on the screen and everybody can see the same thing. The witness can see it. We can see it.

THE COURT: Are you intending - how are you intending in your cross-examination to show exhibits?

MS. ROGERS: Judge, it would have to be shared screen, Your Honor. And to clarify, we will display a transcript of the deposition. He just needs to say I need to review that deposition.

THE COURT: I mean, can that not be provided to him in some paper format or are the exhibits given to him just that the way that they were here, just given to him by the court reporter or whoever is going to be there?

MS. ROGERS: I'm going to have to do that, Your Honor.

THE COURT: I guess the issues that you see as not being able to overcome, I don't see them. I think that this is a situation where we've just got to figure out - I didn't realize that this was going to be an issue. I believe that I ruled about 10 days ago that this was going to be allowed. So now here we are two days before, 48 hours-ish before his testimony and now these issues are being brought before the Court.

And so to me I don't believe that someone needs to be present during his testimony. I don't have concerns. Obviously, if something happens during his testimony that gives me concern that he is somehow referencing something or looking at something that he shouldn't then we'll take that up. I've had to do that in other cases.

But, typically, it's someone that's in their family room that's looking at something. So this is even a more structured environment, not in someone's home, not in someone's office. It will be at a court reporter's office where, you know, he won't have access to things that he

would in his office.

I can give him the instruction before the presentation of evidence that he's not allowed to reference anything that's not been specifically referred to by the Court.

What additional issues do you see with that approach?

MS. ZIMMERMAN: I intend to do the cross-examination of Dr. Mont. He has in past trials asked to review an entire deposition transcript while on the stand. So one of the things that can by typical particularly with the technology issues is that - well there can be really a good use of technology assuming that sort of thing when you're trying to examine or cross-examine adverse witness or an expert. The technology issues with respect to the actual exhibits are a lot more.

THE COURT: How is him wanting to review an entire deposition - how is having someone from plaintiff's counsel in the room going to resolve that?

MR. ZIMMERMAN: I think that that's a separate issue, Your Honor. And we understand your ruling with respect to having somebody there or not.

I think the concern that we have is that the Court in prior hearings also said that we're not going to essentially interrupt - we're going to make sure that people have the ability to complete their cross-examination. The time constraints that are now put on by

the witness where he says essentially that he's available on Friday afternoon ...

THE COURT: Well I'm talking about the practical aspect of him testifying remotely. The time piece we'll deal with that. So here's what I will say. What I would ask is that the exhibits that you intend to use either on direct or on cross-examination be present in the room in some type of paper format for him to review in person whether it be his deposition. And then the intention would be that the split screen be available or be used during the presentation of evidence.

Any additional issues, Ms. Zimmerman?

MS. ZIMMERMAN: So, Your Honor, we'll do the best that we can to get paper copies. Some of the things that are going to be used are on cross-examination. I may not know what additional documents - ones that I hoped I wouldn't have to use with the witness but I'm going have to with respect to impeaching any of his testimony.

We'll send out in whatever manner we can get together multiple binders with I'm guessing probably transcripts both from trials and from depositions in these cases with his reports and with exhibits we tend to use.

We will try to come up with something and I'll ask defense counsel to make sure that Dr. Mont is not opening those ahead of time. Because, obviously, that's kind of a

our work product and our outline.

But to the extent that there may be one or two or more depending on what his testimony is, it may be that we have to show him a document electronically that we haven't been able to ship him ahead of time.

THE COURT: I don't think so. I mean I think that you guys know exactly what you're going to do with the issues that may come up and I think that you err on the side of caution. If you guys want to have someone, I mean, hold the exhibits and not let the witness - if there's some type of agreement that we can reach regarding that.

You know what, I'm changing my ruling. If you guys want to have someone there, someone can be present in that building. No one's going to be present in the room while the doctor is testifying. How about that?

So then you can give all the exhibits that you want. he won't be able to use them until the person that you have there gives it to him and we'll just go from there.

I don't know how to do this, guys. I mean, you guys do not trust the process. You don't trust him. So I don't know of another way to do it.

MR. BLACKWELL: That's workable, Your Honor. We will simply make that work. And there's no one right way to do it. There are some more ways to do it. And at the root of all of this is just wanting to be in the room

obviously. The rest of this is for argument.

THE COURT: So here's the thing. If the big issue is that you have a concern, plaintiff has a concern about the logistics of getting the witness the exhibits; defense has a concern about someone being present in the room without them having someone present in the room. Then I'm going to allow you to have someone present in the building, not in the room while he's testifying. Then if they need to bring things into him depending upon how his cross-examination goes then that will occur.

MR. BLACKWELL: That's works, Judge.

MR. TORLINE: Judge, Mr. Elkese brought up a good point. At some point, we'll need to get the link for the WebEx.

THE COURT: Carly can send that out.

MR. BLACKWELL: So we could do a test.

THE COURT: Anything else? I also want to give you make a record on my ruling on Chan.

MR. EMISON: Your Honor, I have two logistical things real quick. Mr. Sacchet who has been a part of our team in the background and involved in other Bair Hugger cases. We'd like him to be able to take the cross-examine of one of 3M's witnesses. We're in the process of working on a motion to admit him pro hoc vice and are awaiting the receipt from the Supreme Court for filing.

But I just wanted to alert the Court to that that hopefully we'll be able to present that to the Court for filing this afternoon.

And then we have an issue with some stipulated evidence. One of that is 3M's net worth assuming that we have made a prima facie showing of a punitive damages claim in this case. We would like to offer the SCC filing for a stipulation. I'm not expecting an answer on that. But I don't know when the Court is going to be in a position to give us guidance as to whether that evidence will be permitted.

THE COURT: It'll be sometime after the close of your evidence.

MR. EMISON: Okay. So then if we put that evidence on it will be after we close.

THE COURT: It will be - how about before you rest I'll take that up.

MR. EMISON: Okay.

MR. BLACKWELL: And we're working on our response on that even now.

MR. EMISON: And with respect to a stipulation, the other issues - we talked about the fact that 3M has stipulated that it is responsible for the conduct of Arizant and predecessor companies. I think because of the way the instructions are written it only talks about 3M or

defendant.

And so just like if parties had stipulated that a light was red, I think the jury needs to be told that that's an issue that is not in controversy and I can perhaps work something out with defense. But I think we have to tell the jury that 3M is responsible for Arizant and other predecessor companies because of the way the instruction is written.

MR. BLACKWELL: It's probably not something that we could take up in 10 seconds. We're going to have Monday to come together where we'll talk about jury instructions and what the jury will be told. At that time Mr. Emison can let us know what he proposes.

And we just want to make it clear. Our only concern, Your Honor, is that plaintiffs not use this as an effort to have 3M be responsible for all of the inappropriate conduct of Scott Augustine. And so we just want to this in a way that has us responsible for the legitimate stuff that relates to the Bair Hugger product, but not use this as some vehicle to say 3M's responsible for the fraudulent misconduct of Scott Augustine. So I want to hear what Mr. Emison proposes and then we can work through it.

THE COURT: You've gotta have something to understand what it is you're proposing before ...

MR. EMISON: I will have that too, certainly. I

have a copy I can give you today.

THE COURT: And as it relates to the Motion in Limine to Exclude References to and Evidence of Dr. Andrew Chan's testimony, that motion is going to be sustained. The Court does not find the comparison to the invocation of the Fifth Amendment right to be similar in nature to the attorney work product privilege. So that motion will be sustained and no testimony or reference to Dr. Andrew Chan's testimony will be allowed.

Do we need a record on anything else prior to bringing the jury out from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From the defendant?

MS. PRUITT: No, Your Honor.

(JURY IS SEATED AT 8:51 AM.)

THE COURT: Good morning. Welcome back. I hope you guys had a good evening. We'll continue with the cross-examination of Ms. O'Haver. Ma'am, I'll remind you that you remain under oath.

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

CONTINUED CROSS EXAMINATION BY MR. BLACKWELL

Q Good morning, ladies and gentlemen. Good morning, Ms. O'Haver.

A Good morning.

Q When we broke yesterday we were finishing the timeline under medical treatment and care. We just have a few more of the entries to cover.

I wanted to go back first to try to clarify something related to your employment at the Oak Grove School District. You started working just to bring it back - that's a job you started back in 2013 that you talked to us about that in your direct exam?

A Yes.

Q And your left knee surgery was on November 29 of 2016?

A Yes.

Q Your discharge from rehab with that left knee surgery and infection was on February 18th of 2017? Was that a yes?

A Yes.

Q And then it was shortly thereafter on March 3rd of 2017 where you suffered a stroke?

A Correct.

Q Now I had asked you yesterday on the stand if you were still working at Oak Grove at the time you had your stroke. And I think you said that you weren't.

A No, I wasn't.

Q I wanted to show you a document and to be able to discuss it with you.

A Okay.

Q I'm showing you what's marked as Trial Exhibit 1838. This is Plaintiff's Trial Exhibit 1838 and ask if you recognize this document to be your signed Letter of Resignation?

A Yes.

Q From the Oak Grove School District?

A Yes.

MR. BLACKWELL: I'd offer Plaintiff's 1838 into evidence. I'd offer Exhibit 1838.

MS. ROGERS: No objection, Your Honor.

THE COURT: 1838 is received.

MR. BLACKWELL: And, Your Honor, I'd ask to be able to show it to the jury.

THE COURT: You may.

Q Can you see here, Ms. O'Haver, this is dated May 12th of 2017.

A Yes.

Q It reads, "Board of Education: I hereby resign my position as custodia from the Oak Grove" what's that word?

A R6.

Q "R6 School District as of May 23, 2017." Does this refresh your recollection with respect to the Oak Grove School District that you submitted a letter of resignation roughly two months after you would have had the stroke?

A Yes, but I wasn't working at the time. I just went in to sign my resignation for my retirement.

Q So you weren't physically working there?
A No.
Q But you were still viewed as employed there?
A I assume.
Q You assume because you sent a letter of resignation, right?
A I guess. I don't know how that all works, sir.
Q Now do you recall at around the same time in May that you had submitted a claim for permanent disability?
A I'm not sure of the timeline.
Q If you look to this page, page 9. Are you able see here at the bottom where it says "Provider's name and business address."? Do you see the name there of Bruce? Do you see the name here Bruce?
A Yes.
Q What's the doctor's last name?
A Scully.
Q And, Bruce Scully was your primary physician at the time, wasn't he?
A Yes.
Q And was this related to the claim filed under the Family Medical Leave Act?
A I believe so. I don't know all that terms and stuff. I'm sorry.
Q No worries. Let's look, Ms. O'Haver, if you'd turn to

the third page of what's in front of you. It's at the bottom and it says page 10 of 23.

A Yes.

Q And up here at the top where the doctor provides a kind of medical report that says "Medical Facts" at the top.

A Yes.

Q It says "Approximate date condition commenced." And it says March 3, 2017?

A Yes.

Q That would be the date of your stroke?

A Correct.

Q "Probable duration of condition." Do you see where it says, "Lifetime"?

A Yes.

Q Question number 3 it says - there's a question that says, "Is the employee unable to perform any of his or her job function do to the condition?"

The answer is checked yes. Do you see that?

A Yes.

Q Then it asks to identify the job functions that you're unable to perform. It says, "All functions due to paralysis." Do you see that?

A Yes.

Q Then if we turn over to the next page which is page 11 of 23. If you'd look at number 7. "Will the condition cause

episodic flareups periodically preventing the patient from performing his or her job functions?" Again, the box is checked yes.

A Yes because at that time I was paralyzed.

Q Yes. It indicates here "Is it medically necessary for the employee to be absent from work during the flareups?" The answer was yes due to paralysis.

A Yes.

Q Do you see that? And if we look here on the last page, page 12 of 23. Here the doctor says, "The patient suffered a stroke and it is impossible to make any determination as to when her paralysis might resolve or if it even will."

A I see that.

Q Right. So I wanted to clarify just for the jury because it may not have been clear in direct testimony. You took leave from the Oak Grove School District because of the problems associated with this stroke, not because of the knee, correct?

A No, that's not correct.

Q So we just read here the report from the doctor who was explaining and providing the medical support and the medical affirmation so to speak as to the foundation for your seeking leave. Can we at least agree that in nothing that we just showed to the jury from your doctor did the doctor mention your knee being the reason that you're leave the Oak Grove School

District? Can we agree to that?

A Yes but this was my physician. This was not my orthopedic doctor.

Q Did your ortho doctor submit something different than your physician?

A I'm not sure on that, sir.

Q Nothing you've seen, fair?

A I haven't seen it in my medical records.

Q So let's pick back up with a few more entries on the timeline. Where we left off yesterday I was talking to you a bit about what's in your medical records during the time period after the lawsuit had commenced. If you could - if you could turn in your book to the Tab 1. And it's our Exhibit 2631, page 2.

MR. BLACKWELL: Your Honor, I would offer Defendant's Exhibit 2631, page 2.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2631, page 2 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So we have here a record that is dated February 1st of 2022. And I want to focus you on the number 2 there, Ms. O'Haver, where it says, "Etiology of pain not totally clear. She had an unremarkable x-ray. We tried to aspirate some of the fluid but was unsuccessful." Do you see that?

A Yes.
Q And what this record is referring to etiology of pain is totally unclear or not totally clear. The doctors weren't totally clear as to what was the cause of your pain, is that fair?
A I'm not sure what etiology is but I guess. I don't know.
Q You don't have - you don't recall of this visit at all with the doctor?
A I'm sorry.
Q Do you recall seeing your doctor in February of 2022?
A I'm not sure which doctor this even was, sir.
Q Dr. Schultz.
A Okay, yes.
Q And you don't recall from that visit learning what the cause was of your pain from that visit, do you?
A They weren't sure at the time.
Q They did note that your x-ray was unremarkable though?
A Yes, that's what it says.
Q Unremarkable meaning they didn't see anything that stood out?
A Right, that's what it says.
Q Do still on Exhibit 2631. If you could turn to page 17. Moving forward now to March 14th of 2022, page 17.
MR. BLACKWELL: Your Honor, we'd offer Exhibit

2631, page 17.

MS. ROGERS: I have no objection.

THE COURT: 2631, page 17 is received and may be published.

Q So I want to talk to you about this particular record that involves the CT scan that was taken at Advanced Radiology in March of 2022. So we see here in this record there is reference to "moderate large joint effusion." And then there an impression reference. "No obvious hardware failure or acute osseous injury, bone injury." So here's a note that there was effusion or swelling. Do you see that?

A Yes.

Q But you didn't see there any notation of injuries, right?

A Not in that one, no.

Q And, again, no problems with hardware in the knee?

A Correct.

Q So I want you to look now to tab 2 in your binder. We're going to move forward to May 2nd of 2022.

A Okay.

Q May 2, 2022 and that's Defendant's Exhibit 2633. Do you see that document represents a doctor visit on May 2nd, 2022?

A Oh yes. Wait a minute.

Q I'll show you it on the screen also.

MR. BLACKWELL: Your Honor, I'd offer ...

A I don't know what page you're looking at.

Q Page 11.

MR. BLACKWELL: Your Honor, we would offer 2633, page 11.

MS. ROGERS: I have no objection, Your Honor.

THE COURT: 2233, page 11 is received and may be published.

Q Are you there?

A Yes.

Q So on May 2, 2022 and there's an impression and this is report again from Dr. Schultz. "CT scan reviewed and discussed with patient. There's a joint effusion present but otherwise no abnormalities." Do you see that?

A That's pretty much what it said in the last one.

Q Swelling in the knee?

A Yes.

Q But there's no notation from the doctor of any redness, is there?

A Not on this one.

Q No notations of warmth or fever, right?

A No.

Q And you don't see any notation at all here where there was a finding of an ongoing infection, do you?

A No, sir.

Q But now sometime after May you are also having visits with, again, your primary care physician but you're also visiting from time to time with a family nurse practitioner later on in the year after May. I'm going to talk to you about one of those records.

And that will bring us forward to August. So now we're up to August 25th of 2022. And I want to talk to you about a report at your primary care physician visit with actually Christopher Hartigan who is a family nurse practitioner. If you could look at tab 2 in your book, page 3. And that's the Defendant's Exhibit 2633.

MR. TORLINE: What page are you on?

MR. BLACKWELL: Page 3. Your Honor, we would offer 2633, page 3.

MS. ROGERS: Your Honor, I have no objection.

THE COURT: 2633, page 3 is received and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q If we could pull up slide 39. And so we talked about what you see in the records visiting your doctors what the doctors found. But this is a record where you were visiting with the family nurse practitioner. This is with Christopher Hartigan FNP which stands for family nurse practitioner.

And in this record there's an indication that the patient states that she still has a leg infection. Do you see that?

A Yes.
Q Were you telling the family practitioner that you still had a leg infection?
A I believe that was after I'd been to the hospital to the emergency room and they had said that I had a skin infection in that leg.
Q A skin infection?
A Infection, whatever it is. I mean I don't --
Q But that's not a record that you and I have covered in our discussions over the last day or so?
A No.
Q All right. Well I will leave it your counsel if they have that record to show it to the jury when they stand up again.
A Okay.
Q Now I'll stop there with your timeline. And I have other general questions I want to ask you about.
I want to talk to you about the importance of physical therapy. The importance of physical therapy. You know from your dealings with your doctors that after your knee surgery physical therapy was critically important to get a properly functioning knee joint, right?
A Yes.
Q The physical therapy was critically important to get past some of the pain associated with the knee and you have to

do physical therapy, right?

A Yes.

Q Now if we looked at, for example, the past like two years, is it true that though physical therapy has been recommended to you, you haven't done physical therapy for either your left or right knee?

A That's not true.

Q For about two years, no?

A No.

Q Let's take a look at your deposition testimony. That's in the other book there. If you look then at page 33, lines 7 through 15.

A Yes.

Q I'll represent this was your deposition that was taken on January 27 of this year. Tell me if I'm reading this correctly starting at line 7. "Okay. When was the last time you had any physical therapy directed towards your left knee or either knee for that matter?

Answer: "I don't remember dates."

I read that right, correct?

A Correct.

Q "Question: Okay." Your answer is "I don't."

Then the question is asked "Have you had any physical therapy for your left or right knee in the last two years?"

And what was your answer?

A I said "No" but I didn't remember dates.
Q Right. But you were asked whether you remembered having any physical therapy for either knee within the previous two years. And I read it accurately that you answered no in your deposition?
A I understand that, sir.
Q And at your deposition you did do your best to tell the truth as best you knew it, right?
A Always, yes.
Q Now in terms of future medical treatment for your left knee, you don't have any medical treatment for your left knee that's been recommended by your doctors right now, do you?
A Actually, I have an orthopedic appointment scheduled later this month actually. Also I'm going to - I don't remember what our whole discussion was but I do know I have some more medical treatment coming up.
Q Exactly. But have the doctors recommended any type of a new procedure or supplements or a walker or anything? Has there been any medical interventions of any kind from your doctors right now related to your left knee?
A I'm not sure what all the recommendations have been, sir. I mean that's what I said.
Q All right. Have you discussed with Dr. Schultz about you wearing a brace over your left knee?
A At one time, yes.

Q But that's not something that's happened, is it?
A No, I haven't gotten a brace from him, no.
Q You haven't gotten a brace from anywhere. You don't wear a brace, do you?
A No. I mean, I do have a brace but I don't wear it at all times, no.
Q So let's talk about your current mobility. I think you've covered it but you live in a house now with stairs?
A Yes.
Q Your bedroom is upstairs?
A Up three steps, yes.
Q You told us you are able to get up and down the stairs?
A With the use of the handrail and my cane, yes.
Q You're currently able to drive?
A Yes.
Q You're able to get in and out of the car?
A Correct.
Q You don't have any restrictions on your driving?
A No.
Q Now you said when you're in the grocery store you will use the electric cart?
A Correct.
Q Are you able to drive yourself to the store?
A Most of the time my boyfriend will drive but I do

drive sometimes, yes.

Q And you told us about the trip on May 22nd to Dr. Bowling's office in North Carolina.

A Yes.

Q That when you got there you were able to see the ocean and the beach cause you've not seen those before?

A Correct.

Q How long of a drive was it to get to North Carolina?

A I don't remember. It was a few hours.

Q I come from North Carolina originally. So would you say a few hours was more than 10 hours or less the 10 hours?

Q How long did the exam take with Dr. Bowling?

A I don't remember how long it took, sir.

Q Did he examine you for hours or was it minutes?

A It was probably an hour or so.

Q Now when you had finished with Dr. Bowling and you left and you came back home after Dr. Bowling had examined you, did he ever send you a report of what he found?

A No.

Q Do he ever call you with reports of what he was concerned about?

A No. We talked at the time in the office.

Q When you think about who your treating doctors were who were focused on your care and treatment and improvement, would it be fair to say you didn't view Dr. Bowling as one of

those, did you?
A I'm sorry.
Q You didn't view Dr. Bowling as one of your treating doctors, did you?
A No.
Q He was an expert retained by the lawyers, right?
A I went with his opinion.
Q As you were requested to do by the lawyers, right?
A Yes.
Q But, Dr. Bowling has never called you or written to you apart from the involvement in the litigation, right?
A Why would he?
Q I don't know. I'm just asking if he did?
A No.
Q Now I want to talk to you a bit about ongoing conditions. You do still take aspirin to prevent a future stroke?
A Yes.
Q Now you told us in January that you don't frequently take any pain medications anymore, correct?
A Correct.
Q So you used to take Tylenol maybe once every couple of weeks, right?
A I'm not sure how many days but I took it once in a while, yes.

Q Once in a while you take Tylenol?
A Yes.
Q Do you still once in a while take Tylenol?
A Yes.
Q Let me ask about the smoking. You did tell us there were periods in your life where you smoked, right?
A Where I what?
Q Smoked?
A Yes.
Q Do you still smoke?
A Yes, I smoke.
Q Have you smoked since you were a teenager?
A Yes.
Q Now at the time of your left knee surgery you were smoking about what, a half a pack or more cigarettes a day, is that right?
A I think so.
Q And it's your understanding from the doctors that at the time of the surgery it would be good if you could stop?
A Every doctor tells you that. I mean that's part of their --
Q The general directions for good health?
A For everybody, yes.
Q Did you understand from your doctors that the smoking was not just generally good for your health, but it also isn't

good for the healing of the wound after surgery?

A I understand that.

Q And that was part of the reason too that the doctors wanted you to stop smoking?

A Correct.

Q That if you don't it could make the hearling of the wound take more time, yes?

A Yes and I did stop smoking for a period. But I'm not sure of the dates. But I did stop smoking for a while after my surgery.

Q Now I want to ask you just about a couple more things and then I'll stop. I need to talk with you a little bit about if we go back to 2016 and the time of the surgery - just kind of how much you weighed back then because you're a smaller woman today, aren't you?

A About 70 pounds.

Q Yes and that's a good thing?

A Yes.

Q And so do you recall that back before the left knee surgery the doctors were saying it might be good for your healing and general health on the knee if you could lose a few?

A Yes.

Q And cause back at that time you were tipping over 250 back then?

A Yes.

Q And that was a lot of weight and hard on your knees, right?

A Right, yes. I've always been a big person so.

Q Unfortunately, I told you we have some things in common.

A Right, right.

Q So that's enough. I won't ask you anymore about that. But just to clear up one or two other things. You do currently take medications for diabetes, don't you?

A I do.

Q And when were you diagnosed with diabetes?

A That I couldn't tell you.

Q Do you recall having high blood sugar at about the time of your November, 2016 surgery?

A Honestly, I don't remember that because I check my blood sugar so many times I'm not positive on dates.

Q So, Ms. O'Haver, just to kind of bringing it all together. After the washout procedure in your left knee, the irrigation and debridement, you have not had a recurrent infection according to doctors, is that true?

A Yes.

Q And no doctor since early 2017 has treated you for an infection in your knee, right?

A Other than the emergency room visit.

Q The one you referenced that I asked counsel to get the

records on?

A Yes.

Q Ms. O'Haver, thank you for your time.

A You're welcome.

THE COURT: Redirect.

MS. ROGERS: Yes, Your Honor. May I inquire, Your Honor.

THE COURT: You may.

REDIRECT EXAMINATION BY MS. ROGERS

Q Ms. O'Haver, I want to touch base on a couple of things that Mr. Blackwell asked you about over the course of yesterday's questioning and also some questions he asked you this morning.

You had previously had a right knee - total knee replacement, is that correct?

A Yes.

Q And did that knee heal up?

A Yes.

Q And was it fine after the surgery?

A I haven't had any problems with it.

Q You had some problems with it after the stroke just on the right side paralysis, is that correct?

A That's the only time.

Q And that's since resolved itself?

A I don't have any problems anymore.
Q When you went in to get your left knee replaced did you have the same expectation, that you were going to come out with a new knee that was going to work?
A I did.
Q And does that knee work?
A No.
Q Okay. I want to talk to you about because of there was a lot of conversation about your timeline and I'm just going to sprinkle some questions in about that. When you had the stroke in March, was your left knee still not functioning?
A Correct.
Q So is it your testimony that before - after the January 2nd surgery and between then and your stroke that your left knee still wasn't working properly?
A That's correct.
Q I want to go over a couple of other things. I mean since the day you started suffering from the infection, do you experience pain in your left knee?
A Every single day. Some days it's worse.
Q Okay. Is it just part of your life now?
A It is.
Q So when you go to the doctor for things, do you tell the doctor about it every single time?
A No. They know I'm in pain.

Q Cause you've said it enough?
A I've said it plenty of times.
Q Do you go to the doctor for things outside of your knee?
A Who doesn't? If you have an issue that you think needs be checked out, you go to the doctor for that but you don't complain about everything else.
MS. ROGERS: So this is Defendant's Exhibit 2651, page 22 which has been entered into evidence, Your Honor. May I publish it? It's already been entered.
THE COURT: Can you repeat the exhibit number?
MS. ROGERS: 2651, page 22.
THE COURT: You may.
MS. ROGERS: Thank you, Your Honor.
Q So Kathy, I want to draw your attention to this. This is an exhibit that Counsel talked to you about and he asked if there was under a "History of present illness" if there was anything you saw under that that said that you had left knee pain. And I think your testimony was there was no note of that, is that correct?
A That's correct.
Q Can you tell me on this date what it says under the chief complaint, what you were there for?
A Coughing.
Q So you weren't there to talk to your doctor about left

knee pain?

A Correct.

MS. ROGERS: Your Honor, if I could publish 2651, page 30 and I believe it's also been admitted.

THE COURT: You may.

Q Again, I want to show you this exhibit. This is also one where Counsel asked you if there was a note there that talked about left knee pain. I think your testimony is that there is no note.

A Correct.

Q Can you tell the jury what was the chief complaint and why you were there?

A The cough and lightheadedness.

Q So you didn't tell the doctor about your left knee pain?

A No.

MS. ROGERS: Your Honor, if I may show 2651, page 27?

THE COURT: You may.

Q Now I want to ask about this one. In this record can you tell the jury what your complaint was?

A The cough as well.

Q Can you just read that chief complaint?

A "Follow-up cough, still coughing up junk, needs to discuss her pain."

Q And then in this note, does it also say that you discussed that you have more leg pain as well?
A It does.
Q So were you there for two reasons?
A I was there for two reasons on that date.
Q Was one of the reasons your knee pain?
A Yes.
MR. BLACKWELL: Objection, Your Honor, this is leading.
THE COURT: Sustained.
Q Did you ever go to this doctor on this date for knee pain?
A Yes.
Q And you see that's reflected in your notes?
A I do.
MS. ROGERS: Judge, if I could publish 2651, page 36.
THE COURT: You may.
Q I'm going to show you also a defendant's exhibit. And I believe that - do you recall being questioned about whether or not this particular exhibit references your pain in your left knee?
A I believe so. I'm not sure.
Q Does this note say anything about pain in your left knee?

A No.
Q Can you tell me what the chief complaint is and why you were there?
A Follow up on my medication and a rash that I had on my left leg.
Q Were you there on this date to talk about the pain in your left knee?
A No.
MS. ROGERS: Your Honor, may I publish Defendant's Exhibit 2651, page 18?
THE COURT: You may.
Q And, I'm going to show you on this one as well, Ms. O'Haver, again, could you tell the jury what your chief complaint was for this medical visit?
A It was a follow-up to discuss meds and my swallow test results.
Q And do you recall if you were there to talk to this doctor about pain in your left knee?
A No.
MS. ROGERS: Your Honor, if I could show 2648, page 1.
THE COURT: You may.
Q This a doctor's note from 5/11/2017. Do you see that?
A Yes.
Q I think Mr. Blackwell asked you about this note. Can

you tell the jury what the reason for this appointment was?

A My stroke in March.

Q Do you have any reason to disagree that you were there to talk about the stroke in March?

A No.

MS. ROGERS: Your Honor, may I show 2651, page 33.

THE COURT: You may.

Q Ms. O'Haver, Kathy, can you tell me what the chief complaint was for this visit?

A The cough that I had ongoing and the solutions that I tried with no resolution.

Q Do you have any memory of going to this doctor for leg pain?

A No.

MS. ROGERS: Your Honor, may I show 2651, page 11.

THE COURT: You may.

Q Kathy, I'm going to show you another record that Counsel here discussed with you yesterday or today. Can you tell the jury what the chief complaint was for this visit?

A The left knee and left lower leg.

Q And in this case do you recall, did you address those issues with the doctor when you were there for that?

A I did.

Q What was the left lower leg about?
A I believe that was when I had that rash down on my leg.
Q Was that on your left leg?
A Yes.
Q And that - do you know did that ever get infected?
A I'm not sure on that. I had several medications that I used. So it wasn't really ever clear about what was going on because it would come and go.
MS. ROGERS: Your Honor, can I show 2659, page 1, Your Honor.
THE COURT: 2659, page 1 may be published.
Q Okay. If I could show you, Kathy. There's a section here I think Counsel talked to you about this, about "Patient exercises three or four times a week." Do you see that?
A Yes.
Q Could you tell the jury what your exercises are?
A Well even though I didn't go to physical therapy all the time, I worked really hard to get myself out of a wheelchair and I always exercised my leg first thing when I got up every morning.
Q Can you show the jury those exercises?
A Can I show them?
Q Yes.
A (Witness demonstrated.) It's just exercises that my

physical therapist told me to do. And, basically, it was trying to lift my leg and also to try to put it back. But I'm not able to put it back without a lot of pain. And I also was asked to lift my knee up as much as I could without it hurting and I tried to do that every day if I could.

Q So that's the type of exercises that you were performing?

A Yes.

Q Thank you for doing that.

A You're welcome.

MS. ROGERS: Your Honor, if I could show 2650, page 5.

THE COURT: You may.

Q This another exhibit that Mr. Blackwell discussed with you. Do you recall seeing this yesterday, Ms. O'Haver?

A Yes.

Q And under that last category where it says, "Walks frequently," do you see that?

A Yes.

Q Can you read that section on how they define walks frequently?

A "Walks outside the room" meaning just going out of my room "at least twice a day and inside room at least once every two hours during waking hours."

Q Okay. Thank you. And you were able to do those

things?

A Correct.

Q As defined in this document?

A Correct.

MS. ROGERS: Your Honor, may I show 2631, page 17.

THE COURT: What was the exhibit number?

MR. BLACKWELL: 2631, page 17, Your Honor.

THE COURT: You may.

Q Kathy, do you remember Mr. Blackwell talking to you about some of these records?

A I do.

Q And, I think Mr. Blackwell had said that in this one note does - I don't know if you can read it or not. But I think he pointed to the findings portion where it talks about a large joint effusion. Do you remember that earlier?

A Yes.

Q And could you read this portion under the impression where the impression was the highlighted area?

A "Moderate large joint effusion."

Q And do you recall having that large - I think you defined it as swelling?

A Yes. I have it almost every day anymore.

Q Okay. I want to ask you about Defendant's Exhibit 1838.

THE COURT: If it can show that, Your Honor?

MR. TORLINE: I think it's plaintiff's, Judge.

THE COURT: Oh, you're right. You're right. I'm sorry, it's Plaintiff's 1838.

MS. ROGERS: And I think it's the entire set of documents.

THE COURT: 1838 was received in its entirety.

Q So, Ms. O'Haver, I'm going to show you what's been admitted as Plaintiff's Exhibit 1838. This is the entire set of documents but I want to talk to you about the first page, okay?

A Okay.

Q This very first page Mr. Blackwell talked to you about - is that your letter of resignation?

A It is.

Q And what was the date on that?

A 5/12/17.

Q Now your second surgery was when?

A 1/2/17.

Q Did you physically return to work between January 2, 2017 - oh sorry, yes, January 2nd of 2017 and the date of this letter of resignation?

A I was never able to return to work at all.

Q And when you say that are you talking about the January date or are you going back to the November date?

A Going back to the November date and the January date.

I was never able to return.

Q I think you started to talk about this but why did you end up sending this letter of resignation in May?

A Because I realized that I wasn't going to be able to work anymore because of my left leg and my stroke.

Q Okay. So even though you - so you weren't working but you went ahead and resigned?

A Correct.

Q Did you send this letter to get your retirement?

A A very small portion, yes.

Q So and the other part of this document that Mr. Blackwell addressed with you, if I could show you the last part of it. Can you read that date?

A 3-21-17.

Q Would that have been a couple of months before you actually signed that letter of resignation?

A It was.

Q And if you could, what is the highlighted area in this one?

A Family and Medical Leave Act.

Q And, Mr. Blackwell went over some of these things with you. Do you recall that your doctor had mentioned paralysis being a part of it?

A Right and that was my family physician.

Q And in this section right here do you recall him

saying that you're currently undergoing therapy to regain function and use of your right arm and right leg?

A Yes.

Q And on this last page in this section, can you see this one part here where it says, "The patient suffered a stroke and it is impossible to make any determination as to when her paralysis might resolve," right?

A I see that, yes.

Q You testified to this but to be clear, is it your testimony that your paralysis did resolve?

A It did.

Q On the right side?

A On the right side. Pretty much the only lingering effect of the stroke is my speech at times.

Q And the date of this document was what?

A 3-21-17.

Q And how many days after your stroke is that?

A Eighteen days.

Q Mr. Blackwell asked you the question about whether you were able to drive yourself.

A That's correct.

Q And your testimony was that you can, correct?

A Correct. It's one of the things I can do still.

Q Can you tell me what leg you use to drive yourself?

A Right leg.

Q You use your right let to push the gas?
A Yes.
Q Which leg do you use to push on the brake?
A My right leg.
Q Mr. Blackwell during his questioning of you referred to that second surgery in January as a washout procedure. Do you recall him saying that?
A Yes.
Q And your understanding is that you had more than just a washout?
A I don't know the medical terms but I believe so.
Q Mr. Blackwell also asked if you had suffered some depression prior to your infection?
A Yes.
Q Do you recall that?
A Yes.
Q And I - do you recall your answer?
A Yes.
Q Do you recall saying you had suffered it for four to five years before that?
A I do.
Q Mr. Blackwell didn't ask if you if you knew the causes of the depression, did he?
MR. BLACKWELL: Your Honor, may we approach.
THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I object to what counsel was about to elicit. She wants to bring up testimony that Ms. O'Haver had deaths in her family, her brother and some others who were murdered years before. It's not relevant. It's highly inflammatory, unduly prejudicial.

All that I brought out was her depression did not start with the November 16th injury which is - surgery which is what Counsel had suggested on direct. I simply established that her depression proceeded that time. She wants to go further now to bring up things that I think are highly prejudicial to the defense and designed to evoke emotion in the case.

MS. ROGERS: Judge, Mr. Blackwell, is right. I asked this particular question on direct. I specifically asked part of her depression was associated with the knee. I designed that question so that this door wouldn't be opened.

Mr. Blackwell opened the door to why she suffered depression prior to without giving the full story. And, Your Honor, we can look at the transcript. I can certainly ask that question. I think it's absolutely appropriate. Otherwise, he paints a picture that she's walking around depressed as if I'm giving the wrong impression to the jury

which I know I did not do.

THE COURT: The objection will be overruled. I'll allow very limited inquiry into this. I mean if you want to limit your questions as to what was going on but I'm not going allow this to be unfairly inflame the emotions of the jury as it relates this testimony.

MS ROGERS: It will be one question as to what was causing her depression at that time.

MR. BLACKWELL: I'm sorry, Your Honor. That will call for a narrative kind of a response that will simply come up from the witness from the stand which is improper that she asks a narrative focus directed question.

MS. ROGERS: It will be what was the cause of your depression?

THE COURT: And I will interject if I feel it's too narrative.

(RETURN TO OPEN COURT.)

Q Kathy, I haven't asked what the cause of your depression was for four or five years prior to having your surgery. And what was the cause of that depression?

A One of my younger brothers was murdered.

Q Ms. O'Haver, I had asked you about her left knee surgery and if your expectation was that it would help with the knee pain like your right knee did?

A Yes.

Q Did you have the expectation that you would get some normalcy after the left knee was fixed?

A I expected it to go just like my right knee did with no problems.

Q And did that happen?

A No, not at all.

Q And did that contribute to a part of your continuing depression?

A It did.

Q How?

A It does every day because I can no longer work, have anything normal in my life anymore.

MS. ROGERS: Your Honor, if I could display - actually may I approach the witness?

THE COURT: You may.

Q I'm going to hand you what was marked as Defendant's Exhibit 2638, pages 36, 37, and 38. And I want to ask you about that. Do you - Counsel for 3M had asked you about consent and informed consent. Do you remember that yesterday?

A Yes.

Q And do you have those pages memorized?

A No.

Q Can you take a moment to look at those pages.

A It's a lot of reading.

Q Do you feel like you've had an opportunity to look

through that document?

A Yes.

Q Can you tell me after reviewing that document, did you see your initials or your signature on anything that indicated that you consented to the use of a 3M device that would increase the particulates over the sterile field during your surgery?

MR. BLACKWELL: Objection, Your Honor, lack of foundation and leading.

THE COURT: Sustained.

MS. ROGERS: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. ROGERS: I'm confused about the lack of foundation. She's had an opportunity review that document and she can certainly testify to what she did or did not consent to.

MR. BLACKWELL: It's not part of the question, Your Honor. This is gilding it.

THE COURT: What's that?

MR. BLACKWELL: It's just gilding it at this point.

MS. ROGERS: Mr. Blackwell had an opportunity to talk about consent. And he said she consented to all of these things but she didn't consent. She consented to the risk of the infection. If she's not consenting to all the

issues that caused that infection, Your Honor, it goes directly to that.

THE COURT: So I also think that with that supposedly consent is a conclusion that's drawn that the risk exists. And that's what you believe exists but that's not what they believe exists so there's no comment to set.

I mean there's not an agreed upon risk in that regard and so to suggest that she consented to something that you believe exists but they don't believe exists, I don't think that's appropriate for this witness to say that she consented to it or did not consent to it.

If there's another way to phrase it, but I think that your question is a loaded question and that it assumes a conclusion. And for that reason, there's a lack of foundation and the objection is sustained.

MS. ROGERS: Well I'd like to not continue this like going back and forth.

THE COURT: I don't want to either because I just ruled.

MS. ROGERS: The question is simply consent to the use of the Bair Hugger, that would not be that.

THE COURT: That's correct, yes.

(RETURN TO OPEN COURT.)

Q On your consent form is anywhere where you consented to the use of the Bair Hugger during your surgery?

A No.

Q Did you consent to the use of any - one second. Thank you, Kathy.

MS. ROGERS: Your Honor, I have nothing further.

THE COURT: Re-cross.

MR. BLACKWELL: Briefly, Your Honor.

RECROSS EXAMINATION BY MR. BLACKWELL

Q Ms. O'Haver, I want to pick up on the last question you've been asked about whether you consented to the use of the Bair Hugger during your surgery. Do you remember that was just being discussed with you?

A Yes.

Q The fact is you never heard of a Bair Hugger until you heard it from these lawyers, right?

A Until my lawyers told me about it, correct.

Q In your surgery you didn't consent to the use of a specific scalpel, did you?

A No.

Q You didn't consent to a specific anesthesia machine, did you?

A No.

Q You didn't consent to which nurses or doctors would be in the operating room, did you?

A No.

Q That's not what the consent was about, was it?

A No.

Q Let me just ask you just one last question because Counsel was asking you quite a bit about what you expected from your life in terms of normalcy. And let me ask you this because you talked to us about not going to physical therapy the way that the doctors and others have recommended. Is it your plan going forward at least in the future to take up and go to the physical therapy as recommended?

A When I feel like I can go. Sometimes it's easier for me to just do it at home.

Q Ms. O'Haver, thank you.

A You're welcome.

THE COURT: Thank you, ma'am. You may step down. Counsel for plaintiff, you my call your next witness.

MR. EMISON: Your Honor, may we approach briefly.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. EMISON: Our next expert Dr. Smith is here in the hallway. I was hoping I could get him going. He has a personal matter with a telehealth medical call that he has to do it 10:10. I could play a very short deposition and start him after or I can start him if the Court like to take the morning break slightly early.

THE COURT: We can take the morning break slightly early. That's fine.

MR. EMISON: Your Honor, plaintiff would call Stan Smith.

STAN SMITH,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MR. EMISON

Q Would you introduce yourself to the jury.

A Sure. My name is Stan Smith. I'm an economist. I flew in this morning from Chicago.

Q You had an earlier morning than most of us. You said you're an economist. Will you tell us more about what you do, sir?

A Sure. Well some of us do many things. Most of what I do is in connection with analyzing business issues and personal injury issues that come in litigation.

So I had a case where a business makes furniture in a warehouse in New Jersey. In the winter they couldn't heat the warehouse. So the furniture - the glue wouldn't set so the business couldn't ship so this family business was losing money and it lost government contracts actually.

So it's not just that. We deal with personal injury. This

case is an example. I work in Guam. I work in Puerto Rico. I work in Alaska. I work everywhere around the country. So we analyze lots and lots of wage losses and other kinds of losses.

I have a staff of 20 people in Chicago, Ohio, Colorado. So I do this nationwide.

Q What's the name of your company?

A Creatively called Smith Economics.

Q And how many employees do you have, Dr. Smith?

A I have 18 in Chicago, two part-time and full-time.

Q How do you rely on those employees?

A Well they're well-trained. Some of them have been with me for 20 years. Some actually only about a year. So we kind of look over their shoulders to make sure that what they do is correct. We supervise everything.

I'm a systems guy. Everything is systems. Everything is run by computers and software and checking things like that. I'm not perfect but I think I'm good at making sure things come out right.

MR. EMISON: May I approach the witness, Your Honor.

THE COURT: You may.

Q Dr. Smith, I'm going to hand you sort of a stack of exhibits here. I'll ask you about the first one first actually. The first one listed is Exhibit 2212. Would you tell the Court and jury what 2212 is?

A This is my resume. It shows where I work, where I went to school, articles I've written, presentations I've made, associations and professional activities, memberships to economic associations, TV presentations, radio presentations, lots of appearances in New Hampshire and other places.

Q Does that fairly and accurately reflect your background and your training and your experience in the field of economics?

A Yes.

Q Is that something you keep as a routine part of your business at Smith Economics?

A Sure.

MR. EMISON: Your Honor, I'd offer Exhibit 2212.

THE COURT: Can counsel approach. Is it 2212?

MR. EMISON: It's 2213. Sorry.

THE COURT: I have 2213. How about 2211? How about 2200? How about 2222?

MR. EMISON: Your Honor, can you make it 2230?

THE COURT: Sure.

MR. EMISON: And I apologize.

THE COURT: Any objection, Mr. Torline, to the admission of 2230?

MR. TORLINE: No, Your Honor.

THE COURT: 2230 is received.

Q Dr. Smith, just briefly, would you give the Court and

jury a description of her background, training and your skills in economics?

A Sure. So I first trained after graduating high school in Milwaukee, Wisconsin. I went to _____ and got a Bachelor of Science in Operations, Research and Statistics. I then went back to Chicago, my mother's hometown. I've been visiting since I was a baby.

Q And, Dr. Smith, I'm sorry. I'm having a little bit of trouble hearing you. If you could speak up so everybody and the jury can hear.

A Sure. I went to the University of Chicago, got a Master's Degree and a PhD in Economics at the University of Chicago and I stayed. So it's my adopted hometown. I've been there since I graduated high school.

MR. EMISON: Your Honor, is this an okay time to take that break?

THE COURT: Sure. We'll take our morning recess. Folks, we'll recess until 10:25.

(INSTRUCTION READ.)

Be back at 10:25.

(BREAK AT 10:04 AM.)

(RETURN AT 10:28 AM.)

THE COURT: You may be seated. We will continue with the direct examination of Mr. Smith. Sir, I will remind you that you remain under oath. Counsel.

Q Dr. Smith, you told us a lot about your background, training and experience. You have a PhD in economics?

A Yes.

Q So if I call you Dr, Smith but you are not a medical doctor, fair?

A No.

Q Do you have any training or experience in the field of medicine?

A No.

Q You're not here to offer any opinions about what caused Kathy's current medical condition?

A No.

Q Do you have any background training in infectious diseases?

A No.

Q Do you have any background or training in product design?

A Not even bicycle repair, no.

Q Do you have any background or training in computational fluid dynamics?

A I don't even know what that is.

Q We'll get into more detail about what you were asked to do in this case. But at a very basic level are you here only to talk about Kathy's economic losses?

A Yes. I'm just a humble economist, although my wife

says not humble enough.

Q Speaking of not humble enough, we're going to talk a little bit more about your background. Have you taught at the college level?

A Sure, at the University of Chicago when I was a graduate student they gave me a fancy title, the same one they gave Professor Barack Obama which is adjunct professor. That means no tenures, no security, no benefits, no future for about $1.98 an hour.

Then in 1990 I just co-authored the first textbook in the field of forensic economics. DePaul University asked me to teach the first course in the nation in my field for economics. It was a virgin in the 80s. So I had again the same fancy title, no future, no security, no tenure, no nothing. I was raised to $1.99 an hour. I had a wonderful time teaching students.

Q Did I hear you say that you wrote a textbook. Did you write the book on what you do?

A I co-authored it with Dr. Michael Brookshire in West Virginia, the first textbook in the field of forensic economics. I used it first and then it was used at the University of Wisconsin, Penn State, a number of universities in other places. It's also been recently over-the-counter recommended to condition textbook.

Q In addition to the textbook that you have, have you

written any peer-reviewed articles?

A A handful, yes. I did The Journal of Forensic Economics, the Burke Economic Process of the Journal of One Economics, the General Forensic and Rehabilitation Economics.

Q And are you involved in any professional organizations in the field of economics?

A The primary ones is the American Economic Association, the Finance Association. And then mainly under the American Economics Association umbrella is the National Association of Forensic Economics. I think the cofounder is roughly here in Kansas City and one of my competitors.

Q And without getting into any of your conclusions or calculations yet, generally speaking, what is it that you were asked to do in this case?

A Well there are three things that are in the first paragraph of my report. The first is the loss of wages and benefits that Kathy O'Haver sustained because she's not working so her loss of earning capacity.

The second one, the loss of her ability to service in the household. She has some but they are slower. She doesn't do all of them.

Third, the loss of enjoyment of life as a result of all the different ways - what she now has as her medical condition has reduced her quality of life, those three things.

Q How is it that you got started doing this kind of

work?

A I got a phone call in the middle 80s. A young guy was shot and was asked to evaluate his wage losses and his value of life. And that wound up with my picture on the front page of the Wall Street Journal and the phone began to ring. I never thought I'd testify again but I have.

Q And when you're doing this kind of work in a legal setting like you are here today, do you do that only for plaintiff just like Kathy O'Haver or do you also usually do it for defendants or a mix of both?

A On commercial cases businesses suing businesses it's both. For personal injury it's more of the plaintiff. It's usually not on the defense side but sometimes if there's something on defense case. I had a defense case in Guam for example. It was 20 hours. But I take defense cases all over the nation.

Q And like most people who work for living, do you you get paid for the work that you do?

A I do.

Q What do you charge for your work?

A Well for this case for the analysis that I did was a flat fee $5,565 for the report that is Exhibit 1729. And then an hourly rate of $495 an hour for the deposition that took a couple of hours I think and today's trial all is $495 an hour.

Q You mentioned your report and that's Exhibit 1729.

Does that report accurately set forth the calculations and the conclusions that you've done in your work in this case?

A Yes.

MR. EMISON: Your Honor, plaintiffs offer Exhibit 1729.

MR. TORLINE: Your Honor, no objection for demonstrative purposes.

THE COURT: 1729, is that right, Counsel?

MR. EMISON: 1729.

THE COURT: 1729 may be used for demonstrative purposes.

Q In addition to your report, you have some other exhibits there, Exhibit 1730 and Exhibit 1731. Just briefly, what are those?

A 1730 is a form. You can go to my website or email it, age, race, gender, date of birth, date of injury, describe the injuries, when do you need the report done by. It's kind of what you want us to do with a checklist. It's a basic intake form.

Q And then 31? What's Exhibit 1731?

A So that contains my notes. When I go through the file I kind of put things in a summary fashion here. So I've got age, race, gender, date of birth. I look up life expectancy, the calculations of wage history and things like that.

So it's kind of a compression of everything else in my file

and includes also interview notes that was taken from Kathy O'Haver when my staff interviewed her to find out her career, what's happening with her career, services that she could no longer do in terms of daily practical living, sleeping issues, the fact that she's not working, social things she used to do but can't do. So it's an interview about a page and and a half.

Q If you turn back to your report, that 1729 and also look at what I've marked us 1729B.

A Yes.

Q Is what is included in 1729B also included your report?

A Yes, 1729B is tables 1 through 16 that are attached to 1729 which also has the word portion of the report.

Q And for the tables that are reflected both in your report and separately in 1729B, what's the importance of those tables?

A Well the tables are really my favorite. The numbers are my favorite. The report discusses how I got there and it takes several tables in summary fashion. In fact, we have a very short summary of 1729A which is part of the report.

Q And, Dr. Smith, when we talk about the conclusions that you've reached in this case, are those conclusions made to a reasonable degree of economic certainty?

A Yes, yes, they are.

Q And can we have an understanding as we talk about the

work that you did and the calculations and conclusions that you reached, that any conclusion that you tell the jury will be made to a reasonable degree of economic certainty?

A That will be and my report says that they are.

Q Is there anything else generally speaking about what you did to prepare your report other than what you've told us about your interview and notetaking process generally?

A I mean I got tax returns. I got W2s. I got Social Security information. I got pay stubs. Then after I did my report of 1/20/2022, I received a deposition of Ms. O'Haver also which I reviewed and it pretty much says what I expected.

Q And why is it important that you're able or at least somebody from your office is able to talk with Kathy about her harms and losses and why is it important to review her deposition about that?

A Well if we're going to look at wages I want to know, are you working or are not working. What is your plan, services that she can't do? Some things take longer, some things that she can't do so we need to know a little more detail about that.

And then the deposition are really kind of background especially on the issue of a stroke because she was asked about it she at that time it had been a year or so and she had pretty much recovered.

Q What did Kathy tell you how long she intended to work before she had the infection in this case?

A I didn't memorize it. She didn't have a retirement plan and she saw herself working as long as she could.

Q And in - we'll talk about Kathy's losses and lost wages. But in calculating that, does Kathy's life expectancy come into play?

A It does, not so much work because we don't expect people to just sort of work till the end of life expectancy. I would like to see that but not everybody has the physical ability. There's also - but housekeeping, no retiring from housekeeping. You need to make a bed, cook a meal as long as you live. You may not be healthy the last few months of life. My mom couldn't do services the last six months of her life. And she kept herself until 88. So life expectancy is important especially if you have a loss of enjoyment of life also.

Q How did you calculate Kathy's life expectancy?

A So it comes from a table. It's free if you look it up on the website. It's the Department of Health and Human Services the Centers for Disease Control, they publish a table.

You can look up, for example, you can look up a 75-year-old male and you'll - I forget what it says, maybe 12 to 15 years, something like that.

Q And is that a standard method that other economists use when they do with this type of analysis?

A We all use it, yes.

Q Do you make any adjustments to your life expectancy

determination based on anything specific about Kathy?

A An economist can't because the U.S. Life Table is going to say what the person's age, Hispanic or African-American or Caucasian and how old are they. It includes everybody. There's no further lookup. There's the profession called actuaries and they can actually do - they're hired by people who sell life insurance policies. And they say, well this person drives, these kinds of things come into play. But an economist doesn't do that. The actuary could do it.

But this table takes a look at everybody; smokers, people who have cancer, people who drive. The U.S Life Tables look at the entire U.S. population. The average person in there is not in perfect health.

Q And according to the U.S. Life Tables what does that show Kathy's expected life expectancy?

A For Kathy who is presently 60 has an additional remaining life expectancy of 24 years. So 60.8 + 24.1 would bring her to 78.7 statistically average.

Q Is that math right, Doctor? Is it 84.9? Did I see that here in your report?

A I'm sorry, 84.9. I didn't skip third grade but it appears that I might have. 24.1 is her remaining. 60.8 is her past. The total is 84.9. High rate number which is her healthy life expectancy and I can explain that later.

Q So 84.9?

A 84.9. Thanks for the correction.

Q While we're on it why don't you just go ahead and tell us about healthy life expectancy.

A Oh, sure. What we call HOE. So the U.S. Government also publishes tables that say how along are people likely to be free from emotional, intellectual or physical impairment which precludes them from working full time.

So how long will they be healthy enough to hold a full-time job? For Kathy that would be 78.7. Now that doesn't mean as a bricklayer but it means she could show up to work. Obviously, when she's 75 it doesn't necessarily that they're working and still doing heavy labor but should would be free from a physical, emotional or intellectual impairment till that age.

Q And based on this government table, do people ever outlive their life expectancy?

A Yes. You could live till you're 96. Newborns today have a life expectancy of just say till 75 or 73. The chance of that newborn dying between 65 and 85 is less than 50/50. In other words, it's about a 25 percent chance that they won't even get to 65 and there's a 25 percent chance that they won't go past 85. So it tells you that it's an average number but it's very broad. You can fall way past it. You can fall way before that.

It's not like everybody is going to live plus or minus one year. It's going to be very spread out. So Kathy I hope will

be be at the far side of that number.

Q Let's talk about Kathy's lost wages. In your report page 1729 is that the first section of your calculations?

A Yes.

Q We don't need to focus on this very much but it's in this section here called "Loss of Wage and Employee Benefits."

A Yes.

Q Generally speaking, what is loss of wages and employee benefits?

A Well Kathy in the past was employed working full time; sometimes full-time, not always full-time. But the position she had was a full-time job 40 hours a week. She was making she said between 12 and $13 an hour. And you asked me to look at what her capacity is. And we would look at the average earnings - well someone making basically $12 an hour working a full-time job multiplies out to $26,000 a year.

Q And so you assumed Kathy's average earning capacity at $12.50 per hour, did I hear that right?

A Yes.

Q And in calculating that, so she had her knee infection in January of 2017. And from January of 2017 until essentially today did you perform a calculation that shows how much earnings she is lost from that time until today?

A I started the wage loss from January 1st of 2017. I thought that she'd be covered by then. So yes, from January '17

onward.

Q And is that reflected in the tables on Table 1 that show your work in this case?

A Yes.

Q And can we call that past wages?

A Sure.

Q That's Table 1?

A Yes.

Q What's the total amount of Kathy's past wages until today?

A Let's just say today being October 1. So the lost till October 1 is $169,736.

Q Now you also said that Kathy mentioned she had a stroke. Now if that stroke also impacted Kathy's ability to earn wages, for example, say in 2017 or even including 2018, is that something that you can find in here and determine how much that would reduce that amount?

A Yes.

Q Is that also reflected on Table 1?

A Well you can't. At the time I did the report I didn't realize that - well right now she says if she talks long periods of time she has issues but the memory issues are pretty much resolved. But she had some mobility issues back then I don't know how long those lasted. So I don't know how long she would've not been able to return to her job as a custodian. I

don't have an answer.

But let's say it was all of 2017. That first year was $26,000 on her wages back in 2016 but we have some wage inflation. So the 2017 number, if you want to scratch out those wages, it's $27,053.

Q And so if the jury decides that Kathy had an infection but that the stroke caused most of her wage loss in 2017, what would they do with this $169,000 number?

A The entire year, you just subtract the 27,000 from the 169 and you get about 142, almost 143.

Q And numbers for each of those years are reflected in Table 1?

A Yes. The next year is 27,000.

Q And then what about Kathy's future earnings, the earnings that she would've been making from today on for the rest of her life? How did you make those calculations?

A So we get a statistically average national wage increase. That average wage growth for 2017 is about four percent and 2018 is about two and half percent. We'd estimated here - I was estimating a three percent wage increase for last year and this year. It turns out we've had raging inflation since I did this report so these numbers are at least five percent conservative. So for the wage increase they tell me which increases close to seven percent, not the three percent we were assuming.

So when I sit down with my staff to do wage increases, their the experts actually in telling me what their wages should be but I trained them. So we only thought it was three percent from last year and this year. It's gonna be a lot more than three. But given that and assuming an average wage increase in the future based on the next 20 years. The inflation will taper down and things will come back to reasonableness aside from this being maybe five percent short or so because of the last year and this year. In the long run her wage increase in the future, her wages in the future are shown on Table 4 showing a year-by-year increase.

You could take that 10 years. So someone decides she's going to work to the age of 67, we have that number. If somebody decides they're going to work till 66 or 72, we have that number.

Q And before we get to those numbers, I realized I skipped a step. I need to talk to you about - we talked about lost wages but we didn't talk about loss of benefits which is also something that you calculated for her past wage loss, right?

A Yes.

Q Before we get into future wages let's talk about past benefits. Why do you include benefits or economic calculations, Doctor?

A In your assignment to me you said, please calculate

her lost earnings capacity. So she has the capacity on average wages as a custodian. She also has the capacity to earn average benefits. She had she said medical benefits and retirement benefits. She also had Social Security that she paid. If you're an employee, you have to pay Social Security. So those are the three primary benefits.

And that statistical average benefit for here for her it's about 25 percent of total pay, actually. Probably more because it totals less than average nationwide. Average per capita income is more than 25,000. So her benefits we have at 25 percent I think is also conservative.

Q And is that shown on Table 2?

A That is Table 2.

Q What's the total amount from the time of her infection until today for past benefits?

A $43,454. If you want the 2017 number for the time that she worked that year that is $6,926.

Q Okay. And so if you add the total loss wages with the total loss benefits do you have a combined number for total past lost earnings?

A Correct, past and future total.

Q No, just the Table 2.

A Past benefits or wages is $213,390. If you want to look at 2017 below it that's $33,979.

Q So that's Kathy's lost earning capacity from the time

of her infection until today?

A Yes.

Q Let's talk about going forward from today on through the rest of Kathy's lifetime. Is that reflected - and rather than -

A Do you want to do wages and benefits together?

Q Yeah, we'll do wages and benefits together rather than separating those out now that we've shown how that works. Is that reflected, Doctor, in Table 6?

A Six.

Q Six?

A Yes.

Q What is Table 6?

A Table 6 shows future wages and benefits as well as life expectancy.

MR. EMISON: Your Honor, may I publish Table 6? It's in Exhibit 1729A and 1729B. Your Honor, I'd offer Exhibit 1729B.

MR. TORLINE: No objective for demonstrative purposes.

THE COURT: 1729B will be received.

Q Is this Table 6 that you're talking about, Dr. Smith?

A Yes, sir.

Q What are we looking at here?

A You see the year. The first year is 2022. She will

turn 61 in 2022 on her birthday which I think has actually already occurred. So that age is the year she turns - actually her birthday is December 16th so she'll turn.

And then next item is a wage year-by-year and the benefits year-by-year and the total year-by-year is the second to the last column and the last column is the total. The last column adds it all up here year-by-year.

So if we want to go to a particular year we just draw a line and say, okay, if she works till 67 for example, that table shows future of $250,689.

There something about the table that I need to point out. The wages are claimed year-by-year-by year, so are the benefits. Why is that?

Q Why is that?

A So that's because a dollar 10 years from now is worth less than a dollar today. So her wage in the future, let's say some year it might be - I can actually tell you. In 2030 her wage would become as high as 35,000.

Q So what's that worth today?

A Today that's only worth 31,685 because we take the future dollars and reduce them by what could be earned on interest if we put some money away today and let it accumulate. So this is not going to have all of her future wages in the sense of all the dollars. It has the present cash value.

So if someone says, for example, I'm going to give you a

thousand years at 10 years, that's not worth today $10,000. That's worth $8,000 or $9,000.

So her future wages, her future benefits have been discounted. You'll see how each year because of the discounting, yes, they grow. They grow in the future but they're actually worth less.

Q And just so I understand the concept of net present value, by reducing this to net present value does that have the effect of lowering the amount of actual dollars today of Kathy's losses that she would earn cumulatively over her lifetime?

A Exactly. Just like if someone says I'll give you $10,000 a year for 10 years, yes, you would get 10,000. But if they come and say, well let me just pay you off now, that would only be $8,000.

Q And so what is the total amount of Kathy's future wages and benefits?

A Well to answer that question you have to decide to what year would she work. So let's say she had the capacity to work till 67. That is the $251,681.

Q And then what if she works to say 76, a couple of years shy of her - what did you call it? The other life expectancy?

A Healthy life expectancy would be till 78.7. But if we took it to 76 that year is 607,212. It's about 39,000 a year plus or minus.

Q And if she was able to work to her life expectancy of 84.9, what would that be?

A That would be wonderful. That would be 949,429. Wonderful, not that likely though.

Q Understood. Now is there also a table that shows the combined total of loss of Kathy's earning capacity, past lost wages and future lost wages.

A Yes. So past and future, we looked at both. Table 7 puts that on one page.

Q That's Table 7?

A Yes.

Q And what does that show us?

A Well to 67 it shows us 464,871.

Q If we do it to age 76?

A It shows us 820,402.

Q And it's not likely but if it's possible, 85, what's that?

A That would be 1,162,619. If you wanted to take 2017 out of these numbers, that's the number we saw before 33,979.

Q Thank you, Doctor. Now in calculating any of these losses, I know we've talked about Kathy's stroke and about that might have affected the loss wages. Do you have any opinions about that or do you leave that to the jury?

A I really have no opinion. It would be outside my scope.

Q In your work in this case have you attempted to - have you attempted to limit your opinions as to conclusions and calculations to only those injuries and losses based upon Kathy's knee infection?

A Yes.

Q Let's switch gears to the household services. Tell us about household services, what does that mean?

A Household, clothing, care, food preparation, household maintenance and repair. And we have tables that tell us approximately how many hours a week of services is a person likely to do. Now some people do more and there's people who build a room addition and that's way beyond what we're looking to do but most people do something. And Kathy indicated she's doing two to three hours a day of housekeeping.

Q And is that what you based your calculations on?

A Yes in the sense that the American ____ survey says the government statistics show the she would be doing about 15.68 hours a week and that's for single female working full-time. So that is actually two to three hours a day. It's like 2.2 hours a day. So she was saying that she's pretty much average.

Q Tell us again where did you get the numbers for have much those services would cost?

A So then the government publishes statistics of three things on the website. What is the average waiter paid? What

is the average waitress paid? What's the average cleaner, maid, housekeeper. She did a lot of landscaping. How much is average drive to the grocery store and back.

So we have all that. That comes to $16.79 an hour on average for the kinds of things we do in a household. That's what the house person gets paid.

Usually when people hire someone to come clean their houses, they don't also do the yardwork. So you have to think about when somebody comes and cleans the house isn't necessarily doing everything. But anyway that's $16.79 an hour, if you hired it all out, you brought somebody bonded, trained and insured, reputable and you have to pay the Social Security on that.

So that's about a 50 percent non-wage component. To take the wage component and the non-wage component, at 15.68 hours a week and you multiply all that out, in 2017 that would come to $18,184.

But before I use that Kathy's told us many things, there's something she can't do. For example, she said in her interview that she doesn't do the yard work and she can't clean like she used to as far as the heavy-duty cleaning. Also, she said things that would have taken her an hour or two might take her longer today cause she'll pace herself to go slower, etc. And the things she still does it takes 60 to 75 percent longer.

So when we add the things that she can't do plus the things

that everyone else does take her 50 to 75 percent longer, I show a 60 percent overall loss.

Q So 60 percent overall loss?

A Yes. So now it's just a math equation that any 7th grader could solve.

Q Before we get to seventh grade math, let me ask you this. If Kathy occasionally gets help whether it's from her boyfriend that she lives with or a family member or friend to do some of these chores, why would you include that in your calculation?

A Well you asked me to calculate what she's lost. If her church sends over a dozen people every Sunday, that's fine but that doesn't measure what she's lost. She might hire somebody to do the yardwork. She still can't do it. When she pays somebody to do it or the people come over and help her out, whether some of it doesn't get done as well, that has nothing to do with it.

It's what happened after the injury, how does she compensate, how she recovers, who helps out.

If somebody comes to do the yardwork or if she pays them a lot, that has nothing to do with what she's lost. She's lost 60 percent of her ability to do it.

Q And like you did for wages, have you calculated how much Kathy has lost from the time of her infection until today?

A Exactly. Again, we do housekeeping.

Q Don't give me the numbers.
A We did it from January 1.
Q And then have you also calculated her future losses of household services from today through life expectancy?
A Yes.
Q Have you created a table that shows those combined values?
A Table 10. There's one thing you mentioned which is what Kathy doesn't know and what none of us knows is the fact that upon retirement, the hours go up. So once she would no longer be working the tables show that she would be spending about three and half hours a day.
Q How many?
A About two and half.
Q And is the concept there that somebody would reach typical retirement age, they would then have more time to do things at home?
A Right. You're fixing meals. You're not - you're doing a little better cleaning. You're taking your time. You're not doing it after 40 hours a week job where you might come home and you're a little tired. So you say I'll clean the floor tomorrow. So, yes, it's more.
And then at age 75, actually things come down a little. I think what happens at 75 is that you decide I don't need to clean the house as much, I'm going to go out dancing. Life is

not forever. So, actually, the numbers notch down a little bit so I've taken that variation into account.

Q And what it the total for Kathy's total losses of household services?

A So to the end of life expectancy it will $486,467.

Q Again, that's what's reflected here in Table 10?

A Correct. And if in 2017 some of it she couldn't do because of the stroke, there was actually almost $10,000 that year some of which might be part of the stroke. I can't say. That's about $10,910 in 2017.

And let me give you one other number. In 2045 when she's 84 approaching 85, she might not be healthy enough that year. Those numbers are around $17,000 a year at the end of life.

Q You said that was how much?

A In 2045 it's $17,000 roughly. So if someone says well, maybe she's like my mom. She didn't do it the last six months of her life.

Q And that's a decision that's you'll leave up to the jury?

A Or she might live longer.

Q And so if she lives till 2050, that's $17,000. Let's talk about the reduction in value of life and those calculations. First off, what is that?

A So this is obviously what we call services or tangibles. It's the quality of life. So economists have

studied the value of life like a protective study but it's been around since the middle 60s. And they ask the question, we can value work like we see here, work for the household. You can value your work as a custodian or an accountant or whatever you're doing. But what's the value of the whole human being? researched interesting field of economics.

Q Are the methods that you used to make these calculations used by any other economists or government agencies?

A Nationwide. The government uses this all the time with the safety measures and things like that. These numbers are embedded in a regulatory report society. We want to make sure cars are safe. We want to make sure our water safe. If you really want to be safe you should have body guard on you 24/7 and should have a fire hydrant in your kitChan but that's a lot of money. So we do some things to be safe.

We look for better money for better food but we don't have to spend a lot on safety because we have to also pay the rent and buy the car.

So economists have measured in the government when do spend money to reduce the risk of death whether it's a carbon monoxide detectors when you're building a house, how much are we spending per life saved?

And it may sound cold and calculated but we know that number. We know that number just as much as we know what the

average car price is. Some cars are brand new and some cars are 20 years old. And you can't calculate the average cost of a new car and an old car.

Cold precise calculations on average in this society when we are spending money on safety. What's the cost for safety?

Q And in general without getting into the fine details of those nitty gritty calculations, generally speaking, how do you make that calculation?

A Well if we go down the aisle at the Ace Hardware store and we buy a carbon monoxide detector that costs $40. Then if the statistics show that it takes 100,000 of those to save a life the price will go up.

A lot of times it goes on and it doesn't work so it didn't save your life. Sometimes there's no batteries so that didn't save her life. But every once a while it shows that every time you put 100,000 of these things all around the country and it saves one life, that means we've spent 100,000 times $40, it's $4 million. And every time you write a check for $4 million it's safety throughout America we can save a life, we know that we're paying when we buy that car.

We're acting as if life is worth $4 million and we do engage in safety efforts all the time. And there's more than that.

Workers are paid to save us from death whether it's offshore oil or chemical factories all over. In fact, OSHA

studies everywhere in this country. It's not just what we think is unsafe factories. There's a chance of worker death even as a bouncer in a bar or an Uber driver. So there's risk of death in everything.

Q And, for Kathy O'Haver did you calculate a range of her reduction in value of life?

A Yes, using a statistically average value of life.

Q And how did you determine the ranges or the amount of reduction in her life?

A So her range, what she said was that her quality of life had gone down significantly. It can range from - her quality of life left was 30 to 50 percent of what it used to be prior to the injury because sleeping issues, walking issues, standing, going up and down upstairs, social activities with children, grandchildren. She says she feels like she's a nuisance, like she's an anchor on a boat. The way she feels because she doesn't want to keep the rest of the people from doing what they like. She takes medication she said for depression. Her quality of life, she can't enjoy what she used to. This is simply you live with every second of every day 24 hours a day. You try and make the best of it but the truth is if it's true, it's permanent.

Q And for the lower range based upon if it's a 50 percent impairment of Kathy's value of life, is that reflected in Table 13?

A Yes, assuming that she had the average ability to enjoy life before.

Q Not a super good life but just an average life?

A Some days are bad. Some days are great in anybody's life. But on an average life an average person has some bad days and live an average life. I assume that she would have the ability to do that it seemed like, friends, family, a career taking that into account and her life expectancy. A 15-year-old could have more life to look forward than a 75-year-old. So taking it account her life expectancy in which she's had a 50 percent loss.

Q What's that number?

A That translates into $1,976,674.

Q And then if the jury finds that her lost value of life is on the upper end, a 70 percent reduction in the quality of her life, did you do that calculation as well?

A Yes. That amounts to 2,767,000.

Q And that's on Table 16?

A Yes.

Q That's the year-by-year at 70 percent loss. That's $2,767,343. The average of those which is a 60 percent loss, the average is 2,372,000.

Q So that summarizes the calculations and the work that you did to calculate Kathy's total economic losses?

A Yes. And enough detail not to put the jury to sleep.

Q If we were to try and total these up so we have a total overall figure?

A Then we have the summary page.

Q And that is Exhibit 1729A?

A Yes.

MR. EMISON: Your Honor, I'd offer 1729A.

MR. TORLINE: No objection for demonstrative purposes.

THE COURT: 1729A will be received for demonstrative purposes.

Q And so this is lost wages and benefits to an average retirement age of 67?

A Yes.

Q And if Kathy decided to work longer than that say to 76 if she could, that would be a higher number?

A Yes. Table 7 shows that every additional year is approximately $39,500 approximately.

Q And if we add all of these numbers up, Dr. Smith, do you have an amount on the low end of this average range to the high end of the average range based upon the loss of enjoyment of life?

A I could.

Q And that's fine. We can put that together later on for the jury.

A Okay.

Q Dr. Smith, for each of the calculations that you have made that we talked about today and that you've included in your report, have all of those conclusions been made to a reasonable degree of economic certainty?

A Yes, sir.

MR. EMISON: Your Honor, I'd pass the witness.

THE COURT: Cross-examination.

MR. TORLINE: Yes, Your Honor. May it please the Court.

THE COURT: Counsel.

CROSS EXAMINATION BY MR. TORLINE

Q Good morning, Doctor. Can you give the jury an idea of how many times you've actually testified?

A Over about 30+ years so about twice a month so several hundreds of times.

Q And that's depositions and trials?

A Depositions is more. The last few years ago it's been several times a week so that's several thousand.

Q And your deposition was taken when, sir?

A March of '22.

Q March of 2022. We got your report and it's 1729. And as I understand it and from your testimony, you've become aware that Ms. O'Haver had a stroke, correct?

A Yes.

Q And that there has been evidence that that stroke may have impacted her life at least in 2017 by your information, correct?

A Apparently, it did.

Q When did you learn this?

A During the interview.

Q During the interview.

A She said she had a stroke.

Q But in your report you didn't account for that, did you?

A Well we didn't quite know. But, actually, we do because the report has it year-by-year as you saw in earlier testimony where Mr. Emison was able to take my report and say, here's how we can account on this in your report because I can't say how long she won't have the ability go back to work. I don't have the ability say that.

Or if someone says let's take out the entire year 2017 and Mr. Emison showed that number. If someone says let's take out half of 2017, we can take out half that number.

Q I'm looking at 1729B, the table that you were provided which is an excerpt from your report. You had totaled the past wages from 2017 to 2022, correct?

A Yes.

Q And today you come in and you're telling the jury, as I understand it, that 2017 may not be pertinent because you have

learned that she had a stroke?

A Well I knew that when I did the report where it allows me to do that. So the report says if you want to go to that page. So if someone says 2017, let's take out six months, they can do that using my report.

Q And you testified that you looked through the deposition and the information that was provided to you and that you said that hers was pretty much what you expected, correct?

A I didn't see anything in the deposition that was different from what would - that would change my report.

Q And one of the things that you looked at - look at page 2 of your report please. Are you there, sir?

A Yes.

MR. TORLINE: Judge, can I publish this as Exhibit 1729?

THE COURT: You may publish.

MR. TORLINE: Thank you, Your Honor.

Q One thing that you relied upon was the Oak Grove employment records. Do you see that?

A Yes.

Q And those are important to you, correct?

A I didn't rely on them. I had them.

Q But you reviewed them? You said you reviewed the following materials?

A It doesn't say I relied on them.

Q But you reviewed them?
A You said I relied on them.
Q You reviewed them?
A I want to make it clear. I have them.
MR. TORLINE: Your Honor, may I approach?
THE COURT: You may.
Q I'm going to hand you Exhibit 1838. And that's your report, correct?
A You just read from my report.
MR. TORLINE: He's not answering the question.
THE COURT: Mr. Smith, just answer the question please.
A Yes, of course.
Q So you have the 1838? You prepared your report in 2022, correct?
A For the third time, yes, sir.
Q Turn to O'Haver page 668 of Exhibit 1838. Are you with me?
A Yes, sir.
Q This is dated March 3rd, 2017, correct?
A Yes.
MR. TORLINE: Your Honor, may we publish?
THE COURT: What is it?
MR. TORLINE: It's O'Haver 668, page 10.
THE COURT: You may.

Q This is some medical notes, do you see that?
A Let's make it clear. This is part the U.S. Department of Labor.
Q I asked you do you see March 3rd of 2017?
A Yes.
Q And you understand this was the result of Ms. O'Haver's stroke, correct?
A Yes.
Q And the probable duration of condition was lifetime, correct?
A This went way back then, five years ago, yes.
Q And if you'd look at question number 3. "Is employee unable to perform any of his/or job functions due to the condition?" Yes or no? The answer is yes, right?
A At that time.
Q And you got that when you wrote your report?
A Yes.
Q But you didn't impact for it?
A I did. The report allows you to take whatever part of 2017 for which she wasn't able to work, it's in the deposition, her team found that she's pretty much recovered. That's in her deposition. Let me just finish. You can take out whatever part of 2017 from when she quit work, part of that year or all of that year.
Q Did you note this fact in your report?

A The report says it's a total.
Q So you did not?
A I don't have to tell a second grader how to ... no, I did not. I didn't feel ...
THE COURT: Mr. Smith, listen to the question and just answer the question please. Mr. Torline.
Q And if you look at the question, the follow-up to question number 3. "Identify the job functions the employee is unable to perform." The physician said "All functions due to paralysis," correct?
A Yes.
Q The other thing you testified to a moment ago was you saw Ms. O'Haver's deposition, correct?
A Yes.
Q That deposition was pretty much what you'd expected?
A There was nothing in it that changed my opinion.
Q You were working on the assumption that Ms. O'Haver is unable to work, correct?
A I wasn't told to make that medical diagnosis.
Q That information came from Ms. O'Haver, correct?
A It came from plaintiff's counsel and Ms. O'Haver.
Q So plaintiff's counsel and Mrs. O'Haver are the only basis that you have that Ms. O'Haver is unable to work, correct?
A I'm sorry, what do you mean the only basis?
Q You're relying on what plaintiff's counsel and Ms.

O'Haver told you, correct?

A Not really. I leave that to the jury to rely on that. I don't make that determination. I'm not saying yes or no to whether she can or can't work. That's a medical question. I can't answer that question so I'm not relying on what they said.

Q You're assuming that she cannot work, correct?

A No, that's up to the jury to decide that.

Q What was the basis for your opinion that she has a lost wage?

A That if she doesn't work that's the lost wage. If you cannot. But the jury has to decide if that if is the truth. If she can go to work then some of those wages are not lost.

Q If she's able to work those wages are not lost?

A Correct.

MR. TORLINE: Your Honor, may I approach.

THE COURT: You may.

Q I'm handing you a copy of Ms. O'Haver's deposition.

A I have a lighter copy.

Q Turn to page 26 please. I'm sorry, turn to page 65. And just to make sure we're all on the same page, the information that you were asked to provide a lost wage calculation for Ms. O'Haver because Mr. Emison and his firm asked you to do that, correct?

A Repeat the first part again.

Q You were asked to prepare a lost wage calculation

based upon the request of plaintiff's counsel, correct?
A Sure.
Q And so plaintiff's counsel - you had a follow-up interview with Ms. O'Haver, correct?
A Yes.
Q And you read her deposition, correct?
A Not before I wrote the report but yes.
Q But that didn't change anything?
A It did not cause any change.
Q Can you go to page 65, line 25. "Question: Is there any healthcare providers who in 2017 told you Mrs. O'Haver not to go back to work?" What was her answer?
A She said "No."
Q "Question: Any doctor or healthcare providers in 2018 until present told you not to go back to work?" What was her answer?
A She said "No."
Q And, again, you didn't note that in your report, correct?
A The report can be used for that. I saw no need to note so therefore, no.
Q No need and I did not.
A It's not a medical report.
Q We spoke about a moment ago you had three I'm going to call them categories. You had income. You had the loss of

household services and this loss of economics?

A Loss of enjoyment of life is the legal term. We don't use the economic term for it. The first catagor is loss of wage capacity.

Q The second is the household services, correct?

A Yes.

Q And, again, this is based upon request by Mr. Emison for you to calculate what it was going to cost Mrs. O'Haver in the past and in the future for things that she reportedly cannot do anymore around the house etc., correct?

A No. It has nothing to do with what it's going to cost. It has to do with what the value is that she delivered.

Q I'm sorry, you're right. The value. And you put a value to that, right?

A That was the whole point.

Q And that assumption, again, here is that she is in the past and in the future unable to perform those activities of daily living, correct?

A No. Again, activities of daily living has nothing to do with it. This is household housekeeping. The activities of daily living are putting on your pants or socks, bathing, that's not. This is housekeeping.

Q Housekeeping. And were those amounts that you - strike that. Where does Ms. O'Haver live?

A Do you mean town and address? I don't remember. I'd

have to look at her tax return. Oak Grove.

Q I think she's moved on to Columbia, Missouri. The numbers of value that you use are not based upon a person who lives in Columbia, Missouri, correct?

A I think that consider that but they're not exclusive to that, no.

Q And likewise, when you calculated the lost income you knew she worked at the Oak Grove School District, correct?

A Yes.

Q You didn't contact the school district to say hey, what are you guys paying your custodians these days, correct?

A Correct.

Q Turn for a second to back to your report - I'm sorry. Look at 1731 which I think is the worksheet or work notes that you have?

A Yes.

Q And you never spoke with Ms. O'Haver, correct?

A Not until today.

Q You had an assistant who did that?

A An economic research analyst, yes.

Q I want to focus for just a moment on - you've got her making $26,000, correct?

A Yes.

Q If we look back at her historic income, in 2011 she made $12,646, correct?

A Yes.
Q In 2012 she $13,601, correct?
A Yes.
Q In 2013 she made $13,432, correct?
A Yes.
Q In 2014 she made $15,769, correct?
A Yes.
Q In 2015 what was her wage loss? I'm sorry, what was her wage history?
A I don't have information for that year.
Q You don't have information for 2015?
A Or '16.
Q So the year she had her surgery?
A Correct.
Q If you take what you do have and add those together, so for the five or six years prior to her surgery, it comes to approximately $15,600.
A Not for her earnings capacity. That's just her actual past earnings.
Q I didn't say that. I say what was the average.
A I didn't know that because it's (coughing.)
Q What was the average?
A I don't know.
Q Would you agree with me that her average was approximately $15,000 and some odd dollars?

A Yes.

Q Now and when you put those numbers up for her lost and future wages, that's someone working 40 hours a day, 52 weeks a year, correct?

A Someone has the capacity to do that.

Q Doesn't account for vacations, correct?

A She got paid vacations. It's in the record you showed me.

Q It's part of her benefits, right?

A You don't have to work 52 weeks a year to be paid 52 weeks a year. So you said something about vacations and sick pay I said yes, that's included.

MR. TORLINE: Your Honor.

THE COURT: Mr. Smith, I need you to listen very carefully to the question that is asked and only answer that question without the narrative unless you find it necessary.

A Okay.

THE COURT: Mr. Torline.

Q Again, on the third bucket we're calling it, the value of life. You've reached that - the basis of that calculation for you is what Ms. O'Haver told your assistant, correct, the factual basis?

A The percentage lost in the background.

Q So the 30 to 50 percent that Ms. O'Haver told your

assistant, that is what you accepted as true for purposes of that calculation, correct?

A So I learn the facts to determine what's true. I'm not the judge or the jury.

Q Your job is you calculate on one level, correct?

A True.

Q There's garbage in and there's garbage out, correct?

A It's what she said and I don't call call it garbage. I would disrespect that.

Q And if the facts are not what the facts are, that will skew your calculations, correct?

A It's what she actually said.

Q That's what she told your assistant?

A Yes.

MR. TORLINE: Your Honor, I'd pass the witness.

THE COURT: Any redirect?

MR. EMISON: Briefly, Your Honor.

REDIRECT EXAMINATION BY MR. EMISON

Q Dr. Smith, have you seen any information that suggests that Kathy O'Haver has any ongoing impairments from her stroke that would impair her capacity to work?

MR. TORLINE: Your Honor, I'm going to object. It's beyond the scope. He's testified he's not and actuary, he is not a medical doctor.

THE COURT: Sustained.

Q Dr. Smith, in any of the information that you have been provided in the records that you've used that Mr. Torline showed you in Exhibit 1838, have you seen anything that suggests that Ms. O'Haver has any ongoing impairments that would - other than her left knee that would inhibit her capacity to work?

MR. TORLINE: Same objection.

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: So, Counsel, I feel like you just rephrased the question after I sustained the objection. I think Mr. Smith made it very clear in his cross-examination that he's not here to say whether or not she can work or cannot work. This is just if she does not work what her lost wages would be. So I bring you up here to say that I don't want you to rephrase it again because really it's not proper for this witness to testify regardless of his review and what he reviewed. He said it in is cross-examination that's not a determination for him to make.

MR. EMISON: I didn't mean any disrespect. I tried to rephrase to get additional foundation in my response to what Mr. Torline asked him about that very same document that we talked about with the stroke. If I overstepped I do apologize for that. But I was just seeking for him to respond to the question on cross-

examination.

THE COURT: No offense taken. I just wanted to make my ruling clear so that you didn't continue going down that road.

MR. EMISON: I won't. Yes.

(RETURN TO OPEN COURT.)

Q Dr. Smith, you reviewed Ms. O'Haver's deposition?

A Very carefully, yes.

Q Do you still have that in front of you from when Mr. Torline asked you about that?

A Yes, sir.

Q Could you turn to page 65?

A Five and six.

Q Could you turn to 65 and 66. It was at the bottom of page 65, line 25 where he started. Is that correct?

A Yes.

Q He's asking about if there were healthcare providers who had told Ms. O'Haver not to go back to work, is that correct?

A Yes.

Q And he asked you questions about that line 5.

A He stopped there, yes.

Q On the very next question after he stopped, Ms. O'Haver was asked "Are there any jobs you think you could do at present?" What did she answer?

A "I'm not sure I could."

Q And then she was asked "When is the last time you even thought about maybe going back to work?" What did she answer.

A She answered "I think about it every day but I know I can't."

Q And then she was asked "Okay, because if your knee?" And what did she answer?

A "Yes."

Q And we were talking about her earning capacity. What's the difference between earning capacity and actual wages someone has earned?

A The capacity is how much you can make when you do work. So let me give a couple of different examples. My car right now is parked in Chicago going zero miles an hour but it has the capacity to go 70. If someone has a job as a paralegal with a law firm and they come and say, look I'm 65 years old. My daughter's got children and I want to go home in the afternoon and do daycare for the children. So I'm only going to work 20 hours a week now, not 40 hours a week.

So the person who makes $50,000 a year says I'm cutting back voluntarily to make $25,000 a year because I want to be home with my grandchildren. Her capacity is still the $50,000 a year job.

Kathy told us she had the capacity to work full-time 40 hours a week. That's what she was doing. And in my notes, it

says explicitly it was a 40 hour a week job. Even though she hasn't always worked 40 hours a week, she had the capacity to.

Q And we talked about lost earnings capacity and the total amount of her economic losses. If we were looking at Exhibit 1729B and Table 7, again, Dr. Smith. And just taking that because she intended to work as long as she could past age 67, not all the way to her healthy life expectancy but starting at going to age 76. What's her total amount of lost wages and benefits if you can see that?

A So this is Table 7. Sorry.

Q 276 that I have highlighted.

A That's $820,402.

Q $820,402. And then you told us that the total present value of household services is on Table 10. What's that number?

A $486,476.

Q In then there's a range for the lost value of life, the residual value of life. The low range if I remember correctly that was 1,976,674?

A Yes.

Q And on the high-end was 2 million - what is the high end?

A 2,767,343.

Q And so if we add all these together to end up at that range, if we had wages and household services to the lower end of the residual value of life do you get that number to be

$3,283,552?

A Let me try. The high end reflects $4,074.221.

Q And this reflect the most likely value of Kathy's economic losses in this case?

A Yes, sir.

MR. EMISON: I'd pass the witness, Your Honor.

THE COURT: Any re-cross?

MR. TORLINE: No, Your Honor.

THE COURT: May this witness be excused by the plaintiff?

MR. EMISTON: He may, Your Honor.

THE COURT: By the defendant?

MR. TORLINE: Yes, Your Honor.

THE COURT: Thank you, sir. You may step down. Counsel for the plaintiff, you can call your next witness.

MR. EMISON: Plaintiffs would play the video deposition of Al Van Duren taken on April 15th of this year.

THE COURT: You may proceed.

MR. EMISON: May we approach.

(BENCH CONFERENCE.)

MR. EMISON: This is 28 minutes so let the jury know.

(RETURN TO OPEN COURT.)

THE COURT: This deposition is going to be around about 28 minutes. So at the conclusion of this we'll go ahead and take a lunch break.

(AL VAN DUREN'S DEPOSITION WAS PLAYED.)

MR. EMISON: I just need to confirm that Exhibit 1668 has been offered and admitted. And I would like to point out that that's what Mr. Van Duren was talking about and if the jury needs to identify that by the exhibit number, they can.

THE COURT: 1668 has been received.

MR. EMISON: And I would like to make my record on the prior Van Duren deposition that we talked about last night and offer those for the jury.

THE COURT: We already made a record on that, correct?

MR. EMISON: We did. We just haven't done it before the jury.

THE COURT: Got it. Do you just want to go ahead and move for the admission of this?

MR. EMISON: I will.

(RETURN TO OPEN COURT.)

MR. EMISON: And, Your Honor, just so the jury knows, the document that Mr. Van Duren was talking about in the last deposition that was played was Trial Exhibit 1668.

THE COURT: That has been received into evidence.

MR. EMISON: And then, Your Honor, we played Mr. Van Duren's January deposition yesterday. I would move the following exhibits into evidence. Exhibit 1733 which was referred to as Exhibit 2 in that deposition. Exhibit 1734 which was referred to as Exhibit 3 in that deposition. Exhibit 1737 which was referred to as Exhibit 6 in the deposition. Exhibit 1738A which was referred to as Exhibit 7 in the deposition. Exhibit 1739A which was referred to as Exhibit 8 the deposition. Exhibit 1745 which was referred to as Exhibit 14 in the deposition. Exhibit 1746A which was referred to as Exhibit 15 in the deposition. Exhibit 1747A which was referred to as Exhibit 16 in the deposition. Exhibit 1755 which was referred to Exhibit 24 in the deposition. And Exhibit 1759 which was referred to as Exhibit 28 in the deposition.

THE COURT: Any further record from the defendant?

MR. TORLINE: No just that we stand on the objections we raised with you last night, Judge.

THE COURT: The objections are noted. 1733, 1734, 1735, 1737, 1738A, 1739A, 1745, 1746A, 1747A, 1755 and 1759 are received into evidence.

MR. EMISON: Thank you, Your Honor.

THE COURT: Okay, guys, we're going to go ahead and break for lunch. We'll get started around 1:30.

(INSTRUCTION READ.)

Have a good lunch and we'll see you back at 1:30.

(LUNCH BREAK AT 12:23 PM.)

(RETURN AT 1:39 PM.)

THE COURT: You may be seated. Welcome back. We will continue with the presentation of plaintiff's evidence. You may call your next witness.

MS. ROGERS: We would call Darrell Barnes.

DARRELL BARNES,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MS. ROGERS

Q Would you please introduce yourself.

A My name is Darrell Barnes.

Q Mr. Barnes, are you nervous right now?

A Yes, I am.

Q Have you ever testified in front of a jury before?

A No, I haven't.

Q You understand it's okay to be nervous.

A Yes, I do.

Q And that you for battling your nerves and coming today. I want to ask you about Katherine O'Haver. Do you know Kathy?

A Yes.
Q And how do you know her?
A She's my girlfriend.
Q How long have you guys been in a relationship?
A About 20 years.
Q How would you describe your relationship with Kathy?
A We have a good relationship. We do a lot of things together. The things she likes, I like the same things so that's what we used to do.
Q You say what we used to do. I'll get to that in just a second. Do you guys live together?
A Yes, we do.
Q And have you lived together in the past?
A Yes, we have.
Q And in 2016 were you guys living together when Kathy lived with her mom at that time?
A I don't recall.
Q Darrell, where do you live?
A In a Columbia, Missouri.
Q Okay. And are you employed?
A Yes, I am.
Q And what do you do?
A I'm a chef.
Q And where are you a chef?
A At the Holiday Inn Exec Center.

Q And is that also in Columbia?
A Yes, ma'am.
Q How long have you been a chef at that place?
A About six years.
Q Do you like what you do?
A Yes, I do.
Q Have you always been a cook?
A Always.
Q So you said you've been in a relationship with Kathy for about 20 years?
A Yes.
Q So that would mean in 2016 you guys were together?
A Yes.
Q Okay. Are you aware that Kathy had her left knee replaced in November of 2016?
A Yes, I do.
Q And I want to talk to about the time period you've been in a relationship with Kathy before 2016, right now. Is that okay?
A Yes.
Q If you can think before she had her left knee replaced and then the infection, what were some of the things that you and Kathy would do together?
A We loved camping. We used to go camping like every weekend or so to the Mark Twain Lake and we stayed there for

like six or seven days. And while we - we'd do a lot of things together like camping and other stuff too together.

Q Okay. Would you go fishing together?

A Yes, we did.

Q And would you go swimming together?

A I can't swim.

Q Would Kathy go swimming?

A Yes.

Q Now did you guys have a good relationship during that time?

A Yes.

Q Okay. And then I want to talk to you just little bit about Kathy's personality. How would you describe her personality before she got the infection?

A Her personality was beautiful before she got an infection or whatever you call it. She was always in good spirits and always wanted to do something or whatever. You know we always did things together.

It's like after she had her surgery she just started going down. We didn't get to do the things we used to do. So that brought her morale down right there. So after that it just went down after that, all the way downhill.

Q Before she had the infection when you guys lived together would you both help out with like household chores and stuff?

A Oh, yeah.
Q What about cooking, did you guys ever cook together?
A We cooked together a lot of times, a lot of times.
Q Was she your sous chef?
A She was my backup cook.
Q Did you guys ever go like grocery shopping together?
A Yes.
Q And was that something you guys enjoyed doing as well?
A Oh yeah, always.
Q Did it appear to you that she enjoyed it as well?
A Oh, yes, all of it.
Q Since she suffered the infection, tell me have you noticed any - you talked about it a little bit. You said you noticed a difference in her personality
A Yes, I have, a lot. It's like her whole morale went down. And the things we used to do, we can't do no more whatsoever. So it's like it took a lot out of her, you know, a lot of happiness and things we used to do. We used to go fishing and all that stuff. So now we see other people do it. We always say, we wish we could do that again like going fishing or camping or whatever.
Q So since had the infection you guys aren't able to camp very much anymore?
A No we haven't camped at all.
Q What about going fishing?

A We don't go fishing very much at all. If we go fishing she might sit in the car or sit on a bench while I fish.

Q What about going grocery shopping?

A Well grocery shopping, sometimes when we go grocery shopiing she gets her a little cart to ride in or whatever though. But it's not the same as we're walking and holding hands going down the aisle, like it's not the same no more. It's different.

Q Do you guys still get the chance to cook together?

A No, not at all. I do most all the cooking now.

Q Since Kathy has suffered the infection, have you been - when you watch her does she struggle physically?

A Yes.

Q What about emotionally, have you see her struggle?

A I've seen her struggle because she wants to get in and help me and she knows she can't do it. She wants to help me out cooking. I've been a cooking all my life. I'm allergic to milk and stuff like that. I taught her how to cook stuff without using milk. It's not the same. She's my right hand. It's like I'm doing the cooking and she's doing the watching.

Q Do you believe that this infection has been tough on Kathy?

A Oh, yes.

Q Now you've agreed to testify here today, correct?

A Yes.

Q What's your schedule like at your work?
A I go to work at 3 o'clock in the morning.
Q Did you work on Monday?
A No.
Q Why not?
A I was here. I was here in Kansas City getting ready for court.
Q So you took Monday off work?
A Yes.
Q And were you here on Tuesday?
A Yes.
Q So you took Tuesday off work?
A Yes.
Q And did you have to take today off work?
A Yes.
Q You have to go back to work tomorrow though?
A Yes.
Q So you're leaving directly after your testimony?
A As soon as I can.
Q All right. Thank you very much for being here, Darrell.

MS. ROGERS: Your Honor, I have no further questions.

THE COURT: Cross examination?

MR. TORLINE: Yes, Your Honor, briefly.

CROSS EXAMINATION BY MR. TORLINE

Q My name Steve Torline. Mr. Barnes, good afternoon. I've got just a few questions. As I understand it Kathy moved to Oak Grove in 2013, does that sound right to you?

A I don't recall. Sorry.

Q Well if the records show that she began working as a custodian at 2013 in Oak Grove, you were living in Columbia, is that right?

A Right.

Q She had a knee replacement in 2014. And I presume she was still living in Oak Grove at that time?

A Yes.

Q And you were in Columbia?

A Yes.

Q Oak Grove and Columbia are about 110 to 120 miles from each other?

A Yes.

Q You weren't living with Kathy from 2013 through when?

A I don't recall. I don't recall.

Q But you certainly weren't living together while Kathy was living in Oak Grove, correct?

A Correct.

Q So she had a right knee replacement in 2014. You would not been living with her at that point, right?

A Right.

Q She had a knee replacement in 2016. You weren't living with her at that point?

A I don't recall.

Q So what I'm trying to understand is did you observe any of the problems that caused Kathy to have to get a new right knee and a new left knee?

A Could you repeat that again please?

Q Yeah. Were you able to observe any of the physical problems that caused Kathy to get a new right knee and a new left knee?

A All I know is she had problems with it after she had her surgery. That's all I can say.

Q So you don't have any information about what led to her having those surgeries, is that fair?

A Yes.

Q In other words, you weren't around to see her - whatever was causing her pain or inability to get up or get down with her bad knees? Do you remember any of that?

A I remember that I know she was limping a lot. She had a cane. I know that. She was in pain.

Q Prior to her getting her knee implant?

A No, not at all.

Q That's what I was curious about is prior to her getting knee implants, do you remember observing her having problems walking?

A No.
Q Do you have any reason or understanding as to why she would have to get two new knee implants?
A No.
Q In 2016 she had the surgery on the left knee. You were not living with her at that point, correct?
A Right.
Q In March of 2017, I believe she was living with her mother, is that right?
A Right.
Q When she had her stroke?
A Yes.
Q And she went to a rehab facility. And then can you tell us when it was that you and Kathy began to live together after her stroke?
A It's been so long I can't remember. It's been so long.
Q And the differences that you see between Kathy prior to 2017 and after 2017, do you know whether that was because of her stroke?
A I don't know.
Q Did you accompany Kathy to North Carolina?
A No, I didn't.
Q Who did she go with?
A By herself I believe.

Q Did she drive herself?
A No, somebody picked her up and they drove.
Q So you didn't drive her to North Carolina?
A No, somebody else did.
Q Do you know who that was?
A No, I don't.
Q We've also heard testimony that since having her knees replaced Kathy has lost approximately 80 pounds?
A Yes.
Q Is that right?
A That's right.
Q So she's 80 pounds lighter than she was prior to having her knees replaced?
A I can't say. I don't know.
MR. TORLINE: That's all I have. Thank you, sir.
THE COURT: Any redirect?
MS. ROGERS: No, Your Honor.
THE COURT: May this witness be excused by the plaintiff?
MS. ROGERS: Yes, Your Honor.
THE COURT: By the defendant?
MR. TORLINE: Yes.
THE COURT: Don't run out. Counsel for plaintiff, you may call your next witness.
MS. ROGERS: Your Honor, I would call Marlene

Johnson.

MARLENE JOHNSON,

having been first duly sworn upon her oath by the Court, testified as follows:

DIRECT EXAMINATION BY MS. ROGERS

MS. ROGERS: May I inquire, Your Honor.

THE COURT: You may.

Q Would you please introduce yourself to the jury.

A I'm Marlene Johnson.

Q Ms. Johnson, do you know Kathy O'Haver?

A Yes, I do. She's a coworker - was a coworker and friend.

Q How long have you known Kathy?

A A little over nine years.

Q You said she was a coworker of yours?

A Yes.

Q Did you work together?

A We worked at the local school district.

Q What did you do?

A We were custodians.

Q Which school was it?

A We worked at the ECC.

Q What's that?

A Early Child Care.
Q What kind of work would you do as a custodian?
A We'd vacuum. We'd scrub the floors. We did bathrooms, glass. That was Kathy's job. Just cleaned everything up every night, take trash out.
Q Did you and Kathy work the same shift together?
A Yes.
Q And so what was that shift?
A It was from 2:30 to 11.
Q Okay. So you would sometimes you would do some work and she would do some work? Did I hear you right when you said that she cleaned the glass?
A Yes. She liked cleaning the glass.
Q Did you like cleaning the glass?
A No, I did not. I still don't.
Q Would you say that the work that you did as a janitor/custodian required some physical work?
A Yes.
Q Did some of that work require you to be on your feet?
A Yes.
Q No sitting down on the job?
A No. I mean like breaks and stuff, yes.
Q How would you - so did you - how long did you Kathy work together in Oak Grove?
A Three years. Three or four years, something like

that.

Q Okay. How would you describe her work ethic?

A She was great.

Q Did you enjoy working with Kathy?

A Yes, I did.

Q During the time that you worked together did it appear to you that she enjoyed her job?

A Yes.

Q Now prior to you guys working together it sounds like you guys were friends before then?

A No. No, she came - moved from Columbia and started working in the same building.

Q Okay. So that was - that friendship would've started then when you worked together?

A Uh-huh.

Q Was that about 2013?

A Somewhere around in there.

Q Are you aware that Kathy had her left knee replaced in November of 2016?

A Yes, I was.

Q And tell me was that during the time you guys were working together?

A Yes.

Q Did she ever return to work with you in Oak Grove after that?

A No, she did not.
Q Are you aware that Kathy got an infection as a result of that?
A Yes.
Q Can you tell - can you describe Kathy's personality before she suffered that infection?
A We enjoyed working together. She was happy. I mean, you know she felt like she was contributing to, you know, her way of life. You know what I'm saying? She felt like a member of the working force.
Q Have you maintained a friendship with Kathy even after she stopped working there?
A Yes.
Q Have you noticed a difference in her personality since the infection?
A Yes.
Q And how would you describe her personality now?
A She gets depressed because she cannot work anymore. She also would like to work but she just - you know, that changed her because she can't do the things that she used to do.
Q Ms. Johnson, have you ever testified in front of a jury before?
A Once.
Q Oh, you have?
A I have, once.

Q You did a great job. Were you nervous today?
A Yes.
Q Thank you for coming. I appreciate it.
MS. ROGERS: Your Honor, I have no further questions.
THE COURT: Cross-examination.
MR. TORLINE: Yes, Your Honor, very briefly.

CROSS EXAMINATION BY MR. TORLINE

Q My name is Steve Torline. You understand that Kathy had a stroke in 2017?
A Yes.
Q Did you help care for her after the stroke?
A I visited her at her brother's house and at her mom's house but yeah. I didn't physically take care of her. I mean, if she wanted something I would bring it to her.
Q Did you attend any of her doctor's appointments?
A No.
MR. TORLINE: No further questions.
THE COURT: Any redirect?
MS. ROGERS: No, Your Honor.
THE COURT: May this witness be excused by plaintiff?
MS. ROGERS: Yes, Your Honor.
THE COURT: By defendant?

MR. TORLINE: Yes, Your Honor.

THE COURT: Thank you, ma'am. You may step down.

A Thank you.

MR. EMISON: Your Honor, plaintiff will play the videotaped deposition of Dr. Gregory Ballard.

THE COURT: Counsel, can you approach?

(BENCH CONFERENCE.)

THE COURT: How long is this?

MR. EMISON: Two hours and 12 minutes.

MR. TORLINE: I'd like to renew our objection it being played.

THE COURT: With that objection, the video will be played. We got started at 1:40 I think it was. So how about like 3:15. I would say that you guys can just kind of figure out a few minutes around 3:15, let's take a break, okay.

(RETURN TO OPEN COURT.)

THE COURT: Okay guys, so depo is about two hours and 12 minutes long. I've asked counsel to find a good breaking place around 3:15 to take a break given when we came back after lunch. But, again, if any of you guys need to take a break prior to that, just get my attention and we can take a break. Okay. Counsel, you may proceed.

MR. EMISON: Thank you, Your Honor.

(DEPOSITION OF DR. BALLARD WAS PLAYED.)

THE COURT: Okay, guys, we're going to take our afternoon break. We'll be back at 3:30.

(THE INSTRUCTION WAS READ.)

(BREAK AT 3:10 PM.)

(RETURN AT 3:40 PM.)

THE COURT: You may be seated. We will continue with the presentation of Dr. Ballard's deposition. Counsel, you may proceed.

MR. EMISON: Thank you, Your Honor.

(DEPOSITION OF DR. BALLARD CONTINUED TO BE PLAYED.)

THE COURT: We're going to recess for the day. It's 4:50. I know you guys have been working hard today. I know.

(INSTRUCTION READ.)

Have a great night. We'll see you tomorrow at 8:30.

(JURY OUT AT 4:58 PM.)

THE COURT: Why don't you guys come up. So we're outside the presence of the jury. Mr. Emison, although representations have been made that you would rest at the conclusion of today but you're not intending to do that, is that correct?

MR. EMISON: We're not in the position where we can rest today, Your Honor.

THE COURT: And exactly how much additional time

beyond the extra day that you've been given do you anticipate that you would need?

MR. EMISON: We have a deposition of Al Van Duren from 4/14 that that runs an hour and 46 minutes, a deposition of Michelle Hulse Stevens that runs an hour and one minute, a deposition Kimberly Colby that runs 12 minutes. That would total roughly 3 hours and we have a short 10-minute live witness that we would do as well.

And I apologize for underestimating our time. I did not anticipate that we would only be getting through one live witness per day as the case started.

And looking back at our time, it looks like if we are able to conclude our evidence as we need to put on its gonna take six total days.

If we adjust - calculate the hours as the Court indicated times six per day, that's 36 hours for us, 24 hours for the defendant's case still gets us to the 60/40 split that we were trying to get to. And I just did not anticipate that the live witnesses would go slow as they did and that's my fault for underestimating that.

MR. BLACKWELL: May I ask, Your Honor, who the 10-minute witness is just to know?

MR. EMISON: Kathy's mother.

MR. BLACKWELL: The issue that we have, Your Honor, it isn't so much with the 60/40 or any of that.

It's the scheduling and the planning of the witnesses that we plan to put on is something we have to go back now to work on to see what we can do because it really does cause us a great deal of compression.

We had a Borak scheduled and planned for tomorrow. So if creates a hardship for us on the witness schedule. So we're going to have to go back this evening to figure out what and how we can address this and not have down time because it just pushes everything backing off.

The fact that there was an additional day, we thought that works. Okay, we can make it work, this additional day. But then it becomes a day and half and we're not really getting started till after lunch tomorrow. That means we've lost a whole another day and half and we had folks scheduled.

THE COURT: So I don't know what to do, you know. I felt like I built in extra time and I felt like I've been - I felt like I've given everybody the time that they've requested. I felt like when the train was going off the tracks, I let you guys know that.

Here's what it comes down to, Mr. Emison. That will then cause the presentation of your evidence to go over by a day and a half from what the representations were made. And I talked with you guys about the fact that this case started with many more defendants and we planned a three-

week trial. And I don't think that it's unfair for me to assume that given there a fewer number of defendants that we could shorten it.

As it stands now, we are going to shorten it by two days and there were what, four defendants. So, you know, I mean that's the issue that I have.

What it comes down to is that there might be some type of limiting of your time in cross-examination depending upon how that goes.

I mean the jury has got to receive the case by Thursday. Based upon other scheduling issues, I cannot be here on Friday. And so next Thursday is when they have to receive their case.

And I gave representations to the defendant that they would have Thursday, Friday, Tuesday and Wednesday to present their evidence. As it looks now, you know, and it also may come down to that I'm going to limit closing argument time because of this for everybody.

So those are - you know, I don't think that I can say you can't present evidence. I don't think I can force your hand and say you have to rest now. But what I think I can do is to create limitations otherwise whether it be in your cross-examination of the defendant's witnesses and/or limiting everyone's time in closing argument.

Other than that, being sympathetic, Mr. Blackwell, to

the scheduling issues that this creates for you guys, if there's a specific request or a witness that's going to be unavailable, I think that if we have left - it sounds to me like the majority of them are depos, you know, if we need to do something tomorrow morning and take the evidence out of order then we'll have to do that. I don't want to do that. I know you guys don't want me to do that. But I guess if there's a request to be made in that regard, we'll take it up tomorrow morning.

MR. BLACKWELL: We're going to huddle this evening when we get back and propose something this evening yet I expect.

THE COURT: Okay. Anything else from plaintiff?

MR. EMISON: Your Honor, only that I am aware of your concerns and we are working hard. We have been trying to be as efficient as possible. We have cut the deposition designations from 15 hours to eight. We have canceled - we're not playing one of the depositions. We've cancelled on of our experts. We've cancelled one of our damage witnesses. And we're absolutely trying to be as efficient and mindful of the Court's time and the jury's time.

THE COURT: And I appreciate that. And I have no reason to doubt that and I'm sure the defendant is doing the exact same thing. And so I'm just the one that has to

hold you guys to the timeframes that are given. So anything else from defendant?

MR. BLACKWELL: No, Your Honor.

THE COURT: Let's go off the record.

(RECESS AT 5:05 PM.)

PROCEEDINGS

October 6, 2022

THE COURT: Go ahead and come on up. So I just want to go over a few things with you. I understand that there's an agreement on the Michelle Hulse Stevens deposition.

MR. EMISON: Your Honor, we would offer Exhibit 211 into evidence.

MR. TORLINE: Same objection, lack of foundation, hearsay.

THE COURT: The objection is noted and overruled. Exhibit 211 will be received.

MR. EMISON: Your Honor, we would offer Exhibit 216.

THE COURT: Same objection?

MR. TORLINE: Yes, Your Honor.

THE COURT: The objection is noted and overruled. Exhibit 216 will be received.

MR. EMISON: Exhibit 217, Your Honor.

MR. TORLINE: Same objection.

THE COURT: The objection is noted and overruled. 217 will be received.

MR. EMISON: 218, Your Honor.

MR. TORLINE: Same objection Your Honor.

THE COURT: So is this a transcript of the

meeting?

MR. EMISON: 218 is the protocol for the bacteria study.

THE COURT: So it looks like there's a dialogue on page 2 of that. There's a dialogue.

MR. EMISON: It does appear that it has a discussion from the group of people listed on the first page.

THE COURT: Then it goes onto the second page, the third page.

MR. EMISON: The dialogue does continue. The list of people is on the first page.

THE COURT: So what is the basis for the dialogue?

MR. EMISON: These are all part of 3M's Patient Warning Advisory Board Meeting conducted in the course and scope of 3M's business.

THE COURT: The Court is going to grant the objection - sustain the objection as it relates to the dialogue. The Court does not believe that the dialogue in its entirety short of there being some type of redacted version could be some exception to the hearsay rule. The Court does not find the dialogue in its entirety to have an exception to the hearsay rule. So I'm going to call it 218A and the portion without dialogue will be admitted.

MR. TORLINE: That's the dialogue throughout?

THE COURT: Correct. Okay next one.

MR. EMISON: 219, Your Honor.

MR. TORLINE: Same objection, lack of foundation hearsay and double hearsay.

THE COURT: This is an email. The objection is overruled. 219 will be received.

MR. EMISON: 220.

THE COURT: Same objection, Mr. Torline?

MR. TORLINE: Yes, Your Honor.

THE COURT: The objection is overruled and 220 will be received.

MR. EMISON: And 224, Your Honor.

MR. TORLINE: Same objection.

THE COURT: 224 is received. Any further exhibits as it relates to Michelle Stevens?

MR. EMISON: No, Your Honor.

MR. EMISON: Exhibits for Mr. Van Duren's April 14th deposition. Exhibit 1764.

MR. TORLINE: Objection, Your Honor. Lack of foundation and it's hearsay.

THE COURT: The objection is overruled and 1764 is received.

MR. EMISON: 1767, Your Honor.

THE COURT: And this is the ...

MR. TORLINE: Same objection.

THE COURT: The objection is overruled. 1767 is received.

MR. EMISON: And 1773.

THE COURT: Is this the PowerPoint?

MR. EMISON: It is, Your Honor.

THE COURT: And that was created by Mr. Van Duren?

MR. EMISON: I believe that was the testimony.

MR. TORLINE: Same objection, Your Honor. Mr. Van Duren -- I'm sorry.

MR. EMISON: I'm sorry. And if we need to identify the specific page, I can find that in the transcript.

THE COURT: That's what I would prefer as opposed to introducing this in its entirety. If there was a portion of the PowerPoint that was specifically referred to and displayed during Mr. Van Duren's testimony, that would be my ruling. So what I'm going to do is just going to mark it 1773A and I'm going to receive it - the slides used during depo.

MR. EMISON: And is it okay if we clarify that after we rest?

THE COURT: Yes. I mean really this just comes down to if the jury requests it. That's really when we're

going to need to know for sure. Any other exhibits that need to be moved into evidence?

MR. EMISON: For demonstrative publication purposes the plaintiff did display the Bair Hugger 750 which is 1471. That may be in evidence. I just don't remember for sure.

MR. TORLINE: What number?

MR. EMISON: 1741.

THE COURT: Wait, 1471 or 1741?

MR. EMISON: Sorry, 1471.

THE COURT: 1471 is not in.

MR. EMISON: I would offer that for demonstrative purposes.

THE COURT: Any objection to 1741 for demonstrative?

MR. TORLINE: No objection.

THE COURT: 1741 will be us for demonstrative.

MR. EMISON: I'm sorry. You just did what I did.

THE COURT: 1471, yeah, thank you.

MR. EMISON: And the Bair Hugger 775 I think that's in as 2215.

THE COURT: It was displayed - so it was not admitted for demonstrative purposes. I just showed it was displayed that maybe it was.

MR. TORLINE: I do not have it down.

MR. EMISON: Can I offer that for demonstrative purposes?

MR. TORLINE: And I'd object, Your Honor, lack of relevance.

THE COURT: Okay. The objection's overruled. 2215 will be received for demonstrative.

MR. EMISON: And then the exemplar Bair Hugger Model 200 was also displayed. I would offer that for demonstrative purposes as 2194.

THE COURT: 2194. Can you give me that title again?

MR. EMISON: Sure. Bair Hugger 200.

MR. TORLINE: Same objections, Your Honor.

THE COURT: And you're offering that for demonstrative?

MR. EMISON: Yes, Your Honor.

THE COURT: 2194, the Bair Hugger 200 will be admitted for demonstrative purposes. Any other exhibits that plaintiff is moving to admit?

MR. EMISON: Not substantive. I do have clip reports from the deposition designations that have been played as well as the individual clips of admissions used with various witnesses that I can provide to the Court and the court reporter.

THE COURT: I would provide those to the court

reporter. I will tell you that it's not my intention to receive those in any manner but will allow the jury to consider them during their deliberations. Does that make sense?

MR. EMISON: Absolutely.

MR. TORLINE: So she doesn't have to type it.

THE COURT: Sure. Sounds good. Any other exhibits from the plaintiff?

MR. EMISON: I do have an exhibit offered as an offer of proof regarding Andrew Chan just showing the designations that we would have played had we been able to and I have marked that as Exhibit 2228.

THE COURT: Any objection to the Court receiving 2228 just for purposes of the record?

MR. TORLINE: No, Your Honor.

THE COURT: 2228 is noted. I would ask - I think that you already did but if you didn't, I would ask that you efile these.

MR. EMISON: I've efiled the designations. I don't know that we included a copy of the transcript with that e-filing.

THE COURT: Since it's an offer of proof, I would - actually since you've already efiled it, Carly can you attach this depo to their filing once it's in?

A Yeah, I should be able to.

THE COURT: Cause I don't think that they're going to be able to do it after the fact. So Carly will attach the deposition to your depo designations and then we'll receive it in that manner.

MR. EMISON: Thank you, Your Honor. As a matter of housekeeping, do I need to give you the exhibit numbers for the transcripts on the record?

THE COURT: Yes, go ahead. I'm not going to make note of them, but I think for the purposes of the transcript we should.

MR. EMISON: Dr. Gregory Ballard's deposition is 2227. Al Van Duren's April 15 is 2222. Al Van Duren's 4/14 is 2223. Michelle Hulse Stevens is 2224. Kimberly Colby is 2225. And the collection of various short admission clips is contained in the aggregate as 2226.

THE COURT: Noted. Any further record regarding exhibits from the plaintiff?

MR. EMISON: No, Your Honor other than matter of the stipulation to the jury.

THE COURT: Yes. Go ahead. Well I guess, do you have any record that you want to make as far as exhibits go?

MR. TORLINE: Not at this point, no.

MR. EMISON: Your Honor, plaintiff believes they have presented sufficient evidence to show that defendant

3M acted willfully and wantonly in a number of manners with respect to the Bair Hugger including relying on its legal department rather than its clinical affairs people in conducting critical safety testing and failing to adequately test and intentionally withholding information from healthcare providers and others that put plaintiff and others at a severe risk of harm. We would ask that we be permitted to provide evidence by way of a stipulation to the jury regarding 3M's net worth.

THE COURT: Any argument from defendant regarding the submission of punitive damages?

MR. BLACKWELL: Yes, Your Honor. We think that would be improper in this case based on the evidence that the jury has heard. There's been zero evidence that any particle admitted from the Bair Hugger contains bacteria.

And there have been no studies presented by the plaintiffs that conclude that there is a causal nexus between use and operation of the Bair Hugger and surgical site infections.

So not only is the science lacking. It provides no basis for the idea that 3M acted with a willful, reckless or wanton indifference to the rights and safety of others, Your Honor.

THE COURT: Okay. The Court finds that sufficient evidence has been proven to allow the submission

of punitive damages to the jury.

So now the stipulation.

MR. EMISON: Yes, Your Honor. Plaintiffs have proposed and provided to Counsel for defendant a combined stipulation that includes both the matter of predecessor liability which was previously stipulated to and the amount of defendant's net worth as of December 31, 2021 as reflected in its official SCC filing.

THE COURT: Do you guys want to mark this as an exhibit?

MR. EMISON: I can, yes, Your Honor.

THE COURT: Do you want to use 2230? Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

MR. EMISON: How about 2231?

THE COURT: I understand, Mr. Torline, the defendant has an objection generally to punitive damages. Do you have an objection to Plaintiff's Exhibit 2231, the stipulation?

MR. TORLINE: Yes, Your Honor, on two bases. Number one, on the stipulation as to the successor liability. The evidence is clear in this case from voir dire, it was mentioned in opening. Mr. Emison mentioned it and there's been significant evidence that 3M is the

successor, not Arizant and not what came with it.

3M has not disputed that and to have the parties stipulate that above and beyond that we think is prejudicial.

THE COURT: But you agree to the stipulation?

MR. TORLINE: We have stipulated to that fact and we don't think it's a fact - it is a fact that we have not tried to dispute.

THE COURT: Right, great. But you don't believe it's in controversy?

MR. TORLINE: Correct.

THE COURT: Fair enough. And then you're also stipulating to 3M's net worth?

MR. TORLINE: No, as it relates the net worth, if punitives are going to be submitted we believe that what should be the value that should be given to the jury is the cash, cash equivalents and marketable securities which is the *State Farm Mutual versus Campbell* U.S. Supreme Court 538 US 408 found that "The presentation of evidence of a defendant's net worth creates the potential that juries will use their verdicts to express biases against big businesses particularly those without local strong presences."

So that's a concern. What we propose is the use of cash, cash equivalents and marketable securities which as

of June 30, 2022 was $2.984 billion.

THE COURT: Okay. The plaintiff's argument as to the stipulation?

MR. EMISON: Yes, Your Honor. It's misleading to limit it to cash. Nothing in Missouri law that I'm aware of requires that and I'm aware most universally is the defendant's net worth.

In addition to that I'm aware of 3M's ongoing combat the earplug litigation where defendant stipulated to the debt worth as part of the punitive damage evidence there.

THE COURT: Okay. The Court is going to allow the value of defendant 3M's net worth to be considered by the jury. Any further record as it relates to this from plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From defendant?

MR. TORLINE: No other than what's your decision as to the first part?

THE COURT: Which is the first part?

MR. TORLINE: The stipulation as to the successor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: Let's go back on the record. So

explain to me your concern again.

MR. TORLINE: Well Arizant was originally Augustine Medical.

THE COURT: Right.

MR. TORLINE: And there's going to be some evidence now about Mr. Augustine. Our concern is that the jury will get confused and say, no matter what Mr. Augustine or Dr. Augustine was doing after the fact, that's on you 3M.

There was evidence presented through Van Duren and Michelle Hulse Stevens and the others that 3M bought this company and that they are the successor to that company. That evidence is in there. It's not been disputed and there is no argument from our side that we will do that.

So to do that, to allow the jury to hear a stipulation that we're responsible for these predecessor companies in this manner, it creates a risk that they're going to flip that an say, well, you've also bought Augustine too. That's our concern.

THE COURT: It sounds like you guys both have a concern. And it sounds to me like the way that this - I mean it depends upon how you present it and how you argue it to the jury. I mean right now it's 3M. 3M is the only one. I don't know and I don't think that there's been any confusion thus far. Bair Hugger and 3M have been prevented

as one in the same thus far.

How the Scott Augustine gets presented as a defendant is hard for me to say.

MR. EMISON: We're not going to talk about Scott Augustine.

THE COURT: So you have a concern that they're going to try to put Scott Augustine in with 3M?

MR. TORLINE: Yes.

THE COURT: Okay. And you are saying you're not going to do that?

MR. EMISON: I'm not going to do that.

case in chief and you think there's a question or it's uncertain, then we revisit this.

THE COURT: I think that we wait until the close of the evidence and we see - and I take this up again, that maybe by that point we'll all know that 3M and Bair Hugger are one in the same and that's all that we need to do.

So how then are you wanting to present this net worth? Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: So as it relates to the successor liability or predecessor liability, the Court is going to reserve that until the close of all the evidence and then

I'll hear additional argument if further clarification needs to be given to the jury in that regard. Let's go off the record.

(OFF THE RECORD.)

(JURY RETURNS AND IS SEATED AT 8:50 AM.)

THE COURT: We'll continue with the presentation of the plaintiff's evidence. Mr. Emison.

MR. EMISON: Thank you, Your Honor. Plaintiffs have marked or was previously marked as Exhibit 2232 and ask to read that to the jury.

THE COURT: Same objection?

MR. TORLINE: Same objection.

THE COURT: 2232 may be read to the jury.

MR. EMISON: Thank you, Your honor. "3M's net worth as of December 31, 2021 was $15.046 billion."

THE COURT: Any further evidence, Mr. Emison?

MR. EMISON: No, Your Honor. Plaintiff rests.

THE COURT: Can counsel approach.

(BENCH CONFERENCE.)

THE COURT: Does the defendant have any motions?

MR. BLACKWELL: Yes, Your Honor. Defendant will make a Motion for Directed Verdict on the grounds that critical elements of plaintiff's claims in every respect are missing. We will at this point, Your Honor, file our brief with the Court on the issue and we'll wait till the

end of the court day for argument.

THE COURT: Do you have the brief with you?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: I'll show that this was filed in open court. I'll take this under advisement and then we'll make a further record about this after the jury is excused for the day.

THE COURT: Yes, Your Honor.

MR. EMISON: Thank you.

THE COURT: Thank you.

(RETURN TO OPEN COURT.)

THE COURT: Does the defendant have evidence that they wish to present?

MR. BLACKWELL: Yes, indeed, Your Honor.

THE COURT: Mr. Blackwell, you may call your first witness.

MR. BLACKWELL: If we may step out?

THE COURT: You bet. Mr. Blackwell, can you announce the witness please?

MR. BLACKWELL: Yes, Your Honor. Introducing Professor Dr. Jonathan Borak.

JONATHAN BORAK,

having been first duly sworn upon his oath by the Court, testified as follows:

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

DIRECT EXAMINATION BY MR. BLACKWELL

Q Good afternoon, Dr. Borak. Would you please introduce yourself to ladies and gentlemen of the jury?

A Thank you. My name is Jonathan Benjamin Borak.

Q Dr. Borak, where are you from?

A I am from Connecticut. My home is in the town of Guilford, Connecticut and my work is in the city of New Haven, Connecticut.

Q Are you married?

A I am married. As a matter of fact, I was speaking with my wife through your colleague while we were waiting. I have a lovely wife and I have a daughter who is 25. I'm rather excited to see her. She lives in Turkey.

Q So Dr. Borak, why have we asked you to come and talk to the jury today?

A Well one of the reasons that I have for many years taught. And I have for many years taught young graduate students and young doctors and I have learned how to fairly well transmit technical information to people who don't have extensive technical backgrounds. So our hope is that I would be able to clearly discuss it.

Q Have you prepared any slides that help to explain your background with the jury?

A Yes, I think there are some slides.

MR. BLACKWELL: Your Honor, we would offer Exhibit 4111 for demonstrative purposes.

MR. SACCHET: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. SACCHET: I hate to do this so early in but we - our side did not receive at least this part of the demonstrative disclosure. I don't if there's an exception or background qualifications but we certainly didn't see this as of right now.

MR. BLACKWELL: We sent the whole thing with his background qualifications, it's simply background. We sent it all last night, yesterday afternoon in fact.

THE COURT: So the objection is noted. Do you have any concerns about it?

MR. SACCHET: I haven't had a chance to look at it. I just saw on this first page and that there's things I haven't seen before and there's issues about our disclosures with Dr. Elghobashi and things that I don't think were objectionable. I'm just surprised to receive this when there was such a commotion about disclosures.

MR. BLACKWELL: We sent it yesterday.

THE COURT: Dr. Elghobashi's disclosures had something to do with his CV. So the objection is overruled. Can you give me the number again?

MR. BLACKWELL: 4111.

THE COURT: Thank you.

(RETURN TO OPEN COURT.)

THE COURT: 4111 is received.

MR. BLACKWELL: Your Honor, may we show that to the jury?

THE COURT: Yes. Exhibit 4111 may be displayed to the jury.

Q So Dr. Borak, tell us about your current position, what do you do?

A Since it's up on slide there, I'm currently a clinical professor of medicine at Yale University. I was formally also clinical professor of epidemiology and public health. That ended about three or so years ago. I was that for 15 or 20 years before the termination of that.

I was for a number of years also an interim associate professor at John Hopkins University.

Q How long have you been on the Yale faculty?

A It makes me feel very old. I've been on the Yale faculty since 1981.

Q And you're a full professor there?

A I am a full professor there.

Q How long have you been a full professor?

A I've been a full professor since 2008 so about 14 years.

Q Do you also have a consulting business?

A Yes, sir, I do.

Q And what do you consult in?

A I consult in the areas of occupational and environmental health, toxicology, medicine and epidemiology.

Q If we go back to teaching for just a second, would you tell the ladies and gentlemen of the jury what you teach?

A For quite a number of years I taught required graduate courses in toxicology, the study of poisons and chemicals and epidemiology, the studies of diseases in populations. Those were the required and listed in the School of Public Health School, in the School of Medicine; at various times in the School of Forestry and Environmental Studies. I even taught some lawyers and law students.

I currently teach medicine, occupational medicine and epidemiology largely within the school of medicine and I participate in a number of courses.

Q Do you also train residents?

A I supervise the training of residents and fellows. Fellows are young doctors who have completed residency four years after medical school and are then pursuing further specializations.

In that case the further specialization is in occupational and environmental medicine. I supervise the residence and fellows who are in occupational and environmental medicine at the Yale School of Medicine.

Q Now your consulting business, you're the president of Jonathan Borak & Company?

A You want to know how you came up with the name?

Q I was curious. The consulting work you do in what areas?

A The work that we do is largely in the case of toxicology, medicine and epidemiology.

Q Is your consulting work limited to litigation?

A No.

Q What other kind of consulting work do you do?

A We do work where agencies are proposing regulations and people are interested in understanding the regulations and their impact and that sort of thing. I work with to diligence for business transactions where one company goes in with the division of another company and they want to know whether there are health concerns that they should be anticipating or worried about and they want studies on those sorts of things. Those are examples.

Q So for the litigation and consulting work you do or have done the past, have you done that work on behalf of both the plaintiffs and on behalf of defendants?

A I've done it for both sides.

Q Let's switch gears and talk about your own educational background.

A You go ahead, sir. You're the boss. You're the boss.

Q Thank you. I don't hear that often. Why don't you tell us about your educational background?

A Sure. I have a bachelor's degree from Emerson College in Massachusetts. After that I went to New York University and got my MD. I then went to my residence. That is practical training, hospital-based and that sort of thing following medical school, which I did for five years at the _____ Hospital in Montréal.

While I was there I was also a clinical and postoperative fellow in a program which allowed me to do graduate studies in health economics. Following that I went back to the states and went to Yale and did an additional year of training in internal medicine.

Q Do have any professional certifications or licenses?

A I do. I'm licensed to practice medicine in the state of Connecticut.

Q Let's talk to the jury about those.

A What he is showing you at the moment are board certifications. The first is a formal credentialing specialty. I have taken four certifications. I've written certain examinations after residency and was certified in internal

medicine by the American Board of Internal Medicine separately, by the Royal College of Physicians of Canada.

I am certified in occupational and environmental medicine by the American Board of Preventive Medicine. I'm certified in toxicology by the American Board of Toxicology.

Q Looking at the first one, Dr. Borak, would you tell the jury what is internal medicine?

A Internal medicine is the kind of medical thing that most of us probably since we're all adults, generally speaking is adult medicine rather than pediatric medicine. We're talking about disorders and diseases and health conditions that could be chronic things. They could be high blood pressure or heart disease, diabetes or we could be talking about short-term diseases such as COVID or those sorts of things. It largely focuses on adults.

But internal medicine per se is very broad because it includes all of the organs. So it includes the kidneys and the liver and the stomach and the heart and the lungs and the brain. Neurology is out of internal medicine. So it's a very broad field has to do largely with adults.

Q Now you have received a number of fellowships, haven't you, over the years?

A Yes.

Q Let's show the jury those and talk about those.

A The concept of a fellowship is one level above the

board certification. You become - a fellowship indicates that you have both specialty training in exactly what your qualifications are and also that you have distinguished yourself in some way contributing to the field oftentimes and for most people it's providing scientific and other sorts of things but there are other ways you could do it.

And one is elected for a fellowship with the members of the specialty group. Sometimes it's a committee of the specialty. Sometimes it's all the specialty but whatever. It's an elective process.

And so I was elected to fellowship in the American College of Physicians as an intern. I was elected a fellow of the Royal College of Physicians of Canada as an internist. And I was elected a fellow of the American College of Occupational and Environmental Medicine as a specialist for environmental medicine.

I was elected a fellow of the American Industrial Hygiene Association. We haven't spoken to that but hygiene - industrial hygiene is the field which looks at monitoring and surveying environments, generally but not exclusively workplaces to try to understand what sorts of things are there, exposures, temperatures, noise levels, other things also involved with many of the kinds of protective things that companies might do to keep their workers and others safe. And I've been very involved with that organization.

I am not an industrial hygienist. That's a specific field of study. But I have been on the - I think we talked about it. I've been on the editorial board of that field's journals for 20 or 30 years and very active with the group and was recognized by election to fellowship in that group.

Then finally there's the Academy of Toxicological Sciences. This is a group, the national group which comprises people who have fairly high levels of knowledge and practice in toxicology. As I mentioned earlier, one is the study of poisons but it doesn't have to be poisons like overdoses or cyanide. It can be industrial. Some toxicology has to do with learning how the body works by looking at what is disturbed within it.

And I have written and done a lot of work in toxicology over the years. And so I was elected to the Academy of Toxicological Sciences.

Q In all the areas you just told us about have you been one who's published in those areas?

A Yes.

Q Any estimate, for example, how many articles or letters to the editor have you written?

A I don't count them. I would guess somewhere around 100, maybe less, around the hundred.

Q What about books or book chapters that you have authored or co-authored?

A Probably 20 or 30.

Q Have you been parts of any committees, groups or organizations where you have been responsible for publications?

A Absolutely. I spent 10 years as the chairman of the Council on Scientific Affairs in Occupational Environment of Medicine. In that context, I was involved in the publication of a number of papers and guidelines and standards and practice, those sorts of things.

Q Do you serve on any editorial boards?

A I currently sit on three editorial boards.

Q Tell us about those.

A I sit on the board of the Journal of Occupational and Environmental Medicine which is published by American College of Occupational and Environmental Medicine.

And I sit on the editorial board of the Journal of Occupational and Environmental Hygiene which is published by the the American Hygiene association and the American Conference of Environmental and Industrial Hygienists.

And I sit on the board of Occupational Medicine which is published by the Royal Society of Medicine in the UK.
OEM Reports.

Q And you've served on these types of boards for a long time?

A Yes, I have.

Q Decades?

A Decades.

Q I'm going to hand you what's been marked as Exhibit 2599.

MR. BLACKWELL: May I approach?

THE COURT: You may.

Q Dr. Borak, I'll ask if you recognize that as a copy of your CV?

A Yes. This a copy of my CV that was dated December of last year. There's a slight refinement since then but nothing that's important for us today.

MR. BLACKWELL: Your Honor, I would offer Exhibit 2599.

MR. SACCHET: It's hearsay but I'll waive my objection.

THE COURT: There's no objection and 2599 will be received.

Q To let's get into the case. Now prior to formulating your opinions in this case, would you tell the ladies and gentlemen of the jury what you did?

A Well I'll start by telling you that I was provided with an extensive amount of medical records pertaining to Ms. O'Haver. I was also provided records of depositions from a number of individuals and I was provided a number of expert reports.

I had an understanding before the date that I got those documents that that was about the Bair Hugger.

I read Ms. O'Haver's medical records, a very extensive amount of it to try to understand what happened to Ms. O'Haver; what was her experience; what was her medical condition prior to and subsequent to her orthopedic surgery; what were predisposing or risk factors, causal factors for disease if she had any. And if she had them, which were they. And I looked for documentation within the records so that I could understand the magnitude and severity of those risk factors so I could understand how important they might be.

Q Dr. Borak, did you also do a review of the literature as part of your research?

A Yes. I did a very extensive review of the literature. Once I could clearly identify for my purposes what I thought to be Ms. O'Haver's causal factors, risk factors, I went into the literature to understand the magnitude of the risk that they represent. This was something I learned by reading a great number of publications which had to do with patients largely because of the situation of joint arthroplasty surgery to understand how those risk/causal factors played out in the health outcomes of those individuals described in the literature.

Q Were there depositions that you also reviewed as a part of your preparation?

A Absolutely. Depositions and expert reports.

Q Any in particular or what source?

A Well I reviewed Ms. O'Haver's deposition. I reviewed the depositions of her treating physicians. I have reviewed a number of depositions from other scientists who have been following one way or another with the development or other concerns about the Bair Hugger.

Q Dr. Borak, I'm absolutely certain that the jurors have heard of the study called McGovern. Did you review any depositions from study authors from the McGovern?

A Yes, indeed. I read depositions of McGovern himself and a doctor by the name of Michael Reed who was the senior physician or senior surgeon on that study and a man named Albrecht who was a statistician on that study and the parts of depositions of some of the other authors.

Q So once you reviewed the scientific information and other literature and facts related to the case, what did you do next?

A Well I tried to think through whether the allegations that this Bair Hugger device had contributed or caused the infection which I think you all have heard that so I'm going to save some time. And I thought about which were the various causal or risk factors that were most likely to have an importance to her developing that infection. And I tried to balance the way those two lines of thinking.

Q And did you write a report?

A Oh, I did write a report.

Q And you report is on May 12th of 2022 for Ms. O'Haver?
A There's in front of me two reports that look very similar. I'm confused. One is dated June 2 - I see. Yes, I have a report from May 12, 2022.
Q And you supplemented that also?
A I supplemented that afterwards.
Q Do you have those reports in front of you?
A I do.
MR. BLACKWELL: Your Honor, we'd tender Dr. Borak as an expert in the field of general medicine and epidemiology.
MR. SACCHET: No objection, Your Honor.
THE COURT: His testimony will be received in that manner.
MR. BLACKWELL: Thank you, Your Honor.
Q Now Dr. Borak, let's talk about how you are compensated for your time.
A In U.S. dollars.
Q Well we have to talk about how many. Could you tell the jury at what rate you have been compensated in this case?
A This is a little embarrassing. I'm being compensated at $525 an hour, $600 an hour while I'm here. My report is $550. Somebody in my office screwed it up so it's my loss.
Q So is the rate that you charge for all of the consulting types of consulting that you do?

A Pretty much. Anybody who came in new would pay at least that much. I have some longtime clients for whom my original fee was lower and I don't raise it. But that's pretty much what I charge except if some organizations, governments and others I don't charge anything, charity. That's my rate for working in that sense, for working anything that's consulting.

Q And if you're estimating your overall amount of time you've devoted to studying issues related to the Bair Hugger, do you have a ballpark for how many hours, days, weeks or years you've spent?

A I don't have it in that way. If you really want a bottom line, it's works out to something about $300,000.

Q Overall for your time?

A That's an approximate.

Q Let's talk about your experience with public health and epidemiology. Do you currently treat individual patients?

A In some years since I had a private practice. I don't have a private practice today. I'm involved in the care of individual patients as the result of my supervising training doctors in the clinics of the Occupational and Environment Medicine Program at Yale.

Prior to COVID that was a more conventional kind of way of doing work. And since COVID a lot of it is gone. So there's been a lot of time since I've been regularly feeling patients bellies or the lymph nodes or those kinds of things. But I'm

definitely ongoing involved in overseeing the clinical care of patients in that clinic but not as their treating doctor, as a teacher.

Q Do you have experience from your past, for example, being a physician at a trauma center?

A For almost 10 years I was the medical director of a large inner-city trauma center emergency department in New Haven, Connecticut. During my time there I was responsible for nearly 650,000 patients. I didn't see those patients. I had about 100 or more full-time equivalent nurses and about 20 or 25 full-time equivalent physicians 24 hours a day, seven days a week, 352 days a year.

But during that time and I was working 60 hours or more week, I did a lot of patient care. And a lot of my work had to do was supervising the patient care that was given by others to make sure that we weren't making mistakes.

Q This was back in the 70s to 80s?

A Mostly the 80s.

Q Have you ever treated prosthetic joint infections?

A I probably have but frankly I can't remember.

Q How common was that in the 70s and 80s?

A Well I'll start by saying that joint replacement surgery was not so common then as it is now. I don't know that - I think infection might've been even more common for patients butn the number of infections would have be a much smaller

number. But I don't remember treating those patients.

Q So you have a public health background?

A Yes.

Q What's the difference between looking at something from public health perspective versus the an individual care perspective?

A Yes. As a clinician taking care of patients, my concern is what's wrong with her? Does she have a fever? Does she have high blood pressure? Does she have something going on in her lungs? What can I find and what can I do to make that better, the individual. I say she. It could be a he. But I'm focused on an individual and his or her illness.

When I'm wearing the hat of a health physician, I'm looking at the disease from a different perspective. I see a patient with an infection. Instead of thinking what medicine does he or she need, I think about how did this person get the infection. Is it likely to be passed on to somebody else? Is there a way to stop the spread?

Now a public health physician we need to have an understanding of the patient problems but not enough necessarily to be treating them.

And the treating physician would need to know enough about public health to understand the implications of it so not necessarily to implement programs that would intervene. I can give you example of an infection because we've got that in our

mind here. But we could be talking about the effects of smoking on lung cancer. We could be talking about hypertension and stroke. We could be talking about overweight and diabetes.

And there's really a difference between treating the patient with diabetes and trying to encourage society to have less diabetes. That's the difference between individual care and public health.

Q So this is a case about a periprosthetic joint infection. When you are talking generally about the disease or diseases, how does that fit in?

A I think it's a disease. It's not an accident. It's not injury like if you get hit by a car. It's not like pneumonia is a disease.

Q So I'd like to switch a gear and talk with you about the framework for understanding the scientific literature applicable to this case. You studied the scientific literature?

A Yes, sir.

Q Now you mentioned that one of the first things you did was look at this scientific literature. Did you look it up yourself?

A I did. I have library capacities within my office. We hold all the stuff.

Q Now when you look at scientific literature, is there some process you use for determining what is the best science, what's good or what's poor? Are there standards in that regard?

A At think the question he is asking me is he's reminding me to tell you about what we call the hierarchy of medicine. Essentially, there are different designs of studies that are more likely to give valid information, not because anybody is trying to cheat but just because there may be random variations that make some studies less reliable than others.

And so the the hierarchy starts at the top with what we refer to as a randomized clinical control which is a prospective study with well defined end points and well defined steps along the way. And the randomization minimizes the chance for variations that might alter the results.

There's a slightly higher level. But there are multiple of those studies. There are ways in which you can combine them and you can make them more reliable.

Q So is the randomized controlled study the gold standard?

A Pretty close to gold standard, yes.

Q And you were giving the jury an example of such a study or were you? Would you please give them one?

A Well one of the things we're going to talk about later is a study that was done by somebody by the name of Oguz O-G-U-Z. And what he did was he compared the Bair Hugger and a restrictive warming device looking at 80 orthopedic patients.

And he assigned them to either one or the other treatment based upon a computer system. He described it - I don't quite

understand exactly what he did but it was a random assignment. And then he looked to see whether they had different amounts of bacteria detected in the air and also whether they had different rates of infection.

Q So we're going to come to Routh in a little bit to talk about. So if we are starting here at the top with the gold standard, randomized controlled study, what's the next test?

A That next thing would be a well-designed prospective but not randomized study in which the comparison is based upon two interventions in one simultaneously.

In other words, one operating room used the Bair Hugger and another operating room used an alternative. The patients all entered at a given time and went forward. And they were examined with standardized criteria. That's the kind of study that also has relatively less chance of being biased and so forth.

Q Dr. Borak, what does the not randomized mean?

A Well not randomized means that in a sense the patient chooses the treatment rather than the investigator choosing the treatment. So I think the patients who were seen by Dr. A and compared to the patients who were seen by Dr. B. And I don't choose in some manner who's going to go to Dr. A and who's going to go to Dr. B.

Q So then what's the next best thing?

A The next best is retrospective meaning looking

backwards. You have an experience. We look at the results of the experience we've done the best that we can. And depending upon how well that has been done, that can also be a group study but it has more risks for being influenced by unrecognized confounders, things that bias and change the results inadvertently, not intentionally.

Q Is the McGovern study, for example, an example of a retrospective study?

A Well it is but it's an example in a different kind of retrospective study. It's an example of an interrupted series. There are retrospective studies in which you go and you look at people who have had both treatments simultaneously.

In the McGovern study it looked at people who were treated with one method and then it looks at people subsequently at a different time period treated differently and makes a comparison. So that's a different kind of retrospective study.

Q But a type of one?

A It is a type of retrospective study.

Q And so then what's the next best thing?

A Well as we go down the list, we get the case series which are descriptions of things that people have seen. Then we get to case reports where Dr. Issa wanted to write about something I just saw. And then we get to expert opinion.

Q Now if we're looking at, for example, here that I can see and the jury can't. Case series, is that another name for

an observational study?

A It's more so. The random controlled trial is as close as an epidemiologist study that lead to an experiment. All of the others are observational. You can't - they're not really controlling.

Q Now would you tell the ladies and gentlemen of the jury having gone through this, this hierarchy, why is it important?

A Well the reason it's important - the history of this as I mentioned earlier, I think I did, was that there was concern about the way in which physicians were being provided recommendations and guidelines and how to treat patients. And the concern was that many of those recommendations were being driven by opinions rather than facts.

And starting in the middle of the last century medicine became devoted to the concept of what is referred to and you probably heard of as evidence-based medicine. And what that means really is that the decisions that are made by a physician are made on the basis of discrete factual evidence that exists. The best evidence is the best basis for deciding how to treat a patient.

And so this hierarchy was developed to ensure that the guidelines that were being provided to clinicians, those who would by be caring would be driven by the best evidence.

Q Dr. Borak, can we agree that all of the opinions you

expressed from the stand here today will be given to a reasonable degree of medical and scientific certainty?

A Absolutely.

Q Now did you apply this approach, this hierarchy to come to a conclusion about the role of the Bair Hugger with respect to an infection in Ms. O'Haver's case?

A Well particularly with regard to Ms. O'Haver, I used that kind of hierarchy in looking at the reports that related what I've described as causal or risk factors to the outcome of infection. And I emphasized - there are a lot of studies. A lot of them are not good but there's some good ones. I chose those which would be highest on the hierarchy as the ones on which I was relying.

Q Let's talk a bit about the theory of - the plaintiff's theory this case.

A Sure.

Q You talked to me about it as A, B, C, D. Do you remember that?

A I do. We had such a conversation.

Q Would you for the jury help us to understand what you mean by A, B, C, D. First tell us what is A to B?

A Well step back from it and let me just give a quick summary. My understanding of the plaintiff's argument is that the Bair Hugger increases the number of particles in the air, that the number of - and that would be A to B. A is Bair

Hugger. B is increased particles. And what you see is the increase in particles is indicative of an increase of bacteria.

Q Some the more particles equals more bacteria?

A In the air. More bacteria in the air means more bacteria over the surgical site.

And then finally because I can speak more quickly than you can write. More bacteria over the surgical site results in more bacteria into the wound causing an infection.

Q So that's actually A, B, C, D, and E?

A If you like.

Q Let's talk about this particular - is this the theory that you evaluated, the A, B, C, D, E?

A Well whether it's A, B, C, D, E or what, that reflects what I understood to be the plaintiff's argument.

MR. SACCHET: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. SACCHET: Before this gets too deep I want to object on two grounds. One, he wasn't designated as an expert in the subject matter that he's about to delve into. He was designated as an expert in epidemiology, not infectious disease, not particles, not bacteria, not anything of the sort.

Second, he has testified in other cases and he doesn't have that expertise. And, third, there's nothing in his

report addressing the chain of infection as he's about to do right now.

MR. BLACKWELL: Your Honor, it's not a chain of infection. He was actually deposed about this. He discussed his findings that are relevant to in his deposition. It's a part of what he talks about is the plaintiff's theory. It's in his reports in this case as well as the report incorporated from the MDL and it's essential to what he talks about.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So I was asking you, Dr. Borak, whether you had evaluated this theory?

A When you say evaluated, I'm not quite sure what you mean.

Q As in looked at the literature that might be relevant to ...

A Oh, I'm sorry. Yes, as a result of that I looked at the articles that have been published as to the particles in the Bair Hugger.

Q Well first, having reviewed the articles, did you first off see any articles that ever spoke to or reflected that there was bacteria that was capable of being cultured from particles that came from a Bair Hugger?

A I did not see increased bacteria documented following

the use of the Bair Hugger.

Q So is there any part of this that the theory that we see on the screen that you agree with?

A Well I think that the Bair Hugger increases particles in the air.

Q So if you look at A to B, the Bair Hugger increases particles. Is the increase in particles equal to an increase of bacteria?

A No, I don't believe it is.

Q So if you walk us through from A to B, you agree the Bair Hugger can increase particles?

A I think that the literature shows that, yes.

Q So if you look at B to C, do you agree based on the literature as to whether more particles equal more bacteria in the air?

A I think there are at least nine published studies that indicated that the use of the Bair Hugger did not increase the amount of bacteria that were resulting. I don't know that any have looked at the in between steps.

MR. SACCHET: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. SACCHET: Your Honor, these studies that he's talking about aren't on his reference lists, none of them.

MR. BLACKWELL: I can show, Your Honor, where he

has been examined on all of these studies and they're listed on his reliance materials. We haven't even gotten to talking about the studies yet. It's what the case is all about and it's what Dr. Jarvis, all of their experts except Elghobashi talked about in the studies.

THE COURT: Did this witness talk about these studies in his report?

MR. BLACKWELL: He has talked about and referenced these studies in his report.

MR. SACCHET: Zero, zero.

MR. BLACKWELL: I'll show you.

THE COURT: Yes, I'd like to see it.

MR. BLACKWELL: Here, Your Honor, for example, the Oguz study where he discussed it in his deposition. Here's the Bates number. The McGovern study, it's in his report and down the list it goes. He has discussed the studies. He's been examined on the studies.

THE COURT: Has he be examined and discussed the studies?

MR. SACCHET: Not in this case. None of these studies and materials are in here or on his MDL report. I just looked at his MDL report which he incorporated by reference and Oguz is not there. Zink's not there. None of the studies he just talked about are there. The only study that's on this list that talks about the Bair Hugger

is Moretti. That's only one.

THE COURT: If it's not a study that he relied on in his report - despite the fact that he may have been a question about that previously, if he's here to talk about his report, the studies that he didn't rely on in forming that report and completing the report I guess I don't understand.

MR. BLACKWELL: But I believe he did if I may look at my list, Your Honor.

THE COURT: Sure.

MR. BLACKWELL: Take for example the Protect study that we've heard a lot about, the Protect study is referenced in his supplement report in this case, the Protect study. The Routh study is referenced in the supplemental report in this case. The Jensen study is referenced in the supplemental report in this case.

THE COURT: The Court's ruling will be is that if it's a study that was referenced in his report under the original or the supplemental, then the witness can be questioned about that study.

MR. BLACKWELL: Thank you, Judge.

(RETURN TO OPEN COURT.)

Q And, I want to be clear, Dr. Borak, just to clarify. You reviewed various scientific studies and literature for the opinions which you formed this case. And when we're talking

about these theories from A to E can I ask you to limit it to the studies that you reviewed for this case?

A Absolutely. And the theory was meant to explain and clarify. It was not to per se theory. It's an explanation of what seems to be told in the literature.

Q So if you're looking at this in a summary fashion, if we look at C to D, more bacteria - more particles equal more bacteria? C to D that means more bacteria over the surgical site? Do you agree with that based on your review of the literature?

A The literature does not talk about that.

Q Then, ultimately, what all of this means equals more bacteria over the wound. Do you agree with that?

A The literature does not document that.

Q Let me ask you because there's been a lot of discussion about 3M internal documents. Did you review 3M internal documents to determine what was the science?

A It not influence my opinion.

Q And why not?

A Because I was reading the published science.

Q Dr. Borak, have you formed an opinion about whether the Bair Hugger causes surgical site infections from bacteria?

A Yes.

Q And would you tell us what that opinion is?

A My opinion is that there is no scientific evidence

that the Bair Hugger causes infections in the wound.

Q Are you aware of any scientific research that finds a causal relationship between the Bair Hugger and surgical site infections?

A I'm not aware of any such scientific evidence.

Q Have you analyzed the McGovern study?

A Yes, I have.

Q We're going to take a very deep dive on McGovern with the jury. Do you agree or disagree with the notion that the McGovern study proves that the Bair Hugger causes surgical site infections?

A Do I agree with that? No, I disagree with that.

Q So we're going to come back to McGovern. But first let's talk about briefly the particles. Because in your preparation for your opinions in this case did you review some of the studies that related to particles?

A Yes, I did.

Q So have you formulated any opinion about what I call the particle theory?

A An opinion about the particle theory meaning does an increase in particles from the Bair Hugger cause infections?

Q Yes.

A Yes. The answer was I do not think that that has been shown by the facts.

Q Are you aware of those studies that actually measure

particles when the Bair Hugger was used?

A Yes.

MR. SACCHET: Objection.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: Sorry, but are you just objecting because of the study he just referred to is not referenced?

MR. SACCHET: It's not on the list.

MR. BLACKWELL: Your Honor, the study is here on the list. So, for example, the Legg study is one of them. It was discussed in his report on page 3 in this case. It's a particle study.

MR. SACCHET: It's not on his reference list.

THE COURT: Here's what I'm going to need if there's an objection. I need the specific study so you can advocate this just with that. So I would say that if you have an objection, why don't you just come on up and cite the study and we will go from there because it's difficult for me ...

MR. BLACKWELL: And while we're here, Your Honor, he's going to talk about McGovern quite a lot. That's on page 17 of his report.

MR. SACCHET: I agree that's there but Legg is not.

MR. BLACKWELL: Legg is there.

THE COURT: Okay. The objection is overruled.
(RETURN TO OPEN COURT.)
Q So I was asking whether there are studies that measure particles when the Bair Hugger was used?
A I think the answer is yes, the particles will increase.
Q Before we talk about those studies, can you tell us what size particles we're talking about in those studies?
A The particles that have been measured in patients using the Bair Hugger are very small. The vast majority are very small.
Q Did you prepare a demonstrative to help the jury understand that concept?
A The answer is yes.
MR. BLACKWELL: Can we have Exhibit 4123. May I approach, Your Honor.
THE COURT: You may.
Q So is Exhibit 4123 the demonstrative you prepared to discuss with the jury?
A Yes, that's correct.
MR. BLACKWELL: Your Honor, would move to admit 4123 for demonstrative purposes and request to show it.
THE COURT: Any objection?
MR. SACCHET: Not for publication, Your Honor.
THE COURT: 4123 may be shown to the jury.

Q Dr. Borak, if you need a pointer for some reason.
A I actually played with this while we were getting ready.
Q So what do we see here?
A Let me step back for a minute. Particles are measured and described in terms of units referred to as microns. Just to give you sense, there are 25,400 microns in an inch.
Q Let me stop you there for a second cause that was discussed by Dr. Elghobashi. Are you sure there are 25,400 microns in an inch?
A That is my understanding.
Q All right. So 25,400 microns in an inch?
A It's very small, not visible. The human hair is around 70 or 75 microns in size. That's what this was meant to show. The smallest size that a human can see is in the range of about 40 or 50 microns.
The particles that are of concern in the context of this case are in the range of one, two, three, five, 10 microns. And I think that's what is illustrated down at this very low end. I'm trying to show you how small these little things are.
Q Do you know what the bacteria was that caused Ms. O'Haver's infection?
A I don't think anybody can be certain about that because it wasn't cultured. But there were several cocci, gram-positive cocci found in the wound. They didn't grow because

it's hard to culture. But those were probably given the location and the context and so forth, those were probably staphylococcal.

Q For short, staph?

A Staph.

Q And how large is the typical staph bacteria?

A The bacteria itself is probably one micron. But in nature they don't usually stand alone. They are usually in groups. They almost look like - picture this, like bunches of grapes. And so one might be one micron but each group is quite a bit larger.

Q There's a study I want to talk to you about called Legg L-E-G-G.

A Yes.

Q Was Legg one of the studies you reviewed as part of forming your opinions in Ms. O'Haver's case?

A It was relevant, yes.

Q I'm handing you what's marked as Trial Exhibit 2709?

MR. BLACKWELL: May I approach, Your Honor.

THE COURT: You may.

Q Do you recognize that to be a copy of the Legg study?

A Yes, sir. This is Legg 2010? 2012.

MR. BLACKWELL: Your Honor, I'd offer Exhibit 2709.

THE COURT: For demonstrative purposes?

MR. BLACKWELL: Yes, Your Honor.

MR. SACCHET: I'd renew my objection as we just discussed and the publication is not on the list.

THE COURT: The objection's overruled. 2709 may be used for publication purposes.

MR. BLACKWELL: Thank you, Your Honor.

Q First there you see the title. *Do Forced Air Patient Warming Devices Disrupt Unidirectional Downward Flow?* Would you just generally and maybe briefly tell the jury what this study was about?

A Airflow in the operating room has been regarded as an important thing to limit infections in the surgical area. And so one of the questions was whether this Bair Hugger type device was disruptive for when the air came down and as a consequence of the disruption was it maybe more likely that bacteria could get into the surgical area and cause infections.

Q And if we could turn to page 3 in the discussion.

A I'm there.

Q So go to the discussion, right under the word discussion, "It is our view."

A Oh, I'm sorry. I thought you were going to look at that the table but that's fine.

Q We'll come to the table. So first we see here the discussion. "It's our view that both patient warming devices and unidirectional ultraclean downward airflow are needed in

lower limb arthroplasty in order to reduce the risk of infection.

Because of the nature of our experiment we are unable to conclude that the use of a forced air warming device, which produced a change in temperature and an increase in the number particles over the surgical site, would actually lead to an increased risk of surgical site infections." That's sort of the punchline?

A That is the punchline. You read it well.

Q But were you able to look at the specific measurements in the Legg study?

A Yes, yes. For our purposes I think actually that table is more instructive for the jury.

Q And this would be at Table 11?

A That's actually II.

Q What's does this table tell us?

A What this table is showing is that there are three columns. This one is with the use of the Bair Hugger, that's forced air warming. The second one is with the Bair Hugger applied but not turned on. And the third one is with an alternative heating device.

Look only at the first column. That's really where the most interesting thing is. And what we're looking at is three sizes of particles determined by an instrument which takes in the air and measures the number of particles by their size.

Q Okay. So we see the number of different particles by their size. What do we learn about the different particles and size from the Legg study from this graph?

A Well what you're seeing is that the number of particles that are, for example, .3 3/10 of a micron is quite a large number. And the number that are in the range of .5 significantly smaller but the very small number is the number of particles that are five microns or larger. It's a tiny fraction.

The reason this is important and that we've talked about size of bacteria and we've talked about the size of particles. A particle in this size range is too small to be a bacteria.

Q 0.3 to 0.5?

A 0.3 to 0.5?

Q 0.3 to 0.5. These are not large enough to be a bacteria. And they're too small to be carrying a bacteria. So when we're looking at the forced air and its effect on the particles, this huge population of particles are irrelevant to whether they're carrying bacteria and can cause an infection.

Q So what does this tell us - again, punchline in terms of tiny particles of bacteria?

A Tiny particles don't matter with regards to bacteria and infections. They matter to other things like they might affect your lung function or something else. In terms of bacterial and infections though, they don't.

Q Now the particles sizes that we see and just discussed in the Legg study, tell us, what's size of a single staph bacteria again?

A One micron.

Q And so if you're talking about particles that are smaller than one micron, not big enough to carry even a staph bacteria?

A No.

Q Have there also been studies, Dr. Borak, that you looked at in preparing your opinions in this case that actually measure what happens in an operating room when there is something in the operating room that reduces the number of particles and then evaluates whether it has an impact on surgical site or periprosthetic joint infections?

A Yes, I have. There are such things.

Q And would you first tell us what is an ABS machine and how does it relate to those things?

A Sure. Well what he's talking to about is that there's and instrument called an air barrier system, ABS. And it is an FDA approved type thing device which is used. What it does it takes in air and extremely well filters it and lets the air out very slowly. And the air that comes out is almost entirely clean.

And this instrument has been used during surgery to effectively flood the surgical site, the wound where the

incision has been made with this ultrapure air.

And the theory goes that if particles lead to bacteria lead to going into the wound and so forth, this would be protected because there are no particles.

In fact, there have been three studies which I've looked at the use of this ABS during surgery. And what they find is it has significantly reduced the number of particles, almost completely reduced the number of bacteria colony forming units. One of the authors of the study I think said it was a dramatic decrease.

Those are three studies. They tell you that's what this ABS is going to do.

Q Now there's a fourth study that's called Routh?

A Routh is the first author of this very large study. Routh was an orthopedic surgeon. He looked at arthroplasty in 2,260 patients operated on all by the senior surgeons during the course of seven years, maybe eight years.

Q Dr. Borak, we could take a look the study together.

A As you like. That sounds great.

MR. BLACKWELL: May I approach, Your Honor.

THE COURT: You may.

Q So do you recognize that as a copy of the Routh study you were referring to?

A Yes, I do, sir.

MR. BLACKWELL: Your Honor, I would offer Exhibit

2580.

THE COURT: For demonstrative?

MR. BLACKWELL: Yes.

MR. SACCHET: No objection for demonstrative.

THE COURT: 2580 is received for demonstrative purposes only.

Q First just show the title. *Effect of a Clean Surgical Airflow Layer on the Incidence of Infection in Total Hip Arthroplasty.*

A That's correct. You say it well.

Q So now again, the study was – what was the study looking at?

A The study was performed because these surgeons, particularly, Dr. Hamilton, the name is all the way over on the right. And he was involved in all of these. He and his colleagues were concerned about arthroplasty infections, the same they we're talking about here.

One of the things they tried to do as they read about this was further reduce their already good infection rates. So they compared the experience they had doing hip arthroplasty prior to 2013. And then following 2013 using this ABS air barrier system. And they did it in almost 1,200 patients in each group.

Q And, again, this was hip replacement surgery?

A This was hip replacement surgery.

Q Tell us what the study found.

A The study found that the patients who had - first of all there was no difference in the infections. If there was any difference and trust me, it was not significant. But if there was any difference the infection rate was higher than the group that had the ABS than the group that didn't, both deep and superficial infections.

Q So if we might see page 1. So if you read this, it has language from Routh?

A "Both groups had a very low incidence of infection and wound revision treatment with rates below one percent. Despite compelling bench data showing a dramatic reduction of particle load in the wound, the use of the airflow device did not reduce the clinical rate of infection over a large number of cases."

Q And so, Dr. Borak, why is this study meaningful to your opinions in this case?

A Well one of the critical pieces in the possible theory is that particles need the bacteria in the wound to create infections. And if you can significantly dramatically reduce the number of particles and bacteria then it doesn't matter. It strongly argues that that theory is all wrong.

Q If you look at page 4. So what is this language, Dr. Borak, and what does this mean?

A Well, "Because the rate of infection was unchanged after using this device, it reinforced the complex nature of prosthetic joint infection and demonstrated that reducing

airborne particles at the surgical site although it attracted concept, cannot eliminate the occurrence of PJIs."

What this says is based upon their factual presentation, the particle count around the surgical site was not what was determining whether a patient did or didn't get a joint replacement.

Q And do you consider Routh to be a reliable study?

A I have no reason to doubt it. It was well designed and well conducted.

Q Does the Routh study in and of itself allow you to say one way or the other whether increased colony forming units - whether colony forming units increased particles increase equals more infection?

A I think this helps to make the argument that increasing particles is not what is determining infections. Because what they found was that eliminating the particles didn't matter.

Q And did you also look at any studies of the Bair Hugger that specifically evaluated whether you could culture bacteria coming from the Bair Hugger as a part of your assessment in this case?

MR. SACCHET: Objection, Your Honor.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. SACCHET: There's no disclosure of the study

that he just described in his reference list on his report.

MR. BLACKWELL: The Routh study is in his supplemental report and referenced in it, Your Honor. The question that I just want to ask him is going to the bacterial studies. This is the Oguz study that is referenced. It was discussed in his deposition on pages 81, 82, 95 and 96, 166 and 167. He was questioned about it by the plaintiffs.

MR. SACCHET: I looked for Oguz and it's not there. The rule is an expert gets to make a disclosure of the materials they rely on. That's the purpose of reliance in their report. I had to prepare for this depo and no, it's not – it's not in here.

MR. BLACKWELL: I'll show you.

THE COURT: He's been questioned on it by the plaintiff. He was questioned regarding the study by the plaintiff.

MR. BLACKWELL: Yes.

THE COURT: In his deposition.

MR. BLACKWELL: Yes.

THE COURT: The objection is overruled.

MR. BLACKWELL: Pages 81, 82, 95, 96, 166 and 167 on July 6th, 2022.

MR. SACCHET: It's not in the report.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So I would like to speak with you. We're talking about studies of whether bacteria could be cultured from the Bair Hugger blanket. And did you review those studies too in preparation for opinions in this case?

A Mostly from the blanket.

Q Yes.

A Well there's one early study by somebody name Avidan who found that.

Q I want to specifically talk to you about Oguz.

A Okay. I'm happy to talk about Oguz as well. Oguz was a study I mentioned earlier in which 80 orthopedic patients were randomized to either the Bair Hugger or an alternative warming system.

And then there were counts of colony forming units based upon plates that were put around the operating room and in the operating field.

And what they found was that there was no difference whether these used the Bair Hugger or the device which did not blow air convective. Resistive space warming.

Q So they looked at hierarchy of science evidence-types of studies. Where would Oguz fit in this hierarchy? Was it a randomized controlled trial?

A It was a randomized controlled trial and I would put it up at the top in terms of the question of whether the use of

the Bair Hugger increases bacteria in the air.

Q And so I think the jurors probably remember but, again, tell us what is agar plate is, A-G-A-R?

A Sure. You've seen pictures of it if you've ever used one in a biology lab. It's a plate that usually has a top on it. And inside is poured a jello-like material which is nutrients that allow bacteria to grow. The particular material that goes in there is hopefully a generic type that has a plastic plate and a cover.

In each side is poured a material. And on that material bacteria if they settle out of the air will then grow and populate forming colonies.

So when we're talking about colony forming units what we're talking about is the number of places on the agar plates that individual bacteria has settled and then generated colonies.

Q So, again, in Oguz they set those plates out and try to grow bacteria from the particles from a Bair Hugger?

A Yes.

Q They couldn't grow cultures?

A They could not grow it whether they used the Bair Hugger or the Hotdog. Neither one group increased amounts of colonies.

Q So even it you're talking particles, even if there were particles, again, was there any bacterial growth from any of the particles?

A There was no bacterial growth in the Oguz study.

Q Now did you - in forming your opinions in this case did you take into account any computational fluid dynamic studies or do you consider those?

A I have read computational fluid dynamic studies. They're interesting and complicated and theoretical. Their understanding is that they are not validated by actual - they are creations of computers and imagination. Whether they're representing reality is I think uncertain.

And I think the study that you have in mind is one that says specifically that there is a lack of objective validation of the findings.

Q So we've talked about now Oguz. Here we're going to switch gears now and talk about the McGovern study. Now let's take a look at - if I could get Exhibit 2707.

MR. BLACKWELL: May I approach, Your Honor?

THE COURT: You may.

Q Do you recognize Exhibit 2707 as a copy of the McGovern study?

A Yes, I do.

MR. BLACKWELL: Your Honor, we'd offer Exhibit 2707.

THE COURT: For demonstrative purposes?

MR. BLACKWELL: Yes.

MR. SACCHET: No objection.

THE COURT: 2707 may be admitted for demonstrative purposes.

Q Now I want to go into some detail with you on the McGovern study about what it found and what the bases were for any findings within the McGovern study. But if we could, I want to start with something that is a punchline in the McGovern study.

MR. BLACKWELL: Your Honor, may I show it to the jury?

THE COURT: You may.

Q If we could go, Mr. Elkese, to this study. What do you see here, Dr. Borak?

A Do you want me to read it?

Q Yes.

A This says, "This study does not establish a causal basis for this association. Although the demographics were similar between the patient groups in terms of risk factors for infection, the data are observational and may be confounded by other infection control measures instituted by the hospital.

For example, changes were made to the antibiotic and the prophylaxis protocols used during the study, although no infection control changes were made after February 2010.

In addition, we were unable to consider all factors that have been associated with surgical site infection, as the details of blood transfusion, obesity, incontinence and fitness

for surgery which have been identified elsewhere as important predictors of deep infection were not sufficiently detailed in the medical records."

Q Do you agree with this finding in McGovern?

A Yes, I do agree.

Q We've talked about the International Consensus with the history of McGovern and I won't pull that up again right now. Can you just bring back to mind for the ladies and gentlemen of the jury, what was the McGovern study trying to establish?

A The McGovern study was trying to determine whether the Bair Hugger caused a higher risk of surgical site infections than the non-Bair Hugger Hotdog machine.

Q What type of procedures were being studied?

A They were doing hip and knee arthroplasty, not emergency interventions, not revisions.

Q Now the McGovern study was it purporting to show causation or just an association?

A It claimed to show association. The statement that it was not causation was something that you just showed two and a half minutes ago.

Q So I want to talk with you about the difference between causation versus association.

A Sure.

Q What's the difference?

A Well let's take it from the bottom to the top. Association means that things that happen together. It doesn't mean that they happen because one causes the other to happen. It just means that they happen together.

It is necessary to determine whether things that happen together happen because either causes the other. Example: There are data that are I have seen that show that the consumption of ice cream cones is related to drowning and forests burning. The fact is that ice cream cones don't cause people to drown. Ice cream cones don't cause heart attacks.

In the summer when it's hot more people swim and drown. Forests get dry and burn and people eat ice cream. The association between ice cream and drowning is an association. There's nothing causal about it.

Another very good example. There are lots of data that show that people with white hair die sooner than people with darker. It's true. Does that mean you live longer if you dye your hair? It means that people who are older are more likely to have white hair and are also more likely to have chronic diseases and the more people die. There's nothing about the white hair that causes people to die. The white hair is an association. There lots and lots of lots of other such crazy examples.

Q So turning back to this association, what was the association the authors reported in the McGovern study?

A They reported that the incidence of deep joint infection was substantially greater in patients who used the Bair Hugger when they had their surgery than patients use the Dog.

Q The Hotdog?

A When the used the Hotdog during their surgery.

Q So Dr. Borak, what did you conclude about the McGovern study?

A Well the first thing is that the McGovern study did not consider in its analysis a number of important confounders, that is to say other things that were happening that could have involved and more than that likely did influence the results of the report. And if they had considered those other factors it would have caused the results to be certainly in-depth.

Q Did you have concerns about the very design of the study is an interrupted-type study?

A Well an interrupted-type study as it was meaning that one group was studied from July of 2008 until February of 2010. The second group was studied from June of 2010 till the end of December of 2010.

Because of the way they were interrupted in two segments it was prone to the influences of anything that changed during that time because they had had two operating rooms, one with the Bair Hugger and one with the Hotdog.

And if they had started the two at the same time,

presumably any changes would have been equal in both rooms but they didn't. So any change that took place during one time would have influenced the results.

Q So there were various moving parts in the studies?

A There were lots of moving parts in the study.

Q Give us just some examples of a few.

A Well during the study the antibiotic that was being used prophylaxis changed. Antiobiotics prophylaxis are given within an hour or so of starting the surgery so that the wound will be as sterile as possible if anything should get into it.

And the use of the prophylactic antibiotic is meant to sterilize and get rid of those things that just happen to get there.

And they changed that in the middle of it. They changed the way in which - the use of an antithrombotic medication. The problem with patients lying in bed tend to get low tox which can move up through the blood system into the lungs causing pulmonary embolism which can not only hurt you, it could kill you. So it is standard to use anticoagulants to prevent that from happening and they changed that twice.

I'll show you pictures of it. But they used a medication called heparin - heparin at the beginning and at the end. And they used a different kind of medication in the middle.

Q Did you, Dr. Borak, prepare a demonstrative - an illustrative to help the jury understand the differences and the

changes between the study period involving the Bair Hugger versus the Hotdog?

A I did, sir.

THE COURT: Counsel, why don't we go ahead and break for the afternoon and we'll begin there. Folks, we'll get started why don't we say 3:45.

(INSTRUCTION READ.)

We'll get started at 3:45.

(BREAK AT 3:22 PM.)

THE COURT: We're outside the presence of the jury and Dr. Borak has stepped out into the hallway. Counsel, you wanted to make a record?

MR. SACCHET: Yes, thank you, Your Honor. And I apologize for bringing up the point but I feel like I have to. One, Mr. Blackwell represented that the Legg study was cited in Dr. Borak's report. I've looked at it three times. I can't find it. I believe he said it was on page 3. It's not there. I looked at all the records he cited. It's not there.

And two, there was a representation made that the Oguz study was brought up at the behest of plaintiff's counsel. It was not. Dr. Borak brought up sua sponte which then in turn caused plaintiff's counsel, Mr. Assad to follow up with questions about an article that he's citing but never put in his reference materials, no surprises by that.

randomized controlled style gold standard showing no bacteria when it was never presented in his opinion.

And two, I'm concerned - I don't want to object all the time with this going on. I feel bad doing it but I just feel I need to.

MR. BLACKWELL: May I respond, Your Honor?

THE COURT: You may.

MR. BLACKWELL: First, Oguz has already been discussed with this jury as a randomized gold standard study by their own expert on the stand. They already did.

Second, I'm not sure what Mr. Sacchet is looking at but I'm holding it up here in Dr. Borak's report and Your Honor can see right there highlighted is the Andrew Legg reference to the study right in his report just as I said it was.

MR. SACCHET: Is it the deposition or a study?

THE COURT: Hold on. Level down. So it's on page 3 of 55 Borak Report, it says Legg Study. Well it says, "Dr. Andrew John Legg December 1st, 2016."

MR. SACCHET: That's his deposition.

THE COURT: It says Legg Report or Borak Report.

MR. BLACKWELL: Right. It's referenced in this report where it says he looked at the Legg study. And Your Honor, as to the rest, I had anticipated something just

like this when we got ready to put on our case. That's why I took the time before I came here to find references for every one of them, thinking that once we got ready to talk about the science, this is what we were going to get. And so I wanted to make sure that if we're going to talk about any study that it's been referenced in his report or in his supplement.

They questioned him about it in his deposition. The statement that Dr. Borak had brought it up so they felt obliged to question him about it and it's just not very persuasive. They discussed it with him in three different places in his deposition.

So I will, Your Honor, as the Court has explained that and directed us that if it isn't proper sort of reliance material by the expert in the report or they question about it then I'm fine not to bring that up. But I did take the extra step this morning to do that in anticipation of us coming here today.

THE COURT: First of all, do you disagree that it's in his report? Like I don't understand why we keep plowing the same ground. It's either in his report or it's not. Where's the report?

MR. SACCHET: It's right here and I feel bad doing this. But the reason why this is so obvious is that Mr. Blackwell is not making ...

THE COURT: May I see the report?

MR. SACCHET: Yes. On page 3 of the report Dr. Legg's deposition is cited, not his report. The header is plain. Deposition Transcripts and Exhibits, Dr. Andrew Legg. That's the date he was deposed.

The citing references in this report part here and there's no citation to an article by Legg. And I've never had to do this before but this is just --

MR. BLACKWELL: Your Honor, I'm holding here even a deposition he took of Dr. Borak where they are specifically and it was an exhibit even in his deposition, the Legg study. This is not a surprise. They asked him about it. They've seen it. The Legg study is in the trial.

THE COURT: So the question for me is am I going to allow this expert to testify about a study if it's not referenced in his report but it has been talked about in his deposition and he's been questioned by either the plaintiff or the defendant. Is that a fair assessment?

MR. BLACKWELL: Yes, Your Honor, particularly when the study was attached and used at his deposition also.

THE COURT: All right. I'll issue a ruling before the jury comes out.

MR. SACCHET: I'm also gonna have an objection

to the demonstrative.

THE COURT: We'll take that up before the jury comes out.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: A study has been either referenced in the report and/or discussed in a deposition in this matter that the Court will allow testimony in that regard.

MR. BLACKWELL: Your Honor, I did want to correct one thing I said. The Legg study, the lawyers in this courtroom have deposed him about his study. Right here in the courtroom and they know that it was attached to his exhibit to his deposition. They talked to him about it. They were all there. They can't claim surprise. The depo, transcript and the exhibit is right there.

THE COURT: Okay. That correction is noted. Did you want to make a additional record regarding the demonstrative exhibit?

MR. SACCHET: Yes. I assume - I don't think it's been shown yet. But it's the demonstrative that was disclosed. I could lodge an objection if it was a different one. I won't be able to do so. But if it's a slide with the McGovern study and three slides thereafter, is that the demonstrative?

My objection is that if it's entitled McGovern study

and there's a lot of things on the slides that aren't in the McGovern study. So I don't think that there is the foundation to say that that is the McGovern study. I think that if they remove the things that aren't in the McGovern study in that the slide that is entitled the McGovern study, it would be proper and that's my objection.

THE COURT: Mr. Blackwell.

MR. BLACKWELL: Your Honor, the expert created this as a demonstrative to help illustrate his testimony. If Mr. Sacchet has an issue with the way that it's styled or what's in it then that's what his cross-examination is for.

THE COURT: The objection is overruled. The Court the allow the demonstrative evidence to be displayed to the jury. Let's bring them out.

(JURY IS RESEATED.)

THE COURT: You may be seated. We will continue with the direct examination. Sir, I will remind you that you remain under oath.

MR. BLACKWELL: May it please the court.

CONTINUED DIRECT EXAMINATION BY MR. BLACKWELL

Q Dr. Borak, when we broke we were just starting to talk about a demonstrative that you had created to help to explain your testimony.

A Yes.
Q On McGovern?
A Yes.
Q And would using that demonstrative be helpful in giving your testimony to the jury?
A I think it would be certainly helpful to me.
Q So I'm going to hand you what's marked as Exhibit 4124 and ask you if that represents what you prepared?
A Thank you. Yes, this is what I prepared.
MR. BLACKWELL: I'd offer 4124 for demonstrative purposes.
THE COURT: Same objection?
MR. SACCHET: Yes.
THE COURT: The objection is noted and overruled. 4124 is received.
MR. BLACKWELL: May I show to the jury?
THE COURT: You may.
Q If you could tell us generally briefly, Doctor, what this shows us and then we'll move onto the next one.
A Sure. What this demonstrates is each of the columns is a month beginning in July of 2008 and running all the way across to the end of December of 2010.
And the various bars and colors were meant to illustrate when the Bair Hugger or the Hotdog was used. The Bair Hugger is an orange color. That orange color are the months when the Bair

Hugger was used and then there was a three-month transition period after February 10. And then there's a green band. Those are the months when the Hotdog was used.

Q And did you then create - I'll call it an animated version that would be easier for the jurors to see?

A I think given the nature of the projection, yes, it would be easier for them to see.

This is a less clear that the individual months but it shows you the moving parts in the study.

Q All right. Now would you please use this to walk us through the various things that you looked at in terms of factors that changed between the Bair Hugger and Hotdog period?

A Okay. Well let me start by saying the area which is in blue represents the months when the Bair Hugger was being used. This kind of mustard color is the transition period.

Q The three-month period?

A The three-month transition period. They stopped using the Bair Hugger. They get the things reorganized for whatever they did and then they start using the Hotdog starting then. And this kind of browner color is the Hotdog period. So those are the periods of time.

Now the lines across indicate three of the particular changes that occurred during the conduct of this study which are at least potentially and I think in reality important to the outcome.

I would lead you to this one starting cause it's the way I think about it. And we were speaking a moment ago before our break and this refers to the antibiotic that was used for prophylaxis preparing the wound for the surgery, given before the surgery. And this involved gentamicin which is a well-known antibiotic but not particularly good for gram-positive organisms such as staph.

And then this is the period when the gentamicin was used alone with a second antibiotic called teicoplanin which is much more effective against gram-positive infections.

The second change that was easy to demonstrate was that from the beginning until January of 2010, there was no screening for methicillin-resistant staphlococcus aureus. MSSA is a form of staph bacteria that are sensitive to a family of antibiotics. Methicillin is the poster child. They're very common.

And after that date all of the patients were screened for MSSA largely with taking swabs of the nose. If the patients were positive for MSSA they then were administered an antibiotic ointment almost like Vaseline, it's not Vaseline, that they put into their nose, nuparican or bactroban which kills that antibiotic - that kills the MSSA in the nose. That's used about five days twice a day.

So that was - none of that preceded January of 2010 and it was used consistently following 2010 till the end of the study.

Q But it was done overwhelmingly during the Hotdog

period but not during the Bair Hugger period?

A Yeah, it was done almost exclusively during the Hotdog period. It was not done during the Bair Hugger period. The one I mentioned before was a change from gentamicin which was an antibacterial prophylaxis. And the gentamicin was used only during the Bair Hugger phase. And the gentamicin plus teicoplanin was used toward the end of the Bair Hugger phase and following the Hotdog phase.

A very simple change was the use of chlorhexidine or chloraprat to clean the skin before surgery. The idea was to try to disinfect the skin as much as possible before the surgeon cut. And prior to October of 2010, something was used that's called proviodone iodine. After October of '10 what was used instead was chlorhexidine and alcohol. So that chlorhexidine alcohol mixture was used only at the very end but only for the Hotdog.

Q And that was a better skin prep?

A There's a lot of evidence that says that it is a better skin prep. And then the somewhat more complicated and very important one is that starting the study patients were given low weight heparin as an anti-clotting medication following the surgery for the recovery. That medication was changed in July of '09 and instead of a medication called rivaroxaban or Xarelto, same thing, just a brand name and a generic name for which doesn't work in the same way. It

inhibits the production of clotting factors.

That was used from July '09 through the start of February '10. And then it went back to the use of the Tinzaparin.

So in these four various issues the antibiotic for prophylaxis, the MSSA screening, the skin prep and the anti-clotting medication was each changed during the course of the study.

Q So if we could go to slide 3. Now would you tell us what we see here and explain this slide to the jury?

A Sure. One of the issues and one of the challenges in this study is understanding what is the result of changing from the Bair Hugger to the Hotdog?

In contrast to what was the result of changing the prophylactic, the anti-clotting medication and what contributed to the difference that was seen in the study.

It turns out that if you look at the seven months when the Hotdog was used there are actually five months when the Bair Hugger was used and everything else was the same of what we've just spoken about.

They used the same antibiotic prophylaxis. They used the same approach to clotting. And it was possible then to compare whether there was a difference between the outcomes in this five-month period and this seven month period which was a head-to-head apples to apples comparison of the Bair Hugger and the Hotdog. In fact, there was no difference.

Q So the jury may have heard many times that the Bair Hugger was 380 times more likely to have infections or create a risk of infection?

A To be correct, sir, it was 3.8×380 percent.

Q 3.8 times. And so does this show us otherwise?

A Well during these periods when these things were constant there were no differences.

Q Now do you know of a person named Mark Albrecht?

A I know of Mark Albrecht.

Q And who is he?

A Mark Albrecht was the statistician on the McGovern study.

Q One of the persons who crunched the numbers?

A Yes, that's correct. He's a number cruncher.

Q And did you read and rely on Mr. Albrecht's testimony in forming your opinions in this case?

A Yes.

Q Do you know what opinion Mr. Albrecht reached?

A Mr. Albrecht was asked during a deposition ...

MR. SACCHET: Judge, may we approach.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. SACCHET: On the admission of a party opponent where we played depositions, they're soliciting testimony through our experts. This is not a party

opponent. This is a third- party and he's soliciting hearsay that has not been introduced in the trial today before the video that they intend to play.

MR. BLACKWELL: Your Honor, this is part of the Albrecht clips that were approved by the Court just yesterday. We plan to play a clip. They did not just play clips of third-party opponents in their case either. There were fact witnesses that they played repeatedly in the trial and we're going to play one small clip from Mark Albrecht that he relied upon in this case from Mr. Albrecht's deposition.

THE COURT: So I think I would ask for additional foundation be laid in terms of him relying on it and reaching a decision in this case because I'm not sure I heard that testimony.

MR. BLACKWELL: Okay.

(RETURN TO OPEN COURT.)

Q So, Doctor, going back to Mark Albrecht. You told us you read his deposition in this case but in relation to the McGovern study?

A Yes, that's right.

Q And did he express any opinions about the difference between the Bair Hugger test period and the Hotdog test period based on the data?

A You're talking about these little squares that we were

just looking at?

Q Yes.

A I understand he said ...

Q Without telling me what he said was that an analysis that he did, that he compared the two and the data?

A He compared the two.

Q And did you review his testimony and rely on it in forming your opinions in this case?

A Well it certainly reinforced my opinions.

Q And so you read it and relied on it?

A Yes.

MR. BLACKWELL: Your Honor, we'd ask to play a clip from Mr. Albrecht's deposition at page 200, lines 9 through 20, Exhibit 4107.

THE COURT: Same objection counsel?

MR. SACCHET: Yes.

THE COURT: Noted and overruled. 4107 may be played for the jury.

(EXHIBIT 4107 WAS PLAYED.)

Q He said "I don't even need to run an analysis to figure that part out." What does that mean?

A That means yes, they were the same.

Q That means what?

A Yes, they were the same.

Q When you compare apples to apples?

A That was an apple to apple comparison and it turned out that there was no difference. The downfall is the moving parts.

Q So if we now talk about a number of the confounders and we've actually looked at an apples to apples comparison when the same thing, same regiments were being used for Hotdog versus Bair Hugger?

A Correct.

Q We just talked about that. Were there also other confounders in addition to the ones we've discussed?

A Well there were other things that influenced the outcome but we don't know that. That's probably the case. Based on the earlier that no information was available about things like obesity and the condition - physical condition of the patient and so forth. This could have been important influencing factors and they were simply ignored.

Q Fitness for surgery, is that one?

A Fitness for surgery. That's what I meant. Yes, I'm sorry. I misspoke. Fitness for surgery and physical condition.

Q Now why do all these factors matter, fitness for surgery or obesity?

A Well as Dr, Reed and others have said, essentially all these things matter. The really interesting question, complicated question is why are some people able to resist the infections or the bacteria and others are susceptible and

develop infections?

So we look at the various causal factors, these factors that might influence the capacity to resist the infection. Some of those include obesity and fitness for surgery, smoking. There are others.

And you want to look at those and include them because if you're comparing two pieces of fruit, you want to know if there are apples to apples or apples to bananas.

So if one group was very overweight and one was normal weight, you would expect that they would have a different rate of infection after the surgery. And you have to address that when you're doing the analysis.

It's complicated sometimes to do if you don't have the background, training and statistics but that's a different issue. The concept is simple. Apples to apples or apple to oranges.

Q So to sum this up for the jury, Dr. Borak, does the McGovern study show that the Bair Hugger causes surgical infections or surgical site infections?

A It does not.

Q Now let's talk about a second opinion. Do you have an opinion to a reasonable degree of medical and scientific certainty as to whether the Bair Hugger caused Ms. O'Haver's infection?

A Yes, I do.

Q What is that opinion?

A It is my opinion that it did not.

Q Now how did you go about considering the cause of Ms. O'Haver's infection?

A I looked at what was known about the conditions that she had or I guess what would be most important, the causal risk factors and what the high-end medical literature said about how big the risk was. I tried to get a feeling for how much was her risk increased in light of those particular risks.

And then I compared that to what Dr. Jarvis was saying was the risk associated with the Bair Hugger and I made a comparison.

Q So you did read and consider both the report and deposition of Dr. Jarvis?

A Certainly.

Q Which factors were significant to you as it related to Ms. O'Haver?

A Well I think the most important causal factors for Ms. O'Haver was first her body weight. Ms. O'Haver had what is referred to as a body mass index of about 42, over 42 at the time of her surgery. This is calculated by taking the weight in kilograms and dividing it by the height in meters square. The more complicated way to do it is pounds and inches. I won't bother you with that. And categories of obesity are defined by the CDC and others according to those measurements.

MR. SACCHET: Your Honor, I hate to cut in.

THE COURT: Come up.

(BENCH CONFERENCE.)

MR. SACCHET: I believe this violates the MIO on introducing comorbidities as the cause of the infection.

MR. BLACKWELL: Your Honor, we've been discussing Ms. O'Haver's weight for the better part of the entire trial. They discussed it and their own expert talked about it.

THE COURT: Comorbidities and those associated with Ms. O'Haver been discussed throughout the entire trial with the plaintiff and the defendant. The objection is overruled.

(RETURN TO OPEN COURT.)

Q So Dr. Borak, you were explaining what the BMI, the body mass index means and specifically as to Ms. O'Haver.

A It's a way of describing how severely obese or overweight an individual is. And it's important because BMI, calling people obese is kind of like a bad word. But if you talk about out how high their body mass index is, Ms. O'Haver had Class III obesity as defined by the Centers for Disease Control and others. That's a BMI over 40.

Q And why does it matter?

A When you look at people who have arthroplasty surgery and if you group them under the basis of their BMIs, what you

will find is that people who have a BMI of 40 and above have a risk of joint infection that is something like four times that of a normal weight person. It varies from study to study.

What I did was I looked at six large studies of very large groups and three that are called meta-analyses where they put lots of studies together and calculate.

And it's approximate but if you look at them consistently it's elevated and consistently over 40 is very much elevated. The risk, it's about four times normal. That's to say four times the risk of a normal weight person.

Q Was there another risk factor for comorbidity?

A The second particular risk factor for Ms. O'Haver at the time of her surgery was that she had been a lifetime smoker. The medical records indicate that she probably had a history of 40 or more past years of smoking.

If you look at the same kind of literature about people who have had this sort of surgery and you group the patients according to whether they are smokers, non-smokers, former smokers, you find that the risk of joint infection from this kind of surgery increases starting with the lowest is a non-smoker.

The next highest is a former smokers and the highest is current smokers. And the risk for people who are current smokers is one and half to two times.

Q Are the body mass and smoking independent factors or

how do they relate to each other with respect to their role in infections?

A There are a limited number of studies that have looked to see whether, for example, obese non-smokers are at greater risk or lesser risk that than obese smokers. Or alternatively, with the smokers who are not obese have a different risk from smokers who are obese? And that gives us a way to look at how those factors interact.

And the literature indicates - it's not a big literature. I don't want to overwhelm you but there's a distinct literature. And what it says is that smoking and obesity are at least additives and possibly what we refer to as synodistic meaning they multiply together.

So that in this particular case I've given you numbers just for discussion purposes for the testimony now, that I think that a rough approximation is if a person at the weight and body mass that she was at the time of surgery was about a fourfold or so maybe higher risk of infection.

And a lifetime smoker, therefore, with a risk of at least 1.5 increase, that she's off in the range of five to six and that they seem to be interacting.

So my conclusion was that the risks associated with those two causal factors was larger than the risk which has been said to have been associated with the Bair Hugger.

And please understand, I don't think the Bair Hugger has a

such a risk that even if you did say it had such a risk it would be smaller than the risk that's associated with just the obesity and the smoking.

Q But, Dr. Borak, we hear the testimony of the risk but don't you first have to have a bacteria still?

A Well, yes. I think that is important to understand. And I quote again from Dr. Reed who is the senior author of the McGovern study which is essentially all surgical incisions are contaminated at the time that the surgeon cuts the skin.

Q Which means what then?

A Which means that all of the surgeries have bacteria in them. And the important question is why did one person develop an infection and the next person didn't? And they seem to be distinct causal factors that influence the ability to fight the infection and to heal it properly.

Things like smoking and obesity are associated with decreased blood flow to the wound and delayed healing and suppression of the immune system and weak wound formation and increased risks of what's referred to as dehiscence which is where the wound splits open. It so happens Ms. O'Haver developed dehiscence of her wound.

Q Dr. Borak, is it possible to tell us when the bacteria that was in Ms. O'Haver's wound, when it entered?

A I have seen two different opinions. I think that over the course of most patients it occurs at the time of surgery.

But I think that in this particular patient who developed a second wound if you want to think about it like that, the wound opened and was subsequently re-closed.

And it is quite likely that the infection and the introduction of the bacteria occurred somewhere around December the 14th or December the 15th when the wound dehisced, opened up and then was closed with a bunch of stitches put in by the doctor. And that inoculated the wound with bacteria. I can't choose between the two in this case.

Q So between the two based on what we know, it's not possible to say which?

A It's not possible for me to say which.

MR. BLACKWELL: One moment, Your Honor.

THE COURT: Sure.

MR. BLACKWELL: Thank you, Dr. Borak. I'll pass the witness.

THE COURT: Cross-Examination.

MR. SACCHET: Your Honor, may I approach the witness?

THE COURT: You may.

Q Dr. Borak, I'm handing you a book of deposition transcript and reports.

MR. SACCHET: May it please the Court.

THE COURT: Counsel.

CROSS EXAMINATION BY MR. SACCHET

Q Doctor, my name is Michael Sacchet. I don't think we've had the pleasure to meet in person but thank you for being here and thank you for engaging in my questioning.

I want to start a little bit about your qualifications. I understand that, of course, Mr. Blackwell tendered you as an expert in epidemiology, correct?

A Yes.

Q Okay. And with all due respect these questions sometimes can be a little bit invasive and I'm sensitive to that. But do you not have a degree in epidemiology, the subject matter that you were tendered as an expert in, correct?

A I do not have a degree in epidemiology.

Q And, likewise, you've been tendered as an expert in epidemiology but you're not a board-certified epidemiologist, true?

A That's true.

Q Some other topics of testimony have come up today like infectious disease, things like bacteria and so on and so forth, correct?

A Yes.

Q You are not an expert in infectious disease, true?

A Infectious disease is part of internal medicine but I'm not an infectious disease specialist.

Q Okay. I'm going to ask it one more time. You are not an expert in infectious disease, true?

A I'm an expert in internal medicine which includes infectious diseases but I've not an infectious disease specialist.

Q Okay. If I could ask you to turn to Tab 19 of the book in front of you. Dr. Borak, is that a transcript of your deposition testimony in this matter that occurred on July 6, 2022?

A It appears to be. I'm just looking at the cover.

Q Fair enough. I'll represent that it is. If you could please turn to page 55 of that transcript.

A Is that internal number or ---

Q There should only be one number.

A Well there are little numbers on the little pages. Do you want me to go to the number at the very top of the page?

Q Yeah. And then within those little boxes are numbers in each box. They'll be one numbered 55.

A I got it.

Q If I could direct your attention to line 10 to 12. Are you there?

A Fifty-three has four boxes with 10 to 12.

Q Page 55.

A I'm sorry. You said page 53 or page 55?

Q Fifty-five.

A Page 55 has on it four boxes with numbers one through 25.

Q Okay. Are you looking at the big bold letters on the top or the page numbers within the little boxes?

A At the top it says 55.

Q Okay. If you could look at the little numbers in the boxes.

THE COURT: Counsel, why don't you ...

A I see them. There are four boxes and they all have the same numbers.

MR. SACCHET: Okay. If I can approach?

THE COURT: Sure.

Q I'll just direct your attention this page which might be page 14 of the big numbers you're looking at which is page 55 in the top right of the small box.

A Page 55.

Q Okay. And can you find lines 10 through 12 on page 55 of your deposition?

A Yes, I said, "I'm not an infectious disease expert. I'm an expert in internal medicine."

Q You said that - the question was "So you're not an expert in infectious diseases, correct."

And your answer was "I'm not an infectious disease expert, no period. That's it."

A That's what I said.

Q Thank you. You likewise are not an expert in normothermia or hypothermia, correct?

A Correct.

Q Likewise, you are not an expert in orthopedic surgeries or conducting them, the type of surgery that Ms. O'Haver experienced in her case, true?

A I'm not an orthopedic surgeon.

Q You're not expert in statistics in calculating the numbers that were involved in the McGovern study, true?

A I did not calculate the numbers in the McGovern study or read an analysis of the McGovern study.

Q You're not an expert in doing so through statistics?

A I love statistics but I'm not offering myself as statistics expert.

Q You're not an expert in warming devices like the Bair Hugger, true?

A I've become very knowledgeable about the Bair Hugger but I'm not holding myself out to be expert about how the Bair Hugger works.

Q You have never read the manual for the Bair Hugger warming device, true?

A I have looked at sections but I have not read the whole manual.

Q Now there was quite a bit of testimony about things like particles and whether the Bair Hugger increases particles

and whether particles increase the risk of infection, true?

A Yes, I spoke about papers that describe that association or the lack thereof.

Q And to be clear for the ladies and gentlemen of the jury, you are not an expert in the field in determining whether particles do in fact increase the risk of infection, true?

A I have observed the published literature on the particle distributions with the Bair Hugger in infectious disease and described the literature to the jury. I'm not holding out myself to be an expert in particulates or particle dynamics.

Q Dr. Borak, we've engaged in this with some other experts. If I ask a simple question that requires a yes or no answer ...

MR. BLACKWELL: I object to counsel's commentary with respect to what we've engaged in with other witnesses.

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: I just think it would be appropriate if you have a concern about the witness not answering your question, ask for my guidance. Thank you.

MR. SACCHET: Okay, I will.

THE COURT: Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Borak, to be clear, you're not at expert in the

dynamics of particle air disbursement, true?

A True.

Q Thank you. Likewise, there was testimony about whether particles relate to bacteria, correct?

A Yes.

Q And in the same vein you are not an expert in making determinations about whether there is a link between particles and bacteria, true?

A I didn't know that that's an area of expertise.

Q So, therefore, you're not an expert in making such judgments, true?

A I think that I can only talk about what is in the published literature.

Q You are not an expert in determining the number of bacteria that are required to cause a deep joint infection, true?

A I'm not expert. I know what I read but that's all.

Q You talked about whether airborne contamination impacts the risk of deep joint infection, true?

A Say that again.

Q You talked about whether airborne contamination increases the risk of infection, true?

A I think I said - I would've said it was hypothetical but unproven risk.

Q Well you talked about A, B, C and A, B, D, a chain of

infection that involved airborne contamination and whether airborne contamination increases the risk of infection, true?

A The specific had to do with whether A the Bair Hugger raised B the number of particulates and whether that led to C to an increase in bacteria which led to D an infection.

And my conclusions were based on the published literature and my conclusion was that there was no evidence of that chain of connection.

Q Okay. I'm going to ask the question again. You're not an expert on whether someone can get a deep joint infection from airborne contamination, true?

A I'm not an expert on that. I know what I have read and I know what is published.

Q So the answer is no?

A No for that purpose.

Q Thank you. Now with respect to this chain of infection, you were offering an opinion about a mechanism and how it would work if plaintiff's theory of infection were true, correct?

A Yes, I think that's correct.

Q Now you've testified under oath in this very case that I was not engaged to discuss the mechanisms of bacterial invasion, true?

A Yes, I did say that.

Q So you gave the jury an opinion that you told us in

your deposition you are not engaged to provide, correct?

A I was not engaged to provide that.

Q But, nonetheless, you told the jury for approximately five to 10 minutes about why plaintiff's theory of causation from A to B to C to D apparently doesn't hold water?

A I was describing what I understood to be the plaintiff's theory.

Q That you're not an expert?

A I'm not an expert in developing those kinds of models. I'm an expert in telling you what I understood - I can tell you what I understood to be the plaintiff's argument.

Q And in terms of slightly switching subjects - in terms of the time that you spend in your practice at Jonathan Borak Consulting versus the time that you spend at Yale, the vast majority of your time is spent consulting, not teaching, correct?

A That's not correct.

Q 85 percent or more, correct?

A I've said that at times, yes.

Q In terms of your work consulting whether for industry or in other cases, you have offered opinions in the past in support of the National Association for Coal Miners, correct?

A It was not supported - first of all it was a National Association of Mining ...

MR. BLACKWELL: Objection, Your Honor. May I

approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I object on relevance on this. It's beyond the scope of the direct. It's got nothing to do with the issue in this case and it's only presumably being elicited - it's not about cole miners. It's not about coal. I don't know why he's asking about this.

THE COURT: What's the relevance of the question?

MR. SACCHET: He published a study about the risks of coal mining exposure in the general population and concluded against the vast majority of scientific research that there is no causal connection or association. And I intend to elicit the opinion that just like their opinion notwithstanding evidence in the field that goes the other way.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Borak, getting back to the topic. You have never represented a plaintiff like Ms. O'Haver in a lawsuit against a product manufacturer like 3M, true?

A I've recently been working with attorneys on behalf of a plaintiff who died as a consequence of an infection which he got from an aromatherapy that was manufactured and sold in the

United States. It has not gotten to the point of being representative in court or in deposition.

I have represented plaintiffs against the State of New York for having harmed them while they were in a prison and sprayed them with teargas.

But I've never been representing a plaintiff against a company like 3M. I've never been on behalf of anybody else as a plaintiff or defense against 3M.

Q So the answer is you've never represented a human being like Ms. O'Haver in a lawsuit against a product manufacturer like 3M?

A I have not represented in court but I'm working at the moment of development of a case against a company that manufactures and sold an aromatherapy which caused an infection.

Q It's not a lawsuit yet, true?

A I'm sorry?

Q It's not a lawsuit yet, true?

A It is I believe a lawsuit but I don't know what stage it is at.

Q In forming your opinions in this case you have not relied on any of the internal documents from 3M's employees about their views about the risk of infection posed or not posed by the Bair Hugger, true?

A I did not rely upon them.

Q Not a single document from 3M is cited in any of your

expert reports, true?

A Yes, that's correct.

Q You have not relied on Mr. Al Van Duren's testimony or notation in documents that say actually there is a risk of infection ...

MR. BLACKWELL: Objection, Your Honor, to counsel's characterization of the evidence.

THE COURT: The objection is overruled. You may answer.

A I have not relied on anything that Mr. Van Duren might have said.

Q And, likewise, you have not relied on Mr. Van Duren's suggestion that the Bair Hugger is contraindicated for use in the very type of surgery that Ms. O'Haver had, true?

A I haven't seen ...

Q Relied on is the question?

A I have not relied on that.

Q Thank you. Likewise, you have not relied on in forming your opinions in this case any of the deposition testimony of 3M employees like Mr. Al Van Duren, true?

A Yes, that's correct.

Q The jury has heard more deposition testimony from this company's own employees than you have about the Bair Hugger?

A I don't know how much the jury has heard. I have heard some of these because your colleague played some for me

during the deposition. I don't know how extensive they are. I did not rely upon them. I think that's a simple answer to your question.

Q You did not rely on Mr. Al Van Duren's testimony played multiple times in this court that every single study that has examined the question about particles in the Bair Hugger has shown that the Bair Hugger increases particles, true?

A Yes, I did not rely on it. I think I told the jury that I thought that most studies showed that it didn't increase particles.

Q My question is different. You do not rely or consider in forming your opinions in this matter Mr. Al Van Duren's testimony, the person most knowledgeable about this device that every single study that examined the question concluded that the Bair Hugger increases particulates over the sterile surgical field, true?

A Yes, that's true. I did not rely upon any of the things that Mr. Van Duren said but you could ask me repeatedly if you'd like.

Q I will do so. You did not consider Mr. Al Van Duren's testimony that there were worldwide complaints about the Bair Hugger device, true?

MR. BLACKWELL: Objection, Your Honor, repetitive. May I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, this is cumulative. He's already testified he did not rely on Al Van Duren's testimony and he's simply asking him different facets of did you rely on Al Van Duren's testimony. He says he didn't rely on it period. He's already answered that.

MR. SACCHET: The facets of Mr. Al Van Duren's testimony directly address different facets of Mr. Borak's opinions regarding why he does not believe that the Bair Hugger increases risk. And there are many questions I have that go to those very subjects.

THE COURT: I'll limit it to that but I don't want a blow-by-blow.

MR. SACCHET: I've got two more question.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q Dr. Borak, just a few more. You did not rely on Mr. Al Van Duren's testimony that has been shown to the jury ON multiple occasions that forced air warming is ineffective for the first hour of surgery, true?

A I did not rely on anything that Mr. Van Buren said, yes that's correct.

Q And you talked to the jury about obesity and obesity being a risk factor. So too, you have not relied on Mr. Al Van Duren, the person most knowledgeable about the Bair Hugger about

forced air warming being ineffective for obese patients like Ms. O'Haver, true?

A I did not rely on anything that Mr. Van Duren said.

Q Now you cited some studies about the Bair Hugger - about the Bair Hugger and bacteria or particles. You did not rely for example on the Bernard study, true? And rely is the key word.

A Remind me. There many names and moving parts. Bernard study was which?

Q The jury heard through Mr. Jarvis, Dr. Jarvis the Bernard study is a study where at a hospital in the Netherlands there was an outbreak of Acinetobacter baumannii. And the investigators determined that actually the Bair Hugger transmitted ...

MR. BLACKWELL: I object, Your Honor.

Q ... that bacteria.

THE COURT: Hold on. Come up.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor.

THE COURT: First off, when there's an objection I need you to stop talking. Your objection?

MR. BLACKWELL: I object to Mr. Sacchet's characterization of the evidence. He's testifying in front of a jury. He's characterizing the evidence that the jury has heard and I disagree with his characterizations to

boot.

THE COURT: The objection is sustained.

MR. SACCHET: I understand your ruling. I opened it up because he asked me what the study was so I wouldn't have just narrated like that but he said what is that study so I described the study.

THE COURT: I would caution you in terms of referring to what the jury has seen and characterizing that as well. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Borak, I'll come back to the original question. In your expert report you did not rely on the Bernard study, true?

A Yes, that's correct. I did not mention him in my expert report.

Q It did not inform your opinion about whether the Bair Hugger can or cannot cause bacteria to go out of the product and cause an infection, true?

A Yes, correct, it did not inform that.

Q Now you mentioned that to date you have earned approximately $300,000 for defending 3M in this litigation about Bair Hugger, true?

A I said that.

Q I understand based on a review of your past testimony that in 2018 you had already made $270,000, true?

A I think my math was wrong.
Q Okay. Well I'm trying to figure out - 2018 was how many years ago from now?
A That would probably be four or three and half.
Q Okay so you've made more than $30,000 defending 3M in this litigation over the past four years, true?
A Say that again, sir. In this litigation?
Q Yes, in this litigation.
A I think probably with regards to Ms. O'Haver the total was something like perhaps 100.
Q Okay. So 100 plus 270 is at least $370,000, true?
A Clearly, a mistake was made and I apologize to you all.
Q That you've made at least $400,000 in this case, true?
A I don't know but that sounds good.
Q Okay. So when you told the jury that you had made $300,000 defending 3M and the Bair Hugger, you just didn't actually know how much money you had made. You just told them $300,000?
A That was my impression in thinking back. I obviously made a mistake and appreciate you having corrected it.
Q As to the McGovern study, I just want to walk through some basics first before we get into the weeds.
A Please.
Q The McGovern study was a retrospective observational

epidemiologic study, true?

A Yes. It was an interrupted series.

Q Based on the entirety of scientific studies that Mr. Blackwell annotated on this Elmo, it is not the lowest type of scientific evidence, true?

A It is not the lowest.

Q It was kind of in the middle. There is randomized controlled trials, prospective studies, observational studies ad I think you did case series, case reports, expert opinions?

A This would have been at the low end of the large studies because it was interrupted rather than concurrent but it was not as low as my expert opinion.

Q And you're giving an expert opinion in this case, right?

A I am but I'm trying to put out the facts as a basis for it but yes. I'm only giving a legal expert.

Q So you're giving the bottom level of opinion and McGovern is in the middle of the levels of scientific evidence that the jury can consider, true?

A I think that's a very unfair thing to say, sir. You're mixing apples and bananas. There are expert opinions with regard to the scientific data and there's a role as a legal expert which is something that you understand perhaps more than I.

We are talking about expert opinion in the way I spoke of

it as being the opinion of somebody without factual basis rendered because he says I am or she says I am an expert, listen to me.

Q So similar to the opinions that you gave about bacteria and particles in which you acknowledge you are not, in fact, an expert on that subject matter?

A My opinion on particles and bacteria was my explanation to the jury of the data that were contained in the studies that have been published and seemed relevance to this case. I was not rendering an opinion as an expert in particle dynamics. I was explaining the facts that were presented in those studies.

Now as a legal expert I think one is responsible for justifying those opinions and I am leaning upon relying upon these objective studies and I did that. That is not solely an expert opinion but that was a synthesis that I made of publications, no one of which would have been on that Elmo that you referred to.

Q Thank you, Dr. Borak. Back to the simple question. The McGovern study as a retrospective observational epidemiological study was not the lowest form of evidence that one considered nor was it the highest. It was in the middle layer of the types of evidence ..

A It not even in the middle layer. It was lower than that but there's no reason to fight over that.

Q It's more authoritative than a case report, true?

A It was more authoritative than a case review.

Q It's more authoritative than a case series, true?

A Not necessarily because of the fact that it ignored. I said that it ignored so many of these important confounders.

Now if the case series had presented information on the numbers of people who are obese. Had it had looked at the numbers of people who smoked. If it had considered the association with the antibiotics, for example, it didn't have to be analytical epidemiological study but that would have been much more complete.

The weakness of the McGovern study is not because it was designed as an interrupted retrospective assessment, although that is inherently a weaker design. The problem with the McGovern study is that it knowingly ignored these important confounders.

Q We'll get to that, Dr. Borak.

A Well you've asked me a question and I'm trying to answer your question, sir.

Q Thank you. You told the jury that McGovern study its objective was to find causation. That's what you told them, true?

A I don't know that I was trying to form causation. I think I was looking to see whether in this situation there were more infections in one group than in another.

Q Thank you. The objective of the McGovern study was to determine whether there's an association between use of the Bair Hugger and deep joint infection, true?

A True.

Q The very article in the second line of it says, "The goal was to find or not find an association." Nothing about causation, true?

A I have no problem with that.

Q Now epidemiologic studies like the McGovern study cannot prove causation. That's black letter, true?

A Well, generally speaking, epidemiological studies can show associations and not causation because they are not truly experimental, they're observational.

Q To make a determination about causation that's different than relying on one study that's taking the information as a scientist and making a judgment about whether based on this information you can find causation, true?

A No.

Q Dr. Borak, to find causation you take those associations. And to determine causation requires judgment by ane epidemiologist, true?

A As far as judgment, I don't think - I was following up what I said earlier, that I don't think you can use judgment to infer causation from a single study.

Q Fair enough. My question is based on the data,

McGovern study, other studies, other information, it is the judgment of an expert, the scientist to decide is there causation or not causation, true?

A Well that there's judgment involved, yes. It's true that there are other studies, no, false.

Q An association even if it doesn't prove causation is still valuable?

A Not without meaning.

Q And an association its aim is to show a relationship. Is there a correlation between two things even if there's not necessarily causation, true?

A Yes, it's the same thing.

Q And in your report that you filed not as to Bair Hugger and deep joint infections but as to obesity and smoking and the things like you've talked about earlier, you relied on associations, true?

A Yes, that's correct.

Q So you too rely on associations to make opinions about whether Ms. O'Haver's infection was increased by things like smoking or obesity, true?

A Yes. The difference if I may ...

Q Is it yes or no?

A Repeat it.

Q Did you rely on associations involving things like obesity and smoking to make determinations about the risk

factors that applied to Ms. O'Haver?

A Yes.

Q Okay, thank you. And that's because associations can show increased risk, correct?

A They show increased risk in the context of what they can show each study. And the weight of evidence accumulates by looking at multiple studies and repetitive findings which reinforce one another.

So I looked at the weight of evidence of associations over a large number of large studies. I didn't make associations based upon a single study. I just want that to be clear to everybody.

Q Understood. Now the McGovern study reported an association based on an odds risk ratio of 3.8, true?

A Yes, that's what it did.

Q And that 3.8 or 380 percent increased risk was determined by the authors in that study to be statistically significant, true?

A Yes, they did that.

Q Okay.

MR. SACCHET: Let's pull up please and we ask permission to publish it, Your Honor, a copy of the McGovern study that 3M likewise published which is 3M Exhbit 2707.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: 2707 may be published.

Q Dr. Borak, you've read this study and I've read this study. I'm putting it back up on the screen so the jury can see it. If you want, you can turn in the binder. It should come up on the screen soon. But if you want, you can turn to tab 1 of your binder. Okay, now this study as you are aware was published in the Journal of Bone and Joint, true?

A I think that's correct.

Q And we see that in the top left corner, that emblem has a little tree under it, right?

A Yeah, that's what it is.

Q And the Journal of Bone and Joint Surgery is a peer-reviewed publication, correct?

A Correct.

Q So there are outside experts in the field that read the study and decide is this good science, should it be published or is it junk science, no way we'd publish it, true?

A That's what we hope the peer-reviews will do.

Q The title of this study is "Forced Air Warming and Ultraclean Ventilation Do Not Mix," correct?

A That's what it says.

Q And the authors of this study are listed in the left-hand corner. There's seven there. Do you see them. So there's a Dr. McGovern, a Dr. Albrecht, a Dr. Belani, a Dr. Nachtsheim and three surgeons, Partington, Carluke and Reed, true?

A Yes.

Q Are you aware that Dr. Belani is a distinguished professor at the University of Minnesota specializing in anesthesiology?

A I've heard that he was an anesthesiologist in Minnesota.

Q At the University of Minnesota?

A I'm not sure that that's what I specifically remember but I don't challenge you.

Q Okay. And it's actually in the left-hand column, third down if you'd like to know. It does say University of Minnesota. In any event, Dr. Nachtsheim, Professor of Statistics at the Carlton School of Business at the University of Minnesota. Did you know he was an author on this study?

A I know that he was an author. And I knew that he was a professor of statistics but the rest I wasn't clear on.

Q Now if we look at the study in the third paragraph of the abstract. Chris, if you could please blow that up for the ladies and gentlemen of the jury. It says "A significant increase in deep joint infection, as demonstrated by an elevated infection odds ratio (3.8 P = 0.024.)" I'm going to stop there. Do you see that?

A I see that.

Q So the 3.8 is the number that indicates the 380 percent risk, true?

A Yes.

Q And the P = 0.024 that's the number that actually indicates from a statistical standpoint that this finding is statistically significant, true?

A Yes.

Q More likely than not not due to chance, true?

A That's correct.

Q Okay. Now as we keep reading "... was identified during a period when forced air warming was used compared to a period when conductive fabric warming was used." Do you see that?

A I do.

Q "The conclusion of the study by these authors, doctors and surgeons in a peer-reviewed publication was air free warming is therefore recommended over forced air warming for orthopedic patients," true?

A That's what it says.

Q This study is specific to orthopedics, not other types of infections or practices but orthopedics, same type of procedure that Ms. O'Haver had, true?

A Yes, that's correct.

THE COURT: Is this a good time to break for the day?

MR. SACCHET: Sure.

THE COURT: All right, guys, we will get started tomorrow at 8:30. I think you already know that lunch will

be provided. We'll try to - I think we're going to try to confirm that you guys can eat in the jury assembly room again. I don't know that we've confirmed that yet but I think that they've indicated that it's open.

We are - it's my intention for you to receive the case for your deliberation next Thursday if not sooner but so I anticipate that's when you will receive the case for your deliberation. With every passing day we'll give you updates in that regard but that's my intention.

(INSTRUCTION READ.)

Thanks for your attention. Thanks for all your work today. Have a great night. We'll see in the morning. Oh, wait guys. Good call. Sorry. I have domestic stuff tomorrow so be here at nine. Sorry.

(JURY LEAVES FOR THE DAY AT 4:56 PM.)

THE COURT: Okay, we're outside of the presence of the jury. At the close of the plaintiff's evidence the defendant filed a Motion for Directed Verdict at the Close of Plaintiff's Evidence. The Court is in receipt of that motion. The Court will note that it was filed in open court on this day. The Court took it under advisement until now to allow brief argument regarding it. And so Mr. Blackwell.

MR. BLACKWELL: Thank you. My understanding is the Court has given each of us five minutes. Your Honor,

3M is moving for a directed verdict on three bases.

First, we move for directed verdict on the claims that the plaintiff initially submitted but are no longer going to pursue. And we move for directed verdict on the remaining claims in that essential elements are lacking.

We would also move for a directed verdict on the punitive damages. With respect to abandoned claims, Your Honor, the claims that have not been pursued in this trial. That would include the plaintiff's warranty claim, Counts 4 and 5.

THE COURT: I'm just going to interrupt you just so that we don't spend time talking about counts that are no longer in play. Mr. Emison, I have - well I had a total of 13 counts. Ten through 13 it's my understanding involved the defendants that have since been dismissed.

So 1 through and including 9 are the ones as it relates to defendant 3M. Is the plaintiff intending to submit on all nine counts?

MR. EMISON: No, Your Honor. Plaintiff does not intend to submit on express warranty which I believe assuming this is correct, Count 4; breach of implied warning, Count 5; violation of the MMPA, Count 6; negligent misrepresentation, Count 7; fraudulent misrepresentation, Count 8 and fraudulent concealment, Count 9.

THE COURT: Okay. So it looks like Counts 1

through 3 are the ones that the plaintiff intends to submit to the jury?

MR. EMISON: Negligent design and failure to warn.

THE COURT: Yes, okay. With that, I didn't want you to waste your five minutes on counts that didn't matter anymore.

MR. BLACKWELL: Thank you, Your Honor. With respect to the design defect claims, very simply according to the case of *Johnson versus Auto Handling Corporation* 523 S.W.3d at page 466. It's clear that in order for plaintiff to proceed on any claims that are rooted in design defects there must have been testimony and there must have been evidence that the product was in substantially the same condition at the relevant times of the lawsuit, the time of injury as when it was delivered.

In this case there has been - in this trial there's been zero testimony and zero evidence as to the condition of the product and that they have presented no evidence whatsoever. That's at the root of foundation for pursuing a design defect claim.

For the failure to warn claim, plaintiffs had to have shown not only that the product lacked a warning but caused an injury but they must have shown that the warning would've altered behavior.

In this case there's been no testimony at all from a person who would be making decisions in Ms. O'Haver's operating room about the use of the Bair Hugger who has testified at all, let alone that whatever the warning plaintiffs might claim would have altered behavior.

We heard from Dr. Ballard. Dr. Ballard was very clear and it's cited in our papers that he is not the person who would make the decision about the use of a patient warming device. It would be the anesthesiologist.

As Your Honor knows, we didn't hear anything from Dr. Bible in the case at all, the anesthesiologist.

We heard from a corporate representative who's a marketing person, not a person who's in a position to make any decisions about whether or not the type of patient warming is used or not the operating room.

To the extent plaintiff's claim that there is a rebuttal of presumption that applies, that means they don't have to show that the warning would've altered behavior, it's questionable, Your Honor, under Missouri law whether that applies to a intervenor in the first place. And we think there is no jury question in that regard when the person who had been making the decisions, the anesthesiologist did not testify in the trial nor was there any evidence related to what the anesthesiologist either knew or didn't know which is important even for the

rebuttal of presumption. You have to show that the warning information – the warning would've made a difference as in they told them something they didn't know and then that would've altered the behavior.

The persons not even identified here. There's been no testimony of any kind. And for that reason, no basis for the failure to warn claim, Your Honor, should go forward.

We've heard the Court's ruling already with respect to punitives. I won't take much time other than to say we think the evidence doesn't show an indifference let alone a complete indifference or conscious disregard. And that's based upon everything from the Bair Hugger not emitting any bacteria containing particulates; doesn't increase the bacterial load in the operating room, Your Honor, and none of the studies that plaintiffs have relied upon and shown the jury conclude causation.

THE COURT: Thank you, Counsel. Mr. Emison.

MR. EMISON: Yes, Your Honor, just very, very briefly. I know the Court has been paying very close attention to the evidence as it comes in so I won't belabor any of this. But I will just say that none of the essential elements are lacking.

There was evidence that the jury heard today, in fact, from Ms. Colby from CenterPoint Hospital about the Bair Hugger and how 3M maintained ownership and control of the

Bair Hugger devices that were at the hospital and had the responsibility for maintaining those. That satisfies our element that it was in substantially the same condition. If they weren't in substantially the condition, if they were not in working order she testified that they would get a different new model to replace the nonworking model.

With regard to the warnings, Dr. Ballard - the testimony that's cited isn't accurate. Dr. Ballard - all that establishes is Dr. Ballard does not place the Bair Hugger on the patient. Dr. Ballard controls his operating room. He very clearly testified that if he wanted to know the information that 3M had not told him, the warning was not given to make an informed decision about whether or not to use the Bair Hugger in his surgeries.

And we also heard that same testimony from Ms. Colby today for the hospital who said that she relied on 3M to provide proper warnings about the risks and benefits so the hospital could make an informed decision about what forced air warming devices to provide to its healthcare providers.

Other than that, we would stand on our evidence, Your Honor.

THE COURT: The defendant 3M's Motion for Directed Verdict at the Close of Plaintiff's Evidence is overruled. Noting that, given that the plaintiff has only indicated that they are going to submit on the three

counts, then your motion as to their remaining counts will be deemed moot. Any further record this evening from plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: Only one person - don't look behind you. Any further record from the defendant?

MR. BLACKWELL: No, Your Honor.

THE COURT: Let's go off the record.

(COURT IS IN RECESS AT 5:10 PM.)

PROCEEDINGS

October 7, 2022

THE COURT: Mr. Blackwell.

MR. BLACKWELL: Good morning, Your Honor. We had an exchange with the parties last night on the completion of the exam of Dr. Borak. Dr. Borak has to make a flight this morning and we need to get him off the stand before Dr. Mont testifies.

But he was here and prepared to testify on Wednesday morning given the representations that were made from plaintiff's counsel as to when they would rest. I intentionally yesterday limited my exam of him so that I would sit down after 100 minutes so that the plaintiffs would have 40 minutes to get started with him with the idea they would be able to complete it this morning in the same time we had with respect to that exam.

I don't know that there's anything in our exchange last night that looks like we came to any agreement around that. But he has family plans out of the country and he's rescheduled his flight once given the schedule by the plaintiffs, plaintiff closing a day and half later. So that's the one issue that we have with Dr. Borak.

THE COURT: Counsel, your response?

MR. SACCHET: Good morning, Your Honor. A couple of points to be made. First and foremost, this is Ms.

O'Haver's one and only shot against 3M in this case. It's been set for trial for quite some time. Mr. Borak or Dr. Borak's vacation was never disclosed until after I began my cross at approximately eight or 9 PM last night. No notice whatsoever to me or Ms. O'Haver or anyone on our team that I needed to short-circuit the outline that I had prepared or do anything differently until last night.

This is a problem of 3M's own making. They chose to cross-examine our experts like Dr. Jarvis for nearly four hours, nearly four hours. They cross-examined other experts like Dr. Bowling for over two hours.

Now they come in here and say I need to curtail a cross of their chief general causation expert who has undisclosed case specific opinions citing articles he never included in his report and do that because he has a vacation that came out of nowhere. I don't think that that's equitable.

I will certainly do my best. I have no intention of unreasonably delaying. I would never do such a thing. I will do my best to conduct the examination as expeditiously as I possibly can.

I've only gotten to 30 minutes thus far. I scratched the surface on the substance. I got into his qualifications, backgrounds and just started getting into the principal study of this case. I hadn't done anything

else with the opinions that he offered to date.

At bottom, Your Honor, I don't think it's just to require me to short-circuit this exam. There is case law from Missouri that echoes the same concerns I'm raising. *Hyde* 861 S.W.2d 2D 819 from 1993. "A party to cause civil or criminal against whom a witness has been called and given some evidence shall be entitled to cross-examine said witness on the entire case."

So that is our position and we're surprised to learn at such a belated hour that this is an issue.

THE COURT: So what is your request in terms of how much time that you are wanting to continue your cross-examination?

MR. SACCHET: I don't know how long my examination will take because I think part of it requires whether answers will be given, whether they're too narrative ...

THE COURT: Can you ballpark it?

MR. SACCHET: I can ballpark two hours.

THE COURT: Two hours. So here's the thing. I will give you another 70 minutes and at that time we'll make a determination whether I'm going to limit time. I told plaintiff's counsel, Mr. Emison, when we talked about this that plaintiff's evidence went a day and a half longer than what was anticipated. And I indicated that based upon

that that it might have to be limiting time moving forward.

This doesn't have to do just with Mr. Borak. It also has to do - there's been a concern raised - I think it's Dr. Mont. So I think there are two things that are important here. One is that Dr. Mont's testimony begins at 11:30 I think is when it's scheduled to begin. And so I think that those are the two things.

So here's what I will do. I will give you - actually I'll give you 70 minutes. And at that point then we will check in and make a determination whether or not I'm going to begin limiting time. That would give you the same length of time that counsel had for direct examination. I believe that that is fair given everything that has occurred thus far and where we are with the case and not being where we thought that we might. So that will be the decision of the Court. Mr. Blackwell, any further issues?

MR. BLACKWELL: Your Honor, just with respect to the FDA letter. We would like to make an offer of proof on it. We can submit it at this point and Your Honor can see it as suits Your Honor's schedule. But we'll hand it up now and we'll not take up more time with wanting to get the jury out.

THE COURT: What - are you going to give that to me now?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: And do you have that marked as an exhibit?

MR. BLACKWELL: We don't.

THE COURT: Counsel, do you have objection to the Court receiving the FDA letter which will be marked in just a second for an offer of proof?

MR. EMISON: No, Your Honor, not for an offer of proof.

MR. BLACKWELL: May I approach, Your Honor?

THE COURT: You may.

MR. BLACKWELL: I've marked it as 4149.

THE COURT: The Court will receive 4149 as an offer of proof, review it and will issue its decision later whether or not the ruling of the Court will change.

MR. BLACKWELL: And, Your Honor, Exhibit 2798 is the actual letter.

THE COURT: Okay. The Court would receive both of those as an offer proof.

MR. BLACKWELL: Thank you, Your Honor.

THE COURT: Any further record from the defendant before we bring out the jury?

MR. BLACKWELL: No, Your Honor.

THE COURT: From the plaintiff?

MR. SACCHET: No, Your Honor.

(JURY IS SEATED AT 9:24 AM.)

THE COURT: You may be seated. Welcome back. Good morning. I hope you guys had a good evening. We're going to continue with the cross-examination of Mr. Borak. Counsel, you may proceed.

CONTINUED CROSS EXAMINATION BY MR. SACCHET

MR. SACCHET: Thank you. May I approach the witness, Your Honor?

THE COURT: You may.

Q Good morning, Dr. Borak.

A Good morning.

Q How are you?

A I'm fine, thank you. And yourself?

Q Good, thanks. So I want to come back to where we left off yesterday afternoon. And if I could please ask Chris to pull up the 3M Exhibit 2707 which is the McGovern study.

MR. SACCHET: And, Your Honor, I'd ask to publish it at this point.

THE COURT: You may.

Q Dr. Borak, once again this is the peer-reviewed and published McGovern paper published in 2011 in the Journal of Bone and Joint Surgery, true?

A True.

Q And as we discussed yesterday, we read the full abstract. I'm not going to read it again but that study states

that there was an elevated infection odds ratio of 3.8 that was statistically significant, true?

A Yes.

Q Thank you. And in your opinion as you stated in your initial report in this litigation, that 3.8 odds ratio on its face is significantly increased, true?

A The statistics on that univariate comparison is positive, yes.

Q And it is significantly increased, not just statistically significant. It's an elevated odds ...

A It's a univariate comparison which is increased significantly.

Q And that 3.8 odds ratio that was reported by the McGovern authors is higher than some of the odds ratios that you have detailed in your report about things like smoking, true?

A Yes, that absolute number is larger.

Q And the same is true of odds ratios that that you describe in your report about obesity?

A Generally, not so.

Q There are odds ratios that you rely on in your report to suggest that obesity is a causal factor of an odds ratio of 2.77, true?

A Yes, sir. But the range was from I think 2.7 to maybe 12. I'm not sure if I remember precisely.

Q So back to my original question. You rely on odds

ratio regarding obesity that are lower than the odds ratio that was reported in the McGovern study of 3.8, true?

A Yes, correct. Some of the reports that I included had lower that 3.8 odds ratios and some had higher than 3.8 odds ratios. I just want to be clear.

Q Of course. And my question was limited to you cited odds ratios with respect to both smoking and obesity that were lower than the odds ratio with respect to the Bair Hugger increasing infection compared to conductive warming devices, true?

A True. Some of the papers that I cited to had lower and some had higher. That's true.

MR. SACCHET: Your Honor, I might need a little bit of assistance with ...

THE COURT: Why don't you approach.

(BENCH CONFERENCE.)

THE COURT: You'll need to approach the bench if you're wanting guidance from the Court. If you do it in that manner you're effectively doing it yourself. And I think that I asked yesterday for you to allow me to instruct the witness in that regard.

MR. SACCHET: I tried to do that by asking you. I didn’t realize I had to approach and ask you.

THE COURT: When you do that in front of the jury you're effectively doing it yourself.

MR. SACCHET: I apologize.

(RETURN TO OPEN COURT.)

THE COURT: Dr. Borak.

A Yes, Your Honor.

THE COURT: I would ask that you listen very carefully to the question and only answer that question. If defense counsel believes that further clarification is needed they'll have an opportunity to redirect you at that time. Okay.

A Thank you, Your Honor.

Q Dr. Borak, with respect to your opinions about confounding factors, you discussed some of those yesterday with the jury and it included antibiotic and antithrombotic MSSA screening and skin preparation, true?

A Yes.

Q And to be clear for the ladies and gentlemen of the jury your opinion about whether these kinds of factors may or may not have influenced the results of the McGovern study, that was not your discovery, true?

A I'm not sure I understand your question.

Q The authors themselves in the McGovern study noted the possibility. They were candid about the fact that some of these variables might be in play and they might have affected the results of the study, true?

A They did note.

Q So it is not true that the McGovern authors in this paper said that these variables actually are or were confounding factors that impacted the results of their study, true?

A It's true. They did not say they actually were. They didn't look to see.

Q Fair enough. They did not say that these variables actually did impact the results of that 380 percent increased risk?

A Yes, they ignored them for the purpose of the calculations.

Q Okay. Now with respect to the first one that you talked about --

MR. SACCHET: I'd ask the Court for permission to republish the demonstrative that 3M displayed yesterday regarding the McGovern study.

THE COURT: Any objection?

MR. BLACKWELL: No objection, Your Honor.

MR. SACCHET: If I could please have the Elmo.

Q Dr. Borak, I'm going to leave this on the screen just as a reference point for a little bit of time.

A I have it right in front of me.

Q Perfect. So the first potential, potential confounding fact that you discussed with the jury was the antibiotic use which is in that third row, correct?

A Yes, the antibiotic prophylaxis.

Q Antiobiotic prophylaxis. And what happened in this study was that Bair Hugger patients received Bair Hugger warming for a period of time and received gentamicin. After that approximately a year some of them received gent plus teicoplanin. And then all of the conductive fabric warming patients received gent and teicoplanin, true?

A Yes, that's true.

Q Now this is not a situation like in some cases where confounding factors are analyzed of some patients getting an antibiotic and other patients receiving no antibiotic, true?

A Yes. None of the patients did not get - well let me turn it around. All of the patients received an antibiotic. Some received gentamicin and some received gentamicin plus teicoplanin.

Q So the question is if there was confounding, was one of these antibiotics better, significantly better than the other antibiotic, correct?

A The question is whether the gentamicin plus teicoplanin was more effective than the gentamicin alone, yes.

Q And you cannot tell this jury sitting here today right here and now that that change in antibiotic definitively proves that this 3.8 odds ratio of 380 percent increased risk did get impacted by that change?

A I'm not able to say that something definitively proved anything. I'm able to say that there is an accumulated body of

scientific data that indicates that the combination of gentamicin plus teicoplanin is a more effective prophylaxis antibiotic than the gentamicin alone and that it was used for all of the Hotdog but only part of the Bair Hugger. And if it had been more effective during the McGovern study the majority of that positive effect would have been in the Hotdog rather than in the Bair Hugger. That's an example of a confounder. But I did not definitively prove anything.

Q You cannot tell this jury with 100 percent certainty that the change in antibiotic confounded the results of this study, yes or no?

A There's no way to prove it. It wasn't analyzed.

Q Okay. No you mentioned that there is scientific studies showing that these two antibiotics are different with respect to deep joint infections, is that what you're telling the jury?

A I'm telling the jury that there's evidence that these two are different when used as prophylaxis antibiotics and that the lead author of the McGovern paper, Mike Reed agreed that gentamicin was associated with an increased risk of deep joint infections.

Q Okay. And you cited a study by that senior author, Dr. Reed in your report about the effects of antibiotics, true?

A I probably cited him on another result too.

Q Okay. If you could turn the tab 4 of your binder

please. You cited this Hickson and Reed study, correct?

A Yes, sir.

Q Okay. Because it's reliable presumably if you cited it, true?

A I presume that's why I did.

MR. SACCHET: Your Honor, we would ask permission to publish what is Plaintiff's Exhibit 495 for demonstrative purposes only.

MR. BLACKWELL: Your Honor, no objection for demonstrative purposes.

THE COURT: 495 may be published.

Q Now that the jury can see this article, we see on the left-hand side a list. On the left-hand side there's a list of names, do you see those, Dr. Borak?

A Yes.

Q And the second to the last name is Mr. Mike Reed, correct?

A Yes.

Q And that is the senior author of the McGovern study, true?

A Yes, that's true.

Q Now if we can please turn of this study to page 186 which is the little number on the bottom right-hand part of the page, Chris.

A Yes, sir.

Q Dr. Borak, are you there?
A I am here.
Q Okay, great.
A Are you here?
Q I am there in my head because I've got it memorized but I'm waiting for our screen to catch up.
Q If you look at the second paragraph that begins with the word "Although," do you see that?
A Yes, I do, sir.
Q Chris, could you please blow that up for the jury. It says, "Although there is a large body of evidence for the use of prophylactic antibiotics in primary hip and knee arthroplasty, there is no clear benefit to using one particular agent or regiment." Do you see that?
A I do, sir.
Q This is the statement of the senior author of the McGovern study regarding whether one type of antibiotic like gentamicin is more effective or less effective than gentamicin plus teicoplanin, true?
A Sir, I think you misstated what was written here. If you look at the third paragraph on the other column of the same page, I think what you will find is that same author of whom you were speaking says "There is no evidence for the use of systemic gentamicin as prophylaxis in primary knee arthroplasty."
Where Dr. Reed was saying gentamicin alone has no

scientific support.

Q And he says right there at the top of this page that there is no benefit to using one versus another. So it could be equally true that there's no benefit in hip arthroplasty using gentamicin versus teicoplanin.

A I think if you look at this it right it says there's no evidence for one being better but there's evidence for one being worse. And the one that is worse is gentamicin.

Q Now you are aware that - you relied on Dr. Hulford, right?

A I'm sorry?

Q You relied on Dr. Hulford in formulating some of your opinions in this case?

A I don't know Dr. Hulford.

Q He's the biostatistician from Yale that 3M retained as an expert in this litigation, true?

A Yes. He's the emeritus chair of biostatistics at Yale.

Q And he's not coming to testify before this jury, is he?

A I don't know.

Q I hope he does but I don't think he will.

MR. BLACKWELL: Your Honor, I object to Counsel's sidebar comments.

THE COURT: Sustained. Counsel, if you could

refrain from making the comments, I would appreciate it.

Q And you're aware based on your review of Dr. Hulford's report that he does not say anywhere in his report based on his statistical analysis of the McGovern data that the antibiotic confounded the results of McGovern, true?

A I don't know that he did or didn't frankly at the moment. He looked at a number of other comparisons. I don't know that he did that one.

Q But you ultimately do rely on his opinion about whether the actual numbers, the statistics show confounding or not, true?

A I think that what Dr. Hulford shows was that if you look at periods of time in which the same medications were used with the Hotdog or with the Bair Hugger that there's no difference.

Q So Dr. Borak, if I could actually – you know that Dr. Hulford actually found the opposite conclusion about what you're telling the jury right now, do you not?

A I would appreciate if you would just tell me what it is you're looking at and I'll try to respond to it.

Q Dr. Borak found that the infection ...

A I'm Dr. Borak. I didn't find that.

Q Dr. Hulford found that the infection rate went up, not down in the group that used the gentamicin plus teicoplanin, true?

A I actually - if he said it and if you're reading it from his report then that's what he said.

Q Okay. You've agreed to that under oath, correct?

A I may have.

Q You have, true?

A I'm agreeing with you that that's what he said.

Q Let's look at what you said. Tab 17 please. If you could please find page 1463. These little numbers in the boxes.

MR. BLACKWELL: Your Honor, I don't have a copy of the binder so don't know what 17 is.

Q Are you there, Dr. Borak?

A I'm sorry, sir.

Q Are you there?

A I am here.

Q If I could direct your attention to lines 11 through 14 please.

A I am reading it, sir. I see what you're pointing to.

Q Question: You were asked this under oath. "He, Dr. Hulford found that the infection rate went up in the gent/tec group, right?

Answer: That's what this says here and that's what I said then so I won't dispute it."

That's your testimony under oath in this case, true?

A I won't dispute it.

Q In fact, you won't just not dispute it but you've also

testified that the confounding that you told the jury about is actually the opposite. It goes the opposite way and that the 3.8 number is actually deflated as opposed to inflated, true?

A I don't think that's a fact, sir. I think I said it was a reverse confounder but I think the math you're doing is not right.

Q You testified under oath "It would be a reverse confounder because if everybody that wasn't in the Bair Hugger group got a less effective antibiotic, the rate should have been higher in that group, yes." That's what you're saying is correct, true?

A Are you reading what I said?

Q Yes.

A Tell me what line you're now reading?

Q Now I'm on lines 15 to 19. Are you there?

A Fifteen to 19 of 1463?

Q Yes.

A Yes, what you're reading is correct.

Q It is correct that there was reverse confounding in the direction that goes the other way than what you told the jury yesterday?

A What I said yesterday was that the choice of prophylactic antibiotic was confounded.

Q And now you're telling the jury that that potential confounding actually supports rather than hurts the results in

this published and peer-reviewed paper, true?

A Sir, what I'm saying to you is yes, the numbers you are pointing to you right now are correct. But the problem that you're not looking at is that there were multiple moving parts. The problem of doing a univariate analysis as was done by McGovern is that you can't see what is influencing what and how much.

And the problem has to do with taking them completely and ignoring them otherwise.

Q Dr. Borak, this is the sheet that Mr. Blackwell showed the jury and represented that you had prepared to help the jury understand confounding factors in the McGovern study, right?

A Correct.

Q If we are just looking at the antibiotic use, just that factor, not the multi-varied analysis and other factors, but just that singular sole factor ...

A Yes, sir. You're taking that sole factor out of the context of a number of moving parts and you're looking at only one. And the problem with the McGovern study is it failed to consider this multitude of moving parts to understand what you're doing. Please go ahead.

Q This factor, antibiotic use, that sole factor did not negatively confound the results of the McGovern study, true?

A I cannot say that. I know the numbers you've pointed out to me over the period of the Bair Hugger had an increase

with the antibiotic. But I'm not prepared to say that it caused the Hotdog to look better than the Bair Hugger.

Q You agreed under oath in a deposition it was a reverse confounder, true?

A It appears to be a reverse confounder.

Q If it's a reverse confounder it did not negate the results of the McGovern study?

A I can't conclude that. I can agree with you that it's a reverse confounder.

Q Because you don't know? You can't say one way or another whether it is a confounder?

A The answer is I don't know because neither I nor Dr. McGovern or anybody else has analyzed it properly.

Q You don't know whether any of these factors on this sheet actually are in fact confounding factors, true?

A True. The problem with the McGovern study is ...

Q Thank you. Thank you.

A ... nobody looked at that at the time. They only looked at univariate comparison of the Hotdog and the Bair Hugger.

THE COURT: Mr. Borak, I really need you to listen carefully to the question that was asked and only answer that question.

A I apologize. I don't mean to - I'm trying to be clear for the jury.

Q And you also even though you've established that, you're not sure about any of these, you did talk about the antithrombotic, correct?

A I did.

Q And the antithrombotic is another word for a blood thinner, true?

A That's correct.

Q And what happened here in this study was some patients got a blood thinner called tinzaparin, true?

A True.

Q Then there was a change to rivaroxaban which is otherwise known generically as Xarelto, true?

A Correct.

Q And then there was a change back to tinzaparin, the initial blood thinner that was used for some of the patients, true?

A That's true.

Q And, again, this is not a situation where like in other studies some patients got the blood thinner but others got no blood thinner, true? Everyone got some?

A Correct.

Q Okay. Now the purpose of a blood thinner is to thin blood and to prevent blood clots, true?

A Yes.

Q That does not directly relate - I'm not talking about

indirectly relate. That does not directly relate to deep joint infections, true?

A No, it does.

Q So you're talking about a variable that deals with blood thinning even though you acknowledge that blood thinning does not directly impact deep joint infection rates, true?

A No, wrong.

Q You don't have any study to suggest in the scientific literature that's published and peer-reviewed that blood thinning medications like tinzaparin, Xarelto or any other one has a statistically significant association with deep joint infection, true?

A Dr. Reed said that when they moved to the rivaroxaban from Heparin that their deep joint wound complications more than doubled. And the Jensen study shows an increase of infections when that change was made.

Q Not my question. You do not have a published and peer-reviewed study that shows that a blood thinner is statistically associated with deep joint infection, not wound infection, true?

A I don't know that I can parse the difference between the deep wound infection and the joint infection.

Q The Jensen study that you just mentioned was specific to wound infections not deep joint infections, true?

A I will have a look at it. I'll accept for the moment

that it may be true. Many authors combine the two.

Q You mentioned Dr. Reed - you mentioned something that he said somewhere. But you're aware of Dr. Reed's testimony in this litigation about whether or not he believes that the change of the antithrombotic actually did confound the results of the McGovern study, true?

A I have read his deposition.

Q And you're aware that Mr. Reed under oath when asked whether the change from tinzaparin to Xarelto impacted the results of his study as unequivocally no?

MR. BLACKWELL: Objection, Your Honor.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. BLACKWELL: Objection, Your Honor. It's hearsay. He's characterizing testimony. He's now quoting purportedly from Dr. Reed's deposition. He hasn't put it in front of witness and he's characterizing things again. If he wants to talk to him about the deposition, then put it out. It's goose/gander. We both will get to talk about Dr. Reed's deposition.

MR. SACCHET: I'm entitled to ask him questions about testimony. And if he contradicts it, I'm entitled to then impeach him with the transcript which is what I'll do if he's going to say something to ...

THE COURT: Are going to say that ...

MR. SACCHET: I'm going to say ...

THE COURT: Please don't interrupt me. You are in essence testifying. And whenever you do that that's improper for cross-examination. So I'm asking you to lay a foundation. I would also ask that in the event that there's an objection that you stop talking because you can't un-ring the bell. So I'd ask that if there's an objection you stop talking and we take it up.

MR. SACCHET: I will do my best. Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Borak, did you review and rely on Dr. Reed's deposition testimony?

A I read it. I must have relied on it.

Q If you could please turn to page or tab 25 in your binder. If you could please turn to page 215. Again, this the page number in the small boxes as opposed to the big boxes.

A I'm there.

Q And if I could direct your attention on page 215 to lines 14 through 18. Have you reviewed that testimony, sir?

A I see those but are you referring to the McGovern study or to the Jensen study?

Q Jamison.

A What?

Q Jamison and Reed.

A Jamison and Reed, okay.

Q And the question before you that you reviewed and relied on is "So would you agree with me that based on this study that you are the author of that looking at the date of the McGovern paper that now we can exclude Xarelto as a confounding factor of infection rates?

Answer: I think that's what this paper says."

Is that what Dr. Reed testified to under oath?

A In which paper is it that that answer was referring to?

Q Jamison and Reed.

A That's two papers.

Q It's co-authored by Jamison and Reed.

A Which - there's a Jamison paper and there's a Jensen paper.

Q The paper evaluating whether low weight molecular heparins are statistically associated with deep joint infections.

A There were two papers, sir, and they both addressed it.

Q This the first one.

A The first one by Jensen as the lead author.

Q No. Then it's the second one. Jamison's the lead author.

A Jamison's the lead author. Jamison's paper is not appropriate because there were so many errors in the

calculations. I have talked to them at length if the Judge will let me but I don't agree with Dr. Reed's statement.

Q Not my question. Dr. Reed testified under oath that based on the paper that he wrote that he could exclude Xarelto as a confounding factor in this McGovern study, true?

A Sure. That's what he said here and he's referring to the Jamison study.

Q Thank you. Now we've discussed the antibiotic and we've discussed the anti-clotting drug that was used. Those were the two potential confounding factors that the McGovern study authors noted in their paper, true?

A Yes.

Q Now you also identified two other ones, MSSA nasal screening and skin preparation. And I think we can move through these a little bit faster hopefully. Are those the two?

A Those are the two.

Q Now as to the first, MSSA screening, the situation there was Bair Hugger patients received two months of that screening; all of the conductive fabric warming patients received nasal screening for MSSA, true?

A Yes and treatment if they were healthy.

Q Okay. And, again, just like with respect to these other potential variables you cannot tell this jury with any scientific certainty that that changed in MSSA screening did in fact confound the results of the McGovern study, true?

A That's correct.
Q And as to skin preparation, same style of questions. You cannot tell this jury with any scientific certainty that the change in the skin preparation that was used in the McGovern study did you find that it confounded the results of the McGovern study?
A I cannot prove that it confounded the results of the McGovern study.
Q And, in fact, you are aware of no studies that have been conducted that are peer-reviewed and published in the scientific literature that actually do show that skin preparation is statistically significantly associated with deep joint infections, true?
A I'm not sure that I can right now.
Q Okay. So right now, you cannot say such a study was done?
A I don't think I can, right.
Q Thank you. And to be clear, just as these variables, you can't say with any scientific certainty they did impact of the results of the McGovern study, you cannot tell this jury right here right now that the Bair Hugger did not impact the results of the McGovern study?
A I've said throughout this issue that I do not believe there was evidence that the Bair Hugger does or does not cause infection.

Q Therefore, it is possible in your expert opinion for this $15 billion company that the Bair Hugger could ...

MR. BLACKWELL: Objection, Your Honor, it's inflammatory, it's gratuitous. Objection.

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: That's an inflammatory argumentative question to ask and I would instruct you to refrain from that. If you continue to do that, I'm going to have to stop your cross-examination, Mr. Sacchet.

MR. SACCHET: May I respond just respectfully?

THE COURT: No.

(RETURN TO OPEN COURT.)

Q It's your expert testimony on behalf of 3M Company that the Bair Hugger could - it's possible even if you don't know it, can it possibly impact deep joint infection rates?

A From the very beginning of this, sir, I've said it was hypothetically possible but unproven.

Q Thank you. Now to sum up the McGovern study, it is peer-reviewed and published, true?

A Yes.

Q It is the only epidemiologic study that has been published in the peer-reviewed literature on the impact of use of the Bair Hugger versus conductive fabric warming devices on deep joint infection rates, true?

A I believe that would be true.
Q It has never been retracted, true?
A It has not been retracted.
Q You're not aware of anyone who has called for its retraction or withdrawal from scientific literature, true?
A I don't know anything about that.
Q You have not yourself, notwithstanding your concerns about the study called for its retraction in public, true?
A I have not publicly written to the journal.
Q And you're not aware of any contrary epidemiologic studies against the McGovern study, true?
A I don't believe there's any epidemiological evidence against the study specifically.
Q And the only way in your opinion to actually definitively prove whether the Bair Hugger actually with 100 percent certainty caused this deep joint infection risk would be to be conduct a randomized controlled trial, true?
A It would be true if you wanted to be absolutely definitively. And even then, you would have to prove the errors within the design and implementation of a random controlled trial. But I think once we look at the weight of evidence if there were enough evidence.
Q And you're aware of the documents the jury has seen that 3M decided at its highest level to stop conducting studies about the Bair Hugger and infection, true?

A I'm not sure that's true.

Q You didn't review any internal documents from the company, right?

A I've seen some. I don't remember that particular statement.

Q You didn't rely on any any documents to formulate your opinion, you've seen some, true?

A I did not rely on any that I've seen.

Q If we could please pull up for the jury subject to the Court's permission Exhibit 134A which has been admitted into evidence.

THE COURT: Can the attorneys approach.

(BENCH CONFERENCE.)

THE COURT: I have the redacted version that was read to Dr. David but I don't have it was submitted. So can we just agree that it will be published.

MR. SACCHET: That's fine. I can publish.

THE COURT: Any objection?

MR. BLACKWELL: Your Honor, if the foundation is laid. I'm not sure this witness is even familiar with the document.

THE COURT: Why don't you ask some additional foundation questions. And then if there's no further objection, 134 a will be published.

MR. SACCHET: Is it okay - I guess my concern is

respectfully, I don't think he has read the document because at this point he said he didn't rely on 3M internal documents. But my question was are you aware that 3M stopped conducting studies? And he said he didn't know. So for purposes of impeachment whether or not he's relied on this, I was assuming I could use it to say that's in fact what this document shows.

MR. BLACKWELL: If I may, Your Honor. When we wanted to use these studies with our experts that they had not seen before, we weren't allowed to because there wasn't a foundation for it. The witness didn't have knowledge of the studies. Now he's putting on documents that perhaps this witness has ever seen and has no knowledge of them.

MR. SACCHET: The document has been shown to the jury and the jury has seen the document. I believe I'm entitled to impeach over things that are in the record.

THE COURT: If he has not seen - if he indicates he's not seen this before, this is a 3M document and I don't think the foundation has been laid. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Borak, you're not aware one way or another whether 3M made decisions at the highest level to stop conducting clinical studies on the Bair Hugger, true?

A True, I'm not aware.

Q Now the next part of your testimony that you went through with Mr. Blackwell yesterday was about - I'll call it the double control. If you look at apples to apples like Mr. Blackwell described where seeing patients with a Bair Hugger that used the same drugs versus patients who didn't use the Bair Hugger with the same drugs, true?

A May I close this?

Q Sure. Dr. Borak, is this the slide that you prepared for assisting the jury in understanding your testimony?

A It was prepared. I did not personally prepare that, yes. I supervised the preparation.

Q 3M prepared the slide?

A I don't know who prepared it. I supervised it and approved it.

Q Based on this slide, you also went over a video clip by Mr. McGovern where he was asked a question, "If you just look at these two little slices of data from the McGovern study, not the whole McGovern study, but just these two little bits, there's no difference in infection rates between Bair Hugger and the conductive fabric warming device, right?"

A Right. It wasn't Mr. McGovern but that's okay.

Q Oh, Mr. Albrecht. I apologize. That video was shown to the jury, right?

A Correct.

Q Now as both a statistical and epidemiologic matter, it

is not appropriate to control for variables in a statistical calculation that have not been shown to in fact be confounding factors, true?

A No, I don't think that's correct.

Q You're aware that in order to make a determination about statistical significance about whether one thing actually can affect another, you have to have a lot of people when you have a low incidence of something like infection, true?

A I think you're talking about the power of the calculation.

Q And that is true. You have to have a sufficiently powered calculation to make decisions about whether it can or cannot show a difference, true?

A Power is important in ruling out false negatives, yes.

Q And you're aware that Dr. Hulford, the biostatistician from Yale that you relied on actually did the calculation that Mr. Albrecht was asked about in his deposition, true?

A I recall that, yes.

Q And you are aware are you not that Dr. Hulford conceded under oath that he did not conduct a power analysis?

A I'm sure he didn't.

Q He did not conduct a power analysis in analyzing whether the difference between these two small groups could actually be significant or not, true?

A I don't have any reason to question it. So the answer

is I accept that.

Q No power analysis in that calculation?

A I don't think there was a power analysis.

Q Now if there's not a power analysis there could be an issue on small numbers, that term is used in the field, true?

A Yes. I think that's the reason that Dr. Hulford reached an exact comparison which allows a small number comparison.

Q Now when you actually look at the numbers what happened here is the McGovern study had 1,437 patients in the original study, true?

A I accept the number right now without calculating it.

Q Over a thousand to be sure?

A Over a thousand.

Q And when this calculation was performed that number was chopped in half down to approximately 6 to 700, true?

A Okay.

Q And we see that rapidly based on the slide that 3M prepared because if this ...

MR. BLACKWELL: Objection, Your Honor. Foundation misstates the witness's testimony.

THE COURT: Sustained.

Q Based on this graph as the demonstrative that was shown to the jury, instead of looking at this whole timeline of data only this little slice and this slice is what was used to

compare, right?

A This was a conscious attempt to compare the two time periods that existed when the Bair Hugger and the Hotdog populations were treated in the same way. That's all he was trying to do. It was necessary to exclude those when they were treated differently.

Q And by doing so the population was cut in half, true?

A I accept your statement about being in half. I don't know that that's correct.

Q That's what Dr. Hulford attested to, correct?

A I accept that.

Q Now you were shown one clip or the jury saw one clip yesterday of Mr. Albrecht's testimony, true?

A I think that's correct.

Q You've read the entire deposition testimony of Mr. Albrecht, true?

A I have.

Q You relied on it in formulating your opinions, true?

A I have cited that, yes.

Q Mr. Albrecht said things other than what was just shown to the jury yesterday in his entire deposition, true?

A He said hundreds of pages of things.

Q If you could please turn to tab 20 of your binder. And once you're at Tab 20, let me know and I'll give you the page number.

A I'm here.
Q If you could please turn to page 217.
A Tab 20?
Q Could you turn to page 217?
A 217.
Q All right. And do you see line 13?
A May I read it?
Q Of course. Let me know when you've read that question. Have you read the question?
A I have read the question.
Q Okay. In this question 3M's attorney asked Mr. Albrecht in short, if you control for both the antibiotic and the antithrombotic just like we see on this slide, what's going on? That's the gist of the question, right? Would it show a difference?
A That's correct.
Q His answer is "I don't know. I would have to run a model. There's a period of time here which comes into play. This data there's possibly not enough infections, infections to do a multivariate analysis like that where it's properly powered just looking at this." Do you see that?
A I see he said that.
Q Was that shown to the jury yesterday?
A I don't think that was shown to the jury.
Q This is the whole truth of Mr. Albrecht's testimony

that it might not be properly powered, correct?

A Yes but may I please answer because your question is misleading, sir?

Q I'm not going to instruct the witness but I would say ...

A This is not the multiple variate ...

THE COURT: Mr. Borak, he will ask his next question.

Q Dr. Borak, even if something does not show a statistically significant relationship like looking at two little chunks of data, you cannot say that means there is no association, true?

A Yes, you cannot say that.

Q It is possible that even if you have two little batches of data and it's not statistically significant that it still actually could be significant if there was more people or more things to look at, true?

A Anything could happen.

Q So it's true. You can have a statistically significant association even if you have two little batches of data that don't show up?

A You mean you could have an association or you could find an association?

Q You could have one.

A You can have an association and find nothing when you

look at it.

Q If it had one?

A You can still have one.

Q Thank you. Now I understand you have concerns about the McGovern study but you are aware are you not that authors in the field, scientists in the field who practice infectious disease, epidemiology, orthopedic surgery rely on the McGovern study, true?

A Sure. I guess it's true.

Q You're aware that Dr. Reed the senior author of the McGovern paper continues to cite the McGovern paper after its publication for the proposition that the switch to conductive fabric warming instead of Bair Hugger warming led to a significant decrease in deep joint infection rates, true?

A I don't know if that's what he said. I know what he said in the International Consensus.

Q You cited the very paper that I just read from in your report?

A Who's that, sir?

Q Rafi A. Reed.

A Okay, yes, he makes that in there.

Q Do we need to confirm that or are you stipulating that he said "Our switch to the alternative conductive fabric warming led to a significant decrease in deep joint infection rates."

A I would accept that that's what he said there. I'm

not looking at the paper right now.

Q I appreciate that. You cannot tell this jury that anyone that's commented on the McGovern study indicating that it is unreliable per se?

A I'm not aware of anybody who has publicly published that but they may have.

Q You cannot tell this jury that anyone in the public outside of this courtroom has ever said that the McGovern study is unreliable per se, true or false?

A I cannot say that, yes.

Q True?

A It's true that I cannot say that.

Q Thank you. You are giving that opinion to the jury that it's unreliable, true?

A Yes.

Q If the jury disagrees with you and like other scientists including Dr. Reed believes that it is reliable and valid they should disregard your opinion, true?

A Well they should certainly take it with a cautionary note, yes.

Q Now one study that you also discussed yesterday - I'm going to move off the McGovern study for a bit is the Oguz study, correct?

A Yes.

Q Now you labeled that study a randomized controlled

trial, correct?

A Yes.

Q The gold standard, correct?

A That's how they described it.

Q In your report in this case you never cited the Oguz study, true?

A Honestly, I don't remember. Maybe not.

Q Do want to go through the report?

A No, I don't really want to go through my report. If you tell me that, I think that I did. My memory is I don't remember.

Q So you don't know whether or not you cited this one study that you held out to be the randomized controlled trial that proves that the Bair Hugger is safe in your expert report, correct?

A Approved what?

Q That the Bair Hugger is safe?

A I didn't say that the Bair Hugger was safe.

Q So Oguz does not prove that the Bair Hugger was safe?

A The Bair Hugger in the Oguz study said that there was no difference between the Bair Hugger and the Hotdog in terms of bacteria in and around the base of the operating room.

Q You didn't cite that paper in your report?

A I did not.

Q Now if we could - you find it reliable though, true?

A It's in their study.

Q Chris, if we could, subject to the Court's permission, please publish what is Plaintiff's Exhibit 635 for demonstrative purposes only.

THE COURT: Any objection, Counsel?

MR. BLACKWELL: Your Honor, no objection.

THE COURT: 635 may be published for demonstrative purposes.

Q While we're waiting for publication, Dr. Borak, if you want it's at Tab 39 of your binder. Sorry to make you open it again. It's on the screen if that's easier for you.

A Yes.

Q Are you there?

A I am.

Q Now the title of this study, the Oguz study is *Airborne Bacterial Contamination During Orthopedic Surgery: A Randomized Controlled Pilot Trial*, true?

A True.

Q The NIH, The National Institute of Health defines a pilot trial as a small-scale test to determine whether a later test should be conducted, correct?

A I don't know that to be true but I accept it.

Q That's what a pilot study generally means?

A It generally means that an early study to test concepts, yes.

Q And quickly the last author of this study is someone named Oliver Kimberger, correct?

A Yes.

Q Now if we move to page 3 of the study, Chris. Actually, I'm sorry, page 2. There's a section titled Section 2.1 Measurements. Do you see that? Do you see that, sir?

A I'm reading that paragraph. Is that what you want me to do?

Q Yeah, I just want to make sure we're on the same page.

A We're on the same page.

Q You're aware that plate number four was the agar plate that was closest to the wound for the kind of wound cited the patient in this study, right?

A Yes.

Q And if we can now turn to page 4 which is the table of data I believe you were referencing but it was not shown to the jury yesterday, right? Is that the table that displays the increase in bacteria that was cultured when the Bair Hugger was used as opposed to when a non-Bair Hugger conductive fabric warming device was used?

A I would love to look back at the sentence which describes the calculation of use in the Bair Hugger.

Q That's not my question. I don't want to prevent you ...

A I'm sorry. You're asking me to interpret data on a

table and the heading of the table says "Results of a Multi-Variate Analysis of Factors Influencing Bacterial Deposition." And then it talks about the way in which it was calculated. And I'm trying to understand. I presume that these are odds ratios.

Q Let me ask you this question. What table did you rely on in telling the jury that the Bair Hugger didn't increase bacteria from the study?

A I was not specifically depending upon - I'm looking at it right now and I'm looking at Table 2. And I'm looking at the second line where it says "Presence of forced air" and I'm seeing that none of those numbers are statistically significant.

Q I'm going to direct your attention to Plate 4 which has the 1.55 by it, correct?

A Correct.

Q Now that 1.55 setting aside statistically significant is indicative of 155 percent increase, true?

A Amenable to chance.

Q 155 percent increase amenable to chance, true?

A Yes, that number is not a specific number. Is is an approximate number from a limited trial, but yes, it's 155.

Q The answer is yes?

A Yes, the 155.

Q The confidence interval is .92 to 2.6, correct?

A That's correct.

Q It is 0.08 percent away from statistical significance,

correct?

A It is not statistically significant.

Q Not my question. It's barely not significant, true?

A I don't know the word barely in the context that you use it, sir.

Q This confidence interval is 92 percent. So instead of staying with 95 percent certainty that the Bair Hugger increased bacteria by 155 percent, this shows with 92 percent certainty that it did so not due to chance, true?

A Sir, that's not what the number is. 0.92 is referring to the confidence interval around the 155. It's talking about the fact that that was based on 40 observations during this test and that the distribution of the particulates on Plate 4 range from 92 to 2.6 was the calculation.

Q So the percent of increased bacteria based on that is it could have been a 92 percent increase in the amount of bacteria from the Bair Hugger or even a 260 percent increase of bacteria from the Bair Hugger, true?

A No, sir. The .92 would've been a reduction below one.

Q 92 percent increase, not 100 percent increase, true?

A I don't understand what you're talking about. I'm sorry. Maybe it's me. I'm sometimes a little dull in the head. If you would explain more clearly I will try to give you a clear answer.

Q Let's shortcut the conversation by saying you agree

that statistical significance is a very arbitrary lie, true?

A But necessary, yes.

Q It's a very arbitrary lie?

A The word vary is typical. It is arbitrary.

Q So you told the jury that the Bair Hugger does not increase bacteria compared to other devices based on an arbitrary lie, true?

A I don't know that that was exactly the words I used but I understand the thought. I have said that I was not aware of data that the Bair Hugger increased bacteria in the surgical setting.

Q Let's go to last page of this study, Chris, please. At the very top there's a notation about conflict of interest. Do you see that, sir? Do you see the words "Conflict of interest?"

A I see that.

Q And do you see that Oliver Kimberger who is the senior author of the paper, the last one we talked about at the top?

A There's a lot of them.

Q And the second to the last one is 3M Company from St. Paul, Minnesota, true?

A Yes, correct.

Q Now aside from the studies like this one that you've relied on, I want to talk about your expert opinion.

A Sure.

Q Do you agree with me sitting here today that it is not good if bacteria are near the sterile field, true?
A I'm sorry.
Q Do you agree with me sitting here today that it is not good if bacteria are near the sterile field, true?
A It is not good that bacteria are near the surgical site, yes.
Q You agree with me, do you not, that some cases show that the Bair Hugger harbors bacteria, true?
A I think that has been shown in some cases.
Q You agree with me, do you not, that it is not a good idea if the Bair Hugger harbors pathogens in the machine itself, true?
A Probably not a good idea.
Q Probably or it's not a good idea?
A Not a good idea.
Q Not a good idea. You agree with me, do you not, that the presence of infectious microbes being harbored in a Bair Hugger unit can create a risk of infection for a patient?
A A hypothetical risk, yes.
Q It is a reasonable that it could, true?
A It's a hypothetically reasonable.
Q It is reasonable that it could?
A Hypothetically, it could.
Q It is reasonable that if the Bair Hugger has

infectious microbes being harbored in its unit that it can create a risk of infection for a patient, true?

A A hypothetical risk.

Q It is reasonable that if a Bair Hugger harbors microbes inside of it that it creates a reasonable risk of infecting or at least ...

A I don't know what the word reasonable means. I'm telling you I believe the risk to be hypothetical.

Q It is true that there is a risk of infection if the Bair Hugger harbors infectious microbes inside of its unit, true?

A Yes, there's a hypothetical, yes.

Q Thank you. You very quickly yesterday mentioned something called IPOS International Consensus Statement on periprosthetic infections, correct?

A I may have.

Q And you'd rely on that document, correct?

A I've certainly read it, yes.

Q Now you also told the jury yesterday, not your opinion but you generically described expert opinion as being the lowest level of evidence that the jury should consider in making determinations about science, right?

A I said expert the opinion was considered very low on the hierarchy of evidence, yes, I said that.

Q And you're aware, are you not, that Michelle Hulse

Stevens the Director of Infection Prevention for 3M understands that the International Consensus Statement is opinion based, not evidence-based?

MR. BLACKWELL: Objection, Your Honor. May I approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I'd object for lack of foundation. He's testifying again as to what Michelle Hulse Stevens now supposedly said. He's characterizing it. There's no foundation this witness is even aware of it.

MR. SACCHET: I asked if he understood if that's what Michelle Hulse Stevens believed. The jury has seen a document where Michelle Hulse Stevens said the very thing. I'm trying to lay the foundation to know if he understands that or not.

THE COURT: The jury hasn't seen it with this witness. There's been no foundation laid with this witness. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Borak, do you believe that the International Consensus Statement is opinion based?

A What I have seen in that is that the conclusions are based on a vote of the membership and that consensus is opinion based. But each of the sections contains extensive literature

reviews which are fact-based. So it's a little bit - I'm not sure how else to describe it.

Q Fair enough. But you agree that the votes that are cast by the delegates as to whether they agree or disagree with a question that is posed is an opinion, correct?

A I believe it's an opinion based on an extensive review of facts.

Q Are you aware that Dr. Mont is an expert in this case?

A I've heard that. I've never met him.

Q Okay but you're aware that Dr. Michael Mont is an expert for 3M in this case, true?

A That is my understanding.

Q Are you aware that Dr. Michael Mont is on the editorial board of the International Consensus Statement on infection?

A I saw that.

Q So you are aware, are you not, that in the International Consensus Statement it states that Dr. Michael Mont read through the entire document after the July meeting and invested numerous hours editing the document?

A I think that's what I read but not word for word.

Q 3M's expert in this case, Dr. Michael Mont spent numerous hours editing the International Consensus Statement on periprosthetic joint infection, true?

A True. It indicates the magnitude and importance of

their experts.

Q Are you aware that as the International Consensus Statement was being drafted, that attorneys from 3M contacted Dr. Michael Mont and asked for certain parts of his findings to be changed?

A I was told that by your colleague, Mr. Saad during the deposition.

Q So you haven't seen evidence of it but you've been told that?

A Yeah. I think that he may have shown me some of the documents related but I hadn't known it before that.

Q You might have seen an email that actually did show Mr. Blackwell's colleague contacting?

A I recall that there was such an exchange and I don't recall specifically what was provided to me.

Q You're aware that Dr. Parvizi is a paid consultant of 3M?

A I may have seen that in an acknowledgment on some paper.

Q You're aware that Dr. Parvizi was the chairman of the International Consensus Statement on periprosthetic infections?

A I've seen his name on the cover of the publication.

Q Now switching gears, yesterday you testified that you are not an expert on infectious disease, right?

A No, I said I was not a specialist in infectious

diseases. I said I was an expert in internal medicine and that infectious disease was part of internal medicine.

Q Well you've read some studies addressing topics like particles and bacteria, right?

A That is true.

Q You would agree with me, do you not, that surgical site infections usually occur from inoculation of bacteria?

A I think they usually occur from inoculation of bacteria, yes.

Q Thank you. Do you agree with me, do you not, that surgical site infections are generally caused during the surgery as opposed to after the surgery, true?

A What I read indicates that they are more likely to be the result of what happens during surgery.

Q Thank you. And you agree with me, do you not, based on your review the records as applied to Ms. O'Haver that she suffered a deep joint infection, not a surgical site or superficial wound infection?

A I know that she ultimately had that. I'm not quite sure because of the nature of her personal history which includes smoking it so forth, it's not clear to me.

Q In your report you acknowledged that she was treated for a periprosthetic joint infection?

A That's what she was treated after the 1st of January.

Q And in your report you go on to make opinions about

specific causation as they relate to periprosthetic joint infections, true?

A Yes.

Q Now you talked about comorbidities, things like obesity and smoking, right?

A Yes.

Q We just established that infections usually occur from inoculation of bacteria, correct?

A Yes. The bacteria usually get into the wound during the surgery.

Q And that's the bacteria is the first step in causation of the infection, not the smoking or the obesity, correct?

A Yes. I think, as I told you yesterday, that I think all wounds are contaminated at the time of surgery. The issue then becomes why does one person become infected and another doesn't.

Q By definition to have an infection you have to have an infected agent, the organism that goes into the wound, true?

A Yes. But what I just said is it's my belief that essentially all surgical wounds are contaminated and have bacteria largely from the skin I suspect. I guess it would be necessary if you have an open sterile wound it would be surprising if it became infected.

Q I don't want to misrepresent what you said yesterday. But if you told the jury that smoking and obesity were causal

factors, that would not be accurate to say, true?

A They are causal factors. They are not the – if every wound becomes at the time of surgery contaminated and then that causes one person to become infected and another not, it's due to their susceptibility. And in that sense they are causal factors.

Q The obesity and the smoking are not the sole causes, the only causes of a deep joint infection, true?

A Oh, I didn't say they were the sole cause.

Q I'm not saying you didn't. Just wanted to establish. Obesity is not the only cause when someone gets a deep joint infection, true?

A No, no. In Ms. O'Haver's case she had at least two such causes and probably others but just two so it couldn't have been the sole.

Q Yes, or no? Smoking was not the sole cause of Ms. O'Haver's deep joint infection?

A It is not the sole cause of Ms. O'Haver's deep joint infection.

Q Do you agree with me that obesity is not the primary driver of deep joint infections, true?

A I don't know what you mean by the primary driver.

Q Have you testified under oath that there are studies that show that obesity is not a primary driver of joint infections?

A I may have said that. I don't disagree with you. I said I didn't know what that meant today if you asked me.

Q But you're not going to quibble with testimony that you provided in the past that obesity is not the primary driver of a deep joint infection?

A I wouldn't get into that kind of semantic disagreement with you.

Q Thank you. Because to be sure, if you're obese but there's no bacteria or infectious agent you're not going to develop a deep joint infection, right?

A Yes, I said if the room was sterile it would not get infected. But the evidence seems to be all rooms are not sterile. All rooms are contaminated.

Q And if you smoke but you don't have any bacteria that gets into a wound you're not going to develop a deep joint infection, true?

A Again, if a wound ...

Q Yes or no, sir?

A Smoking would not cause an infection. But I believe that wounds are generally contaminated.

Q Yes or no?

A Yes.

Q If someone is walking around or lying on a bed and they're obese, smoking a cigarette and there's a whole huge cloud of bacteria circulating above them. And all of a sudden

something comes in and takes that cloud of bacteria and just shoves it right into the wound. You're not telling the jury that obesity and smoking are to blame as opposed to the thing that causes the bacteria to get in there, are you?

A No, probably not.

Q So you'll agree that in a circumstance like that, whatever that was that caused all that bacteria to jump into the wound contributed to the deep joint infection, true?

A In that case it might've contributed.

Q And you're aware here that the jury is going to decide what contributed, not the sole cause but what contributed to the cause of this infection, true?

A I don't know that to be true. Maybe.

Q You're not aware of any warning, are you, that 3M provided to the public not to use the Bair Hugger if you're obese?

MR. BLACKWELL: Objection, Your Honor, beyond the scope of the witness's expertise.

THE COURT: Overruled at this point. You may answer.

A I am not specifically aware of a warning.

Q You're not aware of a warning that 3M ever provided that said don't use the Bair Hugger if you smoke, right?

A I have never seen that warning.

Q Now you said something yesterday to the effect of if

you combine the odds ratios and the associations for obesity and smoking you're looking at something like a five to a six odds ratio, right?

A I said something like that.

Q And that five to six odds ratios is bigger than the 3.8 odds risk ratio reported in the McGovern study, right?

A Yes.

Q Now even if that's true, assuming for the sake of argument, that doesn't mean that the Bair Hugger does not contribute in some way to the infection, correct?

A Yes.

Q Okay, thank you. Now are you aware of whether or not 3M told the public that the Bair Hugger is safe for use in orthopedic surgery?

A I'm not aware that they did or didn't.

Q Are you aware of whether or not 3M's website still today says whether the Bair Hugger is safe or unsafe for use in orthopedic surgery?

MR. BLACKWELL: Objection, Your Honor. May I approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, my objection is that this is beyond the scope of his expertise. This is beyond the scope of the direct. He's not asking about 3M's either

marketing representations to the public. He's here to talk about general medicine and epidemiology. That's his expertise. That's what they examined him about in his deposition. That's what his reports have all been about.

MR. SACCHET: In the case we cited this morning, it said that under Missouri law an attorney is entitled to cross-examine on any aspect of the case with respect, Your Honor.

THE COURT: I think he's indicated recently that he hasn't read any of the 3M documents or relying on them. So in that sense that you continue to ask the questions of what you know and what the answer is going to be. And so it would appear that you're testifying and that the answer is going to be no. So the answer is he has not relied on any of 3M's documents.

MR. SACCHET: He says he's read documents. He said just 10 minutes ago he has read through the documents and that I don't know if he's read on the website or not.

THE COURT: Then you need to ask the question, have you looked at 3M's website because what you're saying is you giving information to the jury. This is establishing that foundation. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Borak, you testified earlier that the Bair Hugger - you're aware that the Bair Hugger poses a hypothetical risk of

infection in orthopedic surgeries, true?

A True.

Q If a risk is hypothetical, it exists in some circumstances but perhaps not all, true?

A No. It means it could under certain circumstances but it's not on all.

Q A risk which might under some circumstances exist?

Q So the Bair Hugger poses a risk which might under some circumstances exist, true?

A It might pose a risk under some circumstances.

Q Because it is hypothetical or theoretical, it is not some imaginary risk, true?

A No, it is imagined until it's been actualized.

Q It's not an imagined risk that Ms. O'Haver's attorneys like me have concocted out of thin air?

A I don't think there's any factual basis for that view of the world. So in that sense, it's concocted out of the air.

Q You just told the jury that there is a theoretical risk of the Bair Hugger in orthopedic surgery?

A It's hypothetical. It might be. There's no evidence that it does.

Q It's not imaginary?

A It's not conjured out of the air.

Q It's not imaginary?

A Not imaginary.

Q I'm using that word because it's in your deposition. I didn't make it up.

A Did I make it up?

Q You were asked a question. "You would agree that it's a hypothetical risk that's based on valid science?"

You answered: "They are not imaginary." Do you agree with that today?

A I'll accept that. They're not imaginary.

Q The Bair Hugger has the potential of nosocomial transmission of pathogens while it's being use for intraoperative warming, true?

A Yes, that's what it does.

Q Thank you. There is evidence that the Bair Hugger increases particulates over the sterile field?

A Yes, that's true.

Q There are studies that you have reviewed and relied on in this case that show that the Bair Hugger increases the number of particulates over the sterile field by one thousand fold?

A I would say it's true. I'm not sure about the thousand fold. Yes, it definitely increases the particles.

Q Are you aware that the Legg 2013 study which came after the Legg study that you showed the jury yesterday stated that convection currents increase the particle concentration one thousand fold by drawing potentially contaminated particles from below the operating table into the surgical site?

A I'll accept that.
Q You accept the statement in that study that orthopedic surgeons are concerned about particles over the sterile field from the Bair Hugger?
A I can understand that they would be concerned.
Q This is the only patient warming device that you're aware of that has been shown to increase particles over the sterile surgical field?
A I don't know that to be correct.
Q As you sit here today, you are not aware of any other warming device that increases bacteria over the sterile field besides the Bair Hugger, true?
A I am not aware of any other forced air warmer that raises the particulate count. I haven't looked to find out.
Q You're not aware of any other warming device that will stop that increase of bacteria over the sterile field besides the Bair Hugger?
A Let me just say yes, I would.
Q Thank you. You would agree that there is an association between some particles and bacteria, true?
A Yes.
Q You agree that the majority of particles carry bacteria, true?
A No.
Q You would agree that the majority of squames carry

bacteria, true?

A I don't know if it's the majority but some squames carry bacteria.

Q If you could please turn to tab 19 of your binder.

A Tab 19?

Q Yes. Do see the deposition transcript from this matter, Ms. O'Haver's case?

A I do.

Q And if you could please turn to page 46, actually 49 which is the small number. Let me know when you're there, sir. Do you see lines 18 through 21?

A Yes.

Q Under oath you were asked the question. "Well when he says that the majority of squames carry bacteria, you are not going to disagree with that, correct?"

Your answer under oath. "I won't go out and disagree with that, no." Is that what you said?

A That was Dr. Anderson's testimony. I do not disagree.

Q You did not disagree that the majority of squames carry bacteria, correct?

A Sir, what I said is I don't specifically remember that meeting with Dr. Anderson but I won't challenge it.

Q So you won't challenge 3M's own expert, Dr. Anderson who concluded that the majority of squames carry bacteria, true?

MR. BLACKWELL: Objection, Your Honor. May I

approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: I'm objecting on the basis of foundation and Counsel is testifying again now on what Dr. Anderson supposedly said this time. It's Counsel's testimony. There's no foundation for it.

And then the second, it's been close to 80 minutes now, over 75.

THE COURT: It's actually been 67 minutes cause I stop it during objections. So your objection is overruled.

Counsel, how much additional time do anticipate you would need?

MR. SACCHET: Maybe 15 or 20 minutes.

THE COURT: So I'm going to take a break at 10:50 and we'll get started at 11:10. So I'll give you 10 extra minutes past the break and you'll have five minutes for re-cross.

MR. SACCHET: So I have 10 now?

THE COURT: Right.

(RETURN TO OPEN COURT.)

Q I don't know if we resolved that question.

A I'm sorry.

Q I don't know if we resolved that question.

A Sure. I was responding to the question of what Dr. Anderson had said and whether I disagreed with Dr. Anderson. And I said I did not disagree with Dr. Anderson. I was not speaking to his numerical estimate.

Q Dr. Anderson is a 3M expert in infectious disease, correct?

A Correct. I believe he is going to be here next week.

Q He's a 3M expert in infectious disease, true?

A That's correct.

Q Thank you. Okay. You agree that in the operating room squames carrying bacteria are airborne contamination, true?

A True.

Q Now another study that you went over with the jury yesterday was the Routh or Routh, not sure how to pronounce it study.

A I don't know how to pronounce it either.

Q Fair enough. Chris, if you could please pull up Defense Exhibit 2580 subject to the Court's permission to publish. It's again Defense Exhibit 2580.

THE COURT: Any objection?

MR. BLACKWELL: No objection, Your Honor.

THE COURT: You may publish 2580.

MR. SACCHET: Thank you, Your Honor.

Q While we're getting it pulled up, yesterday your testimony was based on this Routh or Routh study that for

purposes of deep joint infection it didn't matter how many particles or not were over the sterile field, true?

A That's what it appears to say, yes.

Q That's what you told the jury yesterday?

A Yes.

Q You're aware that in this Routh or Routh study there was no particle counting that actually occurred, true?

A Yes, that's true.

Q So they didn't do a test to actually know oh, well on this part of the trial there was a thousand particles and on this part of the trial there was only five? But it made no difference in infection, true?

A They did not do that.

Q And you're also aware, are you not, that the Routh study expressly states in its findings that the study is underpowered to conclude that there was no statistical difference between the two groups, true?

A True.

Q You did not tell the jury yesterday when you went over this study that it is underpowered to support the conclusion that you told them, true?

A I did not say that.

Q Let's go to page 3 of the study so we can see that. At the bottom Chris, in the middle paragraph. The last line begins "This study has limitations. The most significant

weakness was that the study was underpowered to conclude that there was no statistical difference between the two groups." Do you see that?

A Yes, you read that correctly.

Q You did not show that to the jury yesterday?

A I did not show that.

Q Now what you did show to the jury was in that same column in the middle of the page - actually on the next page. Are we on page 3? Yes. On that same page you say --

A Do you want me to read it, sir?

Q Hold on one second. No question pending. Strike the question. Page 3 on the next page. We're already on page 3. Thank you. There should be a sentence that begins "Because." Do you recall the clip that you showed the jury yesterday that said "Because the rate of infection was unchanged after instituting use of the device it reinforced the complex nature of PJI and demonstrated that reducing airborne particles at the surgical site, although an attractive concept cannot eliminate the current occurrence of PJI."

A Yes, I remember the statement. I agree that it was projected.

Q If we could go to the next page of this study. And at the bottom of the first column it starts "Another weakness." during a multi-year period."

Do you see that?

A Yes, sir.

Q And it goes on. "Although the authors maintained a consistent commitment to infection control over the study duration, changes in clinical practice not measured in this study could have confounded the results." Do you see that?

A I do, sir.

Q You rely on a paper that acknowledges that there may be confounding factors about any criticism whatsoever but you tell this jury to totally disregard the McGovern study because it has that very same line in that study?

A One of the things they do say in this study is that they dealt with many of the confounders that the McGovern study did not have.

Q This study says that it may be subject to confounding, true?

A Sir, every observational study may be said subject to confounders. And statements like this are almost mandatory in every report to show that you're not stupid.

Q That's why the McGovern authors put it, right, mandatory to do so?

A They said it but they didn't do anything about it. That's the problem.

Q You relied on a study that it contained this caveat and did not rely on another study that contained the same caveat, true?

A I would point to you if you would like to give me the time to read this article, I will do so. But they talk about the constancy across the periods of time. And then they say but there may have be differences. I can read this or I can just leave it.

Q Now this paragraph, those lines we just read were literally right beneath the call out that you showed the jury yesterday but you didn't point that out, true?

A Yes, that's correct, sir.

Q Within the lines of the line that you called out was this language, true?

A It's right there, yes.

Q The Bair Hugger is not used in the study, true?

A They don't talk about it. But, in fact, I was in contact with the senior author. It does not talk about warming units. Your colleague did a deposition about it.

Q There is evidence that the Bair Hugger increases colony forming units over the sterile field, true?

A There is no evidence that it causes increased colony forming units over the sterile field generally.

Q There is evidence that the Bair Hugger increases colony forming units over the sterile field, yes or no?

A No.

Q If you'll please turn to page 19 of your binder. Let me know when you're there.

A I am there.
Q Page 109, the small numbers at the top of the box. Are you there?
A No, I'm not.
Q You were under oath during this deposition, correct?
A I was.
Q You swore to tell the whole truth and nothing but the truth, correct?
A So help me God.
Q This deposition occurred just a few months ago in Ms. O'Haver's case, true?
A Yes.
Q You were asked the question "You agreed before that there is evidence that the Bair Hugger increases colony forming units over the sterile field?
Answer: Yes." Is that what you said?
A Yes.
Q Different testimony today?
A Yes.
Q You're not aware of any other warming unit that increases bacteria or colony forming units over the sterile field, true?
A Maybe I said that already but yes, sir.
Q I asked you about particles. Now I'm asking you about bacteria. Same answer, right?

A Yes.

Q So you are not aware of any other warming device that increases bacteria over the sterile field besides the Bair Hugger, true?

A True.

THE COURT: Counselor, we're going to go ahead and take our morning recess. Folks, we'll get started at 11:10.

(INSTRUCTION READ.)

We'll get started at 11:10.

(BREAK AT 10:49 AM.)

(RETURN AT 11:19 AM.)

THE COURT: We will continue with cross-examination. Sir, I'll remind you that you remain under oath. Counsel.

MS. SACCHET: May it please the Court.

THE COURT: Counsel.

CONTINUED CROSS EXAMINATION BY MR. SACCHET

Q Dr. Borak, a few more questions for you this afternoon or perhaps before noon. We established just before the break that it is her opinion that the Bair Hugger is the only device that increases particles, correct?

A I'm not aware of any others.

Q So, therefore, it is the only, true?

A Yes.
Q And so over the past 30 minutes or so we've established (1) the Bair Hugger increases particles, correct?
A Yes.
Q (2) the Bair Hugger increases bacteria, true?
A Actually, I don't think that's true.
Q You said that before, true?
A In an earlier deposition I said that and I do not think that today.
Q Okay. Are you aware of the Moretti study?
A Of course.
Q You're aware that the Moretti study found a statistically significant increase in the number of bacteria that the Bair Hugger deposited over three agar plates surrounding the surgical table, true?
A I believe the Moretti study reported that the number decreased from the start to the end of the operation or after the patient was placed on the table but I'd have to read it again.
Q The Moretti study found that the Bair Hugger increases the number of bacteria around the surgical table as compared to at rest conditions, true?
A But not when the patient was placed on the operating table, yes.
Q That wasn't my question.

A I'm sorry, sir. Your question is too restrictive.
Q The Moretti study found that the Bair Hugger increased by a statistically significant amount the amount of bacteria on agar plates surrounding the table as compared to at rest conditions, true or false?
A Compared to at rest conditions, true.
Q Thank you. Thank you. You agree that bacteria increases the risk of deep joint infections, true?
A I'm sorry.
Q Bacteria increased the risk of a deep joint infection, true?
A I don't understand your question. Bacteria abstractly?
Q There's high-quality evidence indicating that there's a proportional relationship between intraoperative levels of airborne microorganisms and the incidence of periprosthetic joint infections, true?
A I don't know that's true. Did I say that?
Q Did you not disagree with the International Consensus's finding that that is true?
A Read it again to me, sir.
Q "There is high-quality evidence indicating that there is a proportional relationship between intraoperative levels of airborne microorganisms colony forming units in the incidents of periprosthetic joint infections."

A I will accept the statement. It may be true.
Q You do not disagree?
A I do not disagree with you right now.
Q You're aware that the International Consensus Statement found that proposition to be true based on high-level evidence, true?
A I could look again but I'll accept what you say.
Q Assuming that the bacteria over the sterile field increases the risk of infection, do you agree that the Bair Hugger can increase the risk of periprosthetic joint infection, true?
A True, hypothetically, yes.
Q If it is true that Bair Hugger increases bacteria, it is also true that the Bair Hugger can increase the risk of periprosthetic joint infection?
A Hypothetically, yes.
Q If it is true that there are studies showing a statistically significant increase in the number of bacteria from Bair Hugger, then it is true that the Bair Hugger increases the risk of periprosthetic joint infections?
A Hypothetically.
Q The answer is yes?
A Yes, hypothetically.
Q Unlike the hypothetical risk posed by the Bair Hugger, the Hotdog does not have such a hypothetical risk, true?

A I don't know if that's true. It still warms and changes theories, hypothetically currents and might have an effect.

Q If you could turn to page 225 of tab 19.

A Of what?

Q Tab 19 please. Let's start with 19.

A It's not an issue that I would choose to disagree with you about.

Q You disagree the Hotdog does not have a hypothetical risk that the Bair Hugger does?

A You're asking me that now?

Q Yeah. You just said you weren't going to disagree. Do you disagree?

A Hypothetically, it could be. I don't know. I haven't seen any evidence.

Q Okay. Can you go to page 225 of your deposition. Are you there?

A Not yet. I am now.

Q Lines 2 to 5. You were asked under oath "Well you have - let's use the Hotdog. The Hotdog doesn't have the hypothetical risk, correct?

Answer: "Correct, period."

Was that what you said under oath?

A I'll accept that.

Q Is your answer different today?

A No.
Q Thank you. By using a non-forced air warming device you avoid the hypothetical risk of forced air warming, true?
A That's probably true.
Q Is it true or is it probably true?
A I think it's true.
Q It is true, correct?
A I think it's true.
Q It is true, correct?
A I think it's true.
Q Have you said it is true?
A I think it's true.
Q Dr. Borak, I have to hurry up because you have to leave at 11:30, correct?
A Close to that, yes, sir.
Q And you don't have time to come back for us, right?
A That's correct.
Q So I've got a few more questions before you're off the hook. The first one is you are not aware of any testing that shows that the Bair Hugger is safe, true?
A I'm not aware of any evidence that it is safe.
Q Thank you. There is no evidence that the Bair Hugger does not increase the risk of deep joint infection, true?
A There's no evidence that it does not.
Q There's no evidence that it is safe, true?

A There is evidence that I'm aware of that it is safe.
Q You cannot tell this jury sitting here right here and now on behalf of 3M that there's evidence that shows that the Bair Hugger is safe for use in periprosthetic joint infection cases, true?
A Correct. I can only say that there's no evidence that it is not safe.
Q There's no evidence that the Bair Hugger was safe to use in the operation that Ms. O'Haver had when the Bair Hugger was used on her, true?
A It's true.
Q Thank you.

MR. SACCHET: I'm done with cross-examination.

THE COURT: Redirect.

MR. BLACKWELL: Yes, Your Honor.

REDIRECT EXAMINATION BY MR. BLACKWELL

Q Good morning, Dr. Borak.
A Good morning.
Q Good morning, ladies and gentlemen. Let me just start with this whole issue of hypothetical risk.
A Yes.
Q Are you aware of any studies where the researchers were able to culture bacteria from the air exhausted from a Bair Hugger blanket?

A No.

Q When you had told the jury - when you expressed your opinion on CF use and whether or not the Bair Hugger increases the number of colony forming units in use, you said your opinion was different today?

A Yes.

Q Why is that?

A Well there's a paper that was just mentioned by the plaintiff's lawyer referred to an increase from but ignored when the patient was put on the table. I didn't think that that indicated that the Bair Hugger was causing an increase.

There's a second study by Tumia which shows a very small increase which is regarded as unimportant by the authors and which I probably thought of as more important when I was deposed.

Other than those two I'm actually not aware of anything. I think that Tumia may have been four patients. I think the colony count was one or two, very small.

Q You were asked quite a lot of questions about the McGovern study?

A Yes, I was.

Q You were asked quite a number of questions about the author, principal author Mr. Reed?

A Yes, sir.

Q You were asked questions about the International

Consensus?

A Yes, sir.

MR. BLACKWELL: Your Honor, may I please display Exhibit 3501. It's in evidence already.

THE COURT: Any objection, Counsel?

MR. SACCHET: No objection.

THE COURT: 3501 may be published.

Q So if we may look at the author.

A Yes, sir.

Q Do you remember being asked all those questions about Michael Mont and what was or wasn't done with respect to Michael Mont?

A Yes.

Q In the International Consensus General Assembly Prevention Operating Rules Environment Proceedings at International Consensus on Orthopedic Infections. Now do you see the name Michael Mont in there?

A No, sir.

Q This is 2018?

A That's correct. I think that is.

Q Do you see the name Mike Reed?

A Yes, I do. It's highlighted in yellow.

Q That's the same Mike Reed that was a principal author of the McGovern study?

A I believe so, yes.

Q Do you see a footnote number 7 next to Mike Reed's name? Could we look at that footnote number 7? If we go back up to the text.

So what does the reference there to question number 2 mean with respect to the footnote 7?

A I believe this is indicating which ones of the authors were responsible for drafting the information for each of those specific questions.

Q So if we see a footnote number 7 next to the name of Mike Reed, the author of McGovern, that means he's also the principal author of question number 2?

A Yes, that's correct.

Q Could we please look at question number 2. Question 2: "Does the use of forced air warming during orthopedic procedures increase the risk of subsequent SSI/PJIs?" Isn't that what Mr. Sacchet was talking to you about?

A Yes.

Q "Recommendation: There's no evidence to definitively link forced air warming to an increased risk of SSIs/PJIs. Alternative methods of warming can be effective and may be used." And the delegate votes was what? A strong consensus?

A Yes.

Q 93 percent?

A Yes.

Q And so this again is the author of the McGovern study

who authored this question?

A Yes.

Q Did the International Consensus in fact consider McGovern in anything that Mr. Sacchet asked you about?

A Yes. It's listed in the references to this section.

Q Could we look at that section. We see here that there's a reference to McGovern. Can you see that?

A Yes.

Q And the highlighted text. "The authors noted however that their observational study did not account for infection control procedures that changed over the study period or account for several possible differences in patient risk factors such as obesity and fitness for surgery."

A Yes.

Q Is that exactly what you've been saying?

A That's what I've been saying.

Q And here is the same author?

A Yes.

THE COURT: Counsel, you've used five minutes.

MR. BLACKWELL: My five minutes is up?

THE COURT: It is.

Q Okay. We'll have to stop right there. Thank you very much, Dr. Borak.

THE COURT: Re-Cross.

RECROSS EXAMINATION BY MR. SACCHET

Q Dr. Borak, I have five minutes as well so I'm going try to be clear and quick. Going back to whether studies or not show that there's an increase of bacteria from the Bair Hugger, we established yesterday that your personal opinion is that the presence of infectious microbes being harbored in the Bair Hugger unit can increase the risk of infection for the patient, true?

A Yes, hypothetically.

Q We just heard about the International Consensus Statement, true?

A We did.

Q And if we could please bring that back up on the screen. Question number 2. The question is not is there any evidence that forced-air warming increases the risk of periprosthetic infection, true?

A I would have to look at it again. I don't think that's a question. Does the use of forced air warming during prosthetic procedures increase the risk?

Q Is the answer there's not any evidence, not any evidence that links forced-air warming to periprosthetic infection?

A No, it says, "There is no evidence to definitely link it."

Q Definitely. It says there's no evidence to actually

definitively, not definitely, definitively link forced-air warming?

A Sorry, it's definitively not definitely.

Q To periprosthetic joint infection, true?

A That's exactly what it says.

Q The only kind of evidence that can definitively link anything to anything else is a randomized controlled trial, correct?

A Not even then, sir, sometimes.

Q So there's no evidence anywhere in the world that could have been found to definitively answer this question yes?

A It's generally regarded as being the weight of evidence. And this is a single study which does not have weight. I'm sorry. Your Honor, I apologize. It's hard not to answer the question properly.

Q Is it possible to have definitive evidence to agree with this question based on one study?

A One study such as we have couldn't possibly be definitive.

Q And it looks like 93 percent of people agreed with that idea, correct?

A Yes, sir.

Q Okay. And there was a mention about this actually considered everything that we've been talking about. That's not true, is it? Every single study that you know about or I know

about, is that true?

A It's not every single study. There's a very large list of all McGovern authored papers and also other papers.

Q They did not consider the Bernard study, correct?

A Which I now know about.

Q Yes or no?

A No.

MR. BLACKWELL: I object, Your Honor.

THE COURT: Hold on. Hold on.

MR. BLACKWELL: May I approach please?

THE COURT: Come up.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I'd object on foundation in the sense that Counsel's testifying. Bernard was not a study. He's declared it to be a study. I don't get to get up again. It was simply a case report. It's not a study.

MR. SACCHET: It was on their list of types of evidence and studies that you can consider when determining based on the hierarchy of evidence whether there is support for this.

THE COURT: Rephrase your question. The objection is sustained.

(RETURN TO OPEN COURT.)

Q The Bernard case study was not considered by the

International Consensus Statement in answering that question, yes or no?

A Yes. The Bernard case was not considered.

Q Now to wrap this up. You cannot say that the Bair Hugger did not cause Ms. O'Haver's deep joint infection?

A Yes, I agree. I said that before.

Q You can can't tell this jury that the Bair Hugger didn't do it, correct?

A It is not possible to say it did not and it's not possible to say that it did.

Q Therefore, you cannot rule out, you cannot exclude the Bair Hugger as a potential cause of this woman's deep joint infection, true?

A There's a hypothetical risk.

Q You cannot exclude it as a potential cause of her deep joint infection, true, yes or no?

A Yes. I can conclude it as a hypothetical risk of her joint infection.

Q Yes or no, you cannot exclude it as a potential cause of her infection?

A I cannot exclude it.

Q Therefore, it is a potential cause for this jury to consider in determining whether it contributed to her deep joint infection, true?

MR. BLACKWELL: Objection, Your Honor, it invades

the province of the jury. It's an improper question.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: Response, Counsel?

MR. SACCHET: I don't know why it invades the province of the jury. I said you can't tell this jury that the Bair Hugger did not contribute to her infection.

THE COURT: That's a question for the jury to decide. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Borak, you cannot exclude the Bair Hugger as a potential cause of Ms. O'Haver's deep joint infection?

A I cannot exclude it.

MR. SACCHET: Thank you.

THE COURT: May this witness be excused by the defendant?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: By the plaintiff? May this witness be excused?

MR. SACCHET: May I preserve the objection as we discussed?

THE COURT: Come up.

(BENCH CONFERENCE.)

THE COURT: So your objection was that you would need a certain amount of time. This morning I asked you 10

minutes before the break as to how much additional time you needed and you said 20 minutes. And I said 10 minutes before the break and 10 minutes after the break. You have asked for no additional time since then. So I guess what is your request to the Court?

MR. SACCHET: I don't have a request. I didn't know how much - I didn't do everything I wanted to in the re-cross.

THE COURT: I didn't stop you. You stopped yourself.

MR. SACCHET: I will try. I thought I was at five minutes. I didn't want to violate the Court's order by going over.

THE COURT: You never indicated that you needed additional time after the break. I didn't stop you. You stopped yourself. I also didn't stop you at the five minutes. So if there's a request to the Court that you want to make then you need to make it now.

MR. SACCHET: I'll withdraw it.

(RETURN TO OPEN COURT.)

THE COURT: Thank you, sir. You may step down.

A Thank you, Your Honor.

THE COURT: Counsel, can you approach.

(BENCH CONFERENCE.)

THE COURT: Should we take a recess for 10 minutes to get things going?

MR. BLACKWELL: Yes, that would be a good idea. And we have a technical guy there who's kind of like a Brett there just in case there's a technical problem. He's not a lawyer. He's there if there's a problem with the AV stuff. If that's an issue for Mr. Emison.

MR. EMISON: As long as he's not communicating with the witness.

MR. BLACKWELL: He won't be.

THE COURT: Okay. All right. Let's take a break.

(RETURN TO OPEN COURT.)

THE COURT: Okay, folks, the next witness is actually going to be testifying by WebEx. So we're going to take another quick recess for about 10 minutes just to get that set up.

(INSTRUCTION READ.)

We'll get started about 11:50.

(BREAK AT 11:35 AM.)

(RETURN AT 11:50 AM.)

THE COURT: You may be seated. We will continue with the presentation of the defendant's evidence. So you may call your next witness.

MR. BLACKWELL: May it please the Court. Defense

calls Michael Mont.

THE COURT: Doctor Mont, raise your right hand.

(DR. MICHAEL MONT TESTIFYING BY WEBEX.)

MICHAEL MONT,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MR. BLACKWELL

Q Good afternoon, Dr. Mont.

A Good afternoon.

Q Could you please introduce yourself to the jury and tell us a little about your family?

A My name is Michael Albert Mont. I'm having a little trouble hearing. There's a little static. What was the second part of the question?

Q Could you introduce yourself to the jury and tell us a little bit about your family?

A My family - is that what - I'm having trouble hearing.

Q Can you hear me better now?

A Okay, yes. Much better now. Thank you. So we're broadcasting from Baltimore. I'm married. I have four children. Two of them are in Baltimore, one in New York, one in Philadelphia.

Q Tell us what you do.

A I'm an orthopedic surgeon. I specialize in hip and knee replacement procedures as well as procedures on how to avoid hip and knee replacement.

Q Dr. Mont, that's M-O-N-T. Dr. Mont, why have we asked you to come here today?

A I've been asked to testify regarding the Ms. O'Haver case.

Q Tell us a bit about what you've done to prepare yourself to testify in this case?

A So I went through the medical records of Ms. O'Haver. I went through a number of depositions and I also went through a lot of scientific reports, papers that were pertinent to this case.

Q Are you prepared to offer opinions on the causes of Ms. O'Haver's infection?

A Yes, I am.

Q Tell us, do you specialize in orthopedic procedures?

A Yes, I do.

Q What do you do?

A So I basically - I do hip and knee replacements. I also do a number of other procedures. I do knee arthroscopies. I do grafting procedures to try to save people from hip and knee replacements. I treat a lot of people non-operatively. I probably treat five to 10 times as many people non-operatively versus operatively to try to avoid hip and knee replacements.

We start the joint placements or the surgical procedures for the most part should be the court of last resort for a patient.

Q So you've done a lot of joint replacement surgeries in your career?

A Yes, I have. I've done upward of 15,000 or more joint replacement procedures.

Q Did you say 15,000?

A One five or more give or take.

Q And have you used patient warming in those joint replacement surgeries?

A Yes, I have.

Q How many of those patients of the 15,000 would you say you have warmed?

A I would say 100 percent of them, all of them.

Q And you currently warm all of your patients then?

A Yes.

Q Does it matter if the patient is overweight or not?

A No. No, we do a large portion of the patients that get osteoarthritis that they need a knee or a hip will be overweight. So they're all warmed.

Q And does it matter how long you expect the surgical procedure to last?

A You would still - you would use warming on every case because no matter what you expect you can't absolutely predict

how long a case will take.

Q So have you used the Bair Hugger?

A Yes, I have.

Q And what has been the predominant source of patient warming in your surgeries?

A I would probably venture to say that over 90 percent of the cases I've done in my whole career had been using the Bair Hugger forced air warming device.

Q When was the last time you used the Bair Hugger patient warming device?

A A few hours ago I did a case that ended a little past midnight so it was last night.

Q And when you say you did a case, what's the case?

A Well it was an emergency case that I got called the morning of. It was a joint replacement case that started around 10 PM last night.

Q And when you talk about something being a case, you're referring to a surgical procedure?

A Yes, it was a hip replacement revision.

Q Dr. Mont, let's talk a little bit about your educational background and training. Could you tell the jury about your educational background?

A Well I grew up in New York but then I came to Baltimore and I did my undergraduate degree at Johns Hopkins University. I then went to medical school in Philadelphia at

the University of Pennsylvania. After that I did an internship, a research fellowship for year. And then I get a four year residency in orthopedics at Mount Sinai in New York.

After that point I did a one year special fellowship in adult hip and knee reconstruction or hip and knee replacement and other procedures like what I was just describing. So that was a one-year fellowship at Johns Hopkins in Baltimore where I am now. After that they invited me to stay on as a faculty member so I could continue.

Q You just picked some of the time periods. Your undergraduate degree, first of all, what was it in, your undergraduate degree?

A A Bachelor of Science, a BA in Natural Sciences or Biology.

Q And would that have been in 1980?

A Yes.

Q And your medical degree from the University of Pennsylvania, was that in 1984?

A I'm sorry. Yes, so I got that in '84, four years later.

Q And then you had a number of years of training after medical school, seven years?

A 1 ,2, 6, 7 years, correct.

Q And part of that you were an intern in the Department of Surgery at Mount Sinai in New York?

A Correct.

Q Then you did a residency?

A No. So the internship was right after medical school for one year. No, actually I did a research fellowship for one year - no, I did the internship - I did the internship right after medical school. I then did a research year for one year. And then I did the residency right after that in orthopedics from '86 to '89.

Q And after you completed the internship in '89, what did you do?

A I did the fellowship that I described in Baltimore in adult hip and knee reconstruction.

Q And did you at some point join the faculty at John Hopkins Medical School?

A Correct. And I stayed on as a faculty member. I became an assistant professor, an associate professor until - from '89 I stayed on for about 11 years till the year 2000.

Q And then thereafter were you a founder of an institute that deals with orthopedics?

A So I was a cofounder of the Rubin Institute of Advanced Orthopedics which is at Sinai Hospital in Baltimore which is where I am again right now. So I was there for 16 years. I did leave for a period of time and I'm now back there.

Q And when you left - you said you left for a period of time and then you came back. Where did you go for that period

of time?

A So I was there for 16 years. And then I was - I became the Chairman of Orthopedics at Cleveland Clinic which was a nine hospital system. And I did that - I was the Chairman of Orthopedics for two years. A lot of my family moved to New York for various family reasons. I then after a two year period went to New York and joined Lennox Hill and the Northwell Hospital System.

Q Well let me ask you about your time at the Cleveland Clinic that you told us was a group of nine hospitals. Did they have a staff of physicians who were orthopedists there?

A Yeah, there were about 150 orthopedists or advanced practice practitioners like PAs or sports medicine specialists. And those are the - that's who I supervised as the chairman.

Q And do you how the Cleveland Clinic ranks in terms of orthopedic hospitals in the country?

A At that time it was number two - no, it was number three in the country and stayed that way which we were really proud of.

Q And you were there for two years?

A Yes.

Q Now you're back in the Baltimore at the Rubin Institute that you cofounded. What's your position there now?

A Well after Cleveland Clinic I went to New York for three years if you want to talk about that.

Q Well tell us what you did in New York.

A I'm back in Baltimore now and I'm an orthopedic surgeon. I practice in Baltimore. I still have a position directing clinical research at Northwell which is the system that I entered in New York.

Q Dr. Mont, just to round this out, tell us when you were in New York at what you did in New York.

A So in 2018 I went to New York. I was there for three years. I practiced at Lenox Hill Hospital. I had three positions. I was Vice-Chair of the Orthopedic Department for Strategic Operations. I was the Director of Joint Replacement and I became the Director of Research.

Again, after a three period, for family reasons - two of my kids moved back to Baltimore. My wife felt that she wanted to come back to Baltimore. So for family reasons we came back to Baltimore. Then I was able to maintain that Director of Orthopedic Research position, a slightly different title so I supervised the clinical studies at Northwell. So that's a lot of my research position at this Northwell system.

Northwell is a 23 hospital orthopedic - it's a 23 hospital medical system. It's approximately the fourth-largest in the country. So the research in orthopedics is done at about 18 of those hospitals. So I'm still the director of that. But my clinical duties are now back at the Rubin Institute which is the place that you talked about earlier that I cofounded.

Q Now, Doctor, with all that I take it you're board-certified?

A Yes.

Q When did you become board-certified?

A The first time I was board-certified was in 1995. Then you need to be recertified every 10 years. So I've been recertified. I'm actually up for recertification next year.

Q Now, Doctor, are you doing any teaching right now?

A Yes, I do.

Q Where are you at?

A So basically I'm at the Rubin Institute and I work at two hospitals, at Sinai Hospital and Northwest here in Baltimore. I'm basically teaching medical students and residents and a lot of adult reconstructive fellows.

Q Do you do any teaching still at Johns Hopkins?

A I mean there's an occasional medical student from Johns Hopkins that will come over and I'll teach them. They - I think they may be inviting me for a lecture. So I didn't mention that I did lectures in different institutions. I'll probably be giving a lecture later on. I give lectures at different institutions.

We have a weekly conference with lectures which is teaching. I'm interfacing by Zoom lecture to where I left in New York. So there are five clinical fellows in New York and I still teach them and I still do research projects and I'm

teaching them how to do research in New York. So the teaching encompasses a lot of different aspects.

Q So in getting to know you a bit better, Dr. Mont, what's the most important thing that you teach to the residents and fellows that you instruct?

A Well I mean no question, that the fellows or the residents that work with me, the most important thing for them to learn is how to take care of patients. So they may want to learn about surgery but they need to learn how to take – how to treat patients in the clinic, how to diagnose musculoskeletal disorders and orthopedic problems, their demeanor around patients. That's the number one thing that they should be taught.

Q Is there something you always do with all of your patients with the cell phone?

A I didn't hear the last part of that question. I'm sorry.

Q Is there something you do with all ... so we just have a little bit of lag so I'll try to pause and let you finish before I start again. Is there something you do with all of your patients with respect to your cell phone?

A All surgical patients get my cell phone number and generally their significant others, many of the nonsurgical patients. I started this in the 90s when we didn't have cell phones so they would get my home number. But now we have cell

phones and I think that's very important so that they can get a hold of me at any time.

Q So tell us, are you a member of any professional societies?

A Yes.

Q Tell us what they are.

A Well to be an orthopedic surgeon you need to be a member of the American Academy of Orthopedic Surgeons. That's the organization that you said am I board-certified and that I'm doing every 10 years so it says I can practice orthopedics. It's related to the ALA which is another organization so they're couples.

Specifically, in the specialty hip and knee I'm a member of a number of organizations. For example, The International Hip Society is very prestigious, limited number of members. There is an organization called The American Association of Hip and Knee Surgeons. That's about 5,000 members in the country that do hip and knee replacements.

And then there are more elite, you could say more elite organizations. There's the Hip Society and the Knee Society. And those are organizations that have a little less than 100 members. They're by invitation only. They have very strict criteria to get into those organizations, The Hip and Knee Society.

Q And so what in general and even briefly, what might be

some of those qualifications to be a part of that society?

A So the latter two you would - for both of them I believe you'd need to have published at least 20 papers in that specific field in a short period of time. They can't be over 20 years. In say the last three or four years you have to be dedicated to that showing knowledge of hip or knee that's a major interest. And it's typically by invitation only. You have to have number of recommendations to get in.

Q Doctor, one of the other groups the jury has heard about in this trial is the International Consensus on Musculoskeletal Infections. Are you familiar with that group?

A Well those were two groups that were convened. I believe one was in 2013 and the other one was in 2017 when we had on-site meetings. And then the proceedings were published in 2014 and 2018. I'm believe we'll have another one somewhere in 2024 or '25. So those were groups that were convened to discuss periprosthetic infections and opine on a lot of those matters.

Q We heard you say we may have meetings upcoming. What's your role or participation in International Consensus?

A Well I have a number of roles but I was - everybody that's there is considered a delegate. Some of the delegates are involved in writing about certain topics before the meeting convenes. All of the delegates are there to discuss these topics and vote on them. I think that's what you're asking me.

I had some other roles. I was - these topics were published in a journal. At the time I was the assistant editor-in-chief of the Journal of Arthroplasty. And the proceedings of these meetings were completely published in these - or almost completely published in the journal that I was the assistant editor of. So for both of the proceedings I ended up editing. I was major editor of the proceedings.

Q Is the International Consensus simply an opinion-based organization or what's the basis for the positions that the International Consensus takes?

A The consensus meeting basically looks at different topics. For example, in hip and knee there were about 140 topics. They were written about. They were discussed, vetted out, analyzed. And then on those topics the people there would go and then they'd agree with the statements being made, disagree with the statements being made or they abstained.

Q Thank you.

MR. BLACKWELL: Your Honor, I would offer Trial Exhibit 2610 which is a copy of Dr. Mont's CV.

MS. ZIMMERMAN: No objection, Your Honor.

THE COURT: 2610 is received.

Q Now I want to go with you back to the Journal of Arthroplasty where you were an editor-in-chief, right?

A I just became editor-in-chief this past January. So I was the assistant editor-in-chief for a five-year period. I've

been involved with the Journal of Arthroplasty for over 20 years. I became the editor-in-chief this last January, yes.

Q And tell us, what is the Journal of Arthroplasty?

A It's a journal that it receives submissions that have to be peer-reviewed. I would say it's the pre-eminence journal that publishes articles on hip and knee replacement. Probably each issue has approximately 50 or 60 articles. So it probably publishes depending on the year 55 percent of the articles that are in hip and knee replacement and other topics related to the hip and knee. It doesn't just have to be replacement.

And if you look at the major journals, it publishes about 70 percent of the content if you just look at the major journals in orthopedics. So for hip and knee I guess I'm pretty proud of that journal.

Q Have you been an editor or reviewer of additional journals over the years?

A Yes, for many journals.

Q More than 20?

A Over the years. I mean I'm not doing as many right now because I have all the duties with the Journal of Arthroplasty. I'm still doing about five or six on a regular basis but I've done way more than - I've been editor over my career for over 20, yes.

Q Dr. Mont, I'm holding here Exhibit 2610, your CV that is 155 pages. Have you done any publishing, any publications?

A Yes, yes I have.
Q Roughly how many peer-reviewed publications have you done?
A Very close to 1,200.
Q What about either book chapters or abstracts?
A I write a lot of book chapters and abstracts for a lot of meetings. There's so many abstracts - if you're asking me for numbers, they're probably too numerous to count. The whole thing would be well over 2,000. I don't keep track of every one now.
Q Dr. Mont, do you know of anyone else involved in orthopedics who has published more than you have in the peer-reviewed literature?
A No, certainly not in the past 10 years.
Q Have any of your publications looked at issues related to periprosthetic joint infections?
A Yes.
Q Roughly how many?
A Probably over - I mean guesstimate over 200.
Q Now in addition to the teaching or the publishing, the seeing of patients, do you also do consulting work?
A Yes.
Q Tell us about that.
A I do consulting work for different companies. The primary company that I work for is Stryker which I can elaborate

on what I do. I'm part of inventor/consultant group, a small number of surgeons that develop new prostheses. We develop instrumentation, do a lot of research on that.

For example, I did part of teams that have developed the robotic - how to do robotic knee replacements and robotic hip replacements which is a big interest of mine.

Q Before spending time with respect to the Bair Hugger, had you been a consult with 3M before?

A No, not to my knowledge, no.

Q Are you charging for your time here today?

A Yes, I am.

Q What's your hourly rate?

A Five hundred dollars per hour.

Q With respect to this case, do you know what you've charged for this case so far?

A Yes. I would say for this specific case approximately 40,000.

Q Now for any other consulting work you've done for 3M, what would you say the total is that you've charged?

A It would be a guesstimate but I would say approximately 200K.

MR. BLACKWELL: Your Honor, I would offer Dr. Mont as an expert in orthopedic surgery including the treatment of periprosthetic joint infections.

MS. ZIMMERMAN: No objection.

THE COURT: His testimony will be received as such.

Q So Dr. Mont, let's talk about your orthopedic practice in surgical draping. What percentage of your practice - what percentage of your practice would you say involves hip and knee replacement surgeries?

A It varies a bit per year but it's approximately 70 to 80 percent.

Q Between that hip and knee, how would you break that down?

A I would call that 50/50.

Q The jurors have heard the term arthroplasty quite a bit in the trial. You tell us, what is that? What is arthroplasty?

A You could think of the first part arthro is the joint. So when you have arthritis that means you're getting an inflammation of the joint or breakdown of the joint. So arthro is the joint and plasty, think of plastic. You're shaping - you're reshaping the joint.

Some one way to reshape the joint is by doing these prostheses. And I've held up a knee replacement model that I brought in. There are other ways to reshape the joint. You can cut the bone and re-angle the joint. There are different things that you could do to try to save the joint. So there are procedures that allow you to save the joint from a metal and

plastic joint replacement.

Most people think of an arthroplasty as just a joint replacement. But these other reshaping procedures or cartilage preserving procedures they can be considered arthroplasties. And they're very satisfying when you can actually take a patient and save them from getting a joint replacement and now it works.

That's certainly something I like to do with some of the diseases that I treat.

Q So you had just held up an actual prosthesis. What was that?

A Yes.

Q Was it a hip or a knee?

A I held up a model of a knee replacement. It's just a model of the knee replacement but it is a real prosthesis in the model.

Q So you told us that you certainly treat periprosthetic joint infections. How many of those have you treated?

A I would have to guess at something like 2,000, maybe it's 2,000 to 2,500, something like that in my career.

Q Does treating a periprosthetic joint infection involve a revision procedure?

A Generally, it does require some type of going in and cleaning out. Occasionally it's - occasionally it might be a superficial infection and you don't need to do a revision. You could just wash things out because it's not below the fascial

layer. So that does occasionally happen and that would be considered a periprosthetic, a superficial infection.

A deep infection is a different bird. That's when the bacteria is deep in the joint. And that typically requires some type of revision procedure. And there are different types of revision procedures.

Q And by revision, you mean taking the joint back out and replacing it?

A I'm going to hold up the knee. And in this knee you can see this metal. Is it worth my explaining what a knee replacement is? This is a model of a knee that does not have a knee replacement. And then this is a knee that has a knee replacement in it.

Q All right. So with a revision procedure, what are you doing?

A So I was going to - okay. So your question I believe is saying what's involved in a revision or maybe just asking. Ask it again. A knee replacement - and native knee that gets arthritic has a kneecap in front that can get arthritic. And it has nice white cartilage on the femur and the tibia like if you open a chicken bone and you see that white shiny cartilage. That gets damaged and that needs to be replaced when you do a knee replacement.

We typically replace the damaged cartilage on the femoral side with this metal prosthesis. I hope everybody can see that.

That's the front of it up here and that's the side of it.

In addition, the tibia part, the femur is the longest bone in the body and that articulates with the tibia. Those are the two bones coming together. And there's a metal tibia component.

And between these two components is plastic. We call it high molecular weight polyethylene but it's a piece of plastic.

So the knee replacement is made up of the metal on the femoral part of the knee, the tibial metal and a piece of plastic in the middle.

When you do a revision you could just take the plastic out and that's what happened here in the DAIR procedure and I could explain that later if you'd like. Or you could take all these pieces out which is a much bigger revision. They can both be considered revisions.

One is a simpler revision where you're just cleaning it out, taking out - popping the plastic out, that piece of plastic, putting it back in, cleaning the knee out. That's a simpler revision than taking everything out.

Q So you told us about what is a simple revision and then what's one that's a total joint replacement type of revision where you replace the whole thing?

A Yes, you have to replace all the pieces.

Q How many total revision surgeries have you done?

A If I count hips and knee revisions, my revision practice is approximately 40 percent of my all joint

replacements so 40 percent of 15,000 is about 6,000 so approximately 6,000 revisions.

Q And do you feel doing that quantity of revisions is typical for an orthopedic surgeon like yourself?

A No, it's a lot more.

Q Now have you developed certain ways or approaches to treating infections?

A Have I developed ways?

Q Yes.

A Early in the 1990s the treatment of patients with these infections of trying to save these knees by taking out the plastic and saving the whole knee, that's called - I called it in the 90s an irrigate and debridement procedure. Actually, people joke about me and just say irrigation debrideMONT procedure.

So I published on multiple debrideMONT procedures and we would save about 80 percent of the knees if they were under the right circumstances.

That procedure then got studied more and more. They call it different names now like the DAIR procedure.

Q So Dr. Mont, are you saying you are one of the pioneers of the irrigation and debridement process?

A Yes.

Q Now can you tell us what your infection rate is for primary surgeries talking about cases where you've done the

initial surgery?

A Under one percent.

Q And how does that compare to the national average?

A It's way less. The national average is like between one and two percent. Many years I have zero. I have no infections. I think I have one out of the last 300, something like that.

Q So, Dr. Mont, you're familiar with how the Bair Hugger blanket is placed on the patient before the surgery in the operating room?

A Yes.

THE COURT: Counsel, if you getting ready to switch topics.

MR. BLACKWELL: Yes, Your Honor.

THE COURT: Okay. Why don't we go ahead and recess. Dr. Mont, we're going to go ahead and recess for lunch, okay?

A Okay.

THE COURT: Okay, guys, lunch has been set up across the way. We'll get started at 1:45.

(INSTRUCTION READ.)

Have a good lunch and we'll get started at 1:45.

(LUNCH BREAK AT 12:41 PM.)

(RETURN AT 1:47 PM.)

THE COURT: You may be seated. We will continue

with the direct examination of Dr Mont. Dr. Mont, I will just remind you that you remain under oath.

A I understand.

THE COURT: Thank you. Counsel.

CONTINUED DIRECT EXAMINATION BY MR. BLACKWELL

Q I wanted to clarify one thing, Dr. Mont, before we go forward and talk about the draping. You told us about a number of revision surgeries that you have done. Now those surgeries overwhelmingly were not for people who were originally your patients, are they?

A Correct. There are various a very small number are my own patients. We are in an attachment area of three or four states and a lot of people send to myself and my partners a lot of the revisions.

Q And why are they referred to you?

A Well, as I said, I did a special fellowship right after my training in hip and knee reconstruction. And ever since that period of time I've been doing revisions and writing about it and lecturing about them and talking to other surgeons in the areas. And I enjoy doing that and take pride in helping patients.

Q So, Dr. Mont, let's talk about the draping. Have you brought or prepared a number of photographs to illustrate how the draping process would take place in a knee replacement

surgery?

A Yes, I have.

Q Dr. Mont, if I can get you to turn to Exhibit 4125, the draping slide?

MR. BLACKWELL: Your Honor, first I'd offer Exhibit 4145 for demonstrative purposes.

DR. MONT: On my sheet it says "Patient demonstrations."

Q Dr. Mont, just one moment.

A I have it, 4145. It's in the right-hand corner.

THE COURT: Counsel, you're moving to admit which exhibit?

MR. BLACKWELL: Exhibit 4145 for demonstrative purposes only.

THE COURT: Ms. Zimmerman.

MS. ZIMMERMAN: For demonstrative purposes only, no objection.

THE COURT: 4145 is received for demonstrative purposes only and may be published to the jury.

Q Dr. Mont, can you see on the screen there in front of you. Do they have a screen where you can see Exhibit 4145?

A Oh, yes, I can. Now it just came up. Yes, I can.

Q Would you tell us or walk us through what we see here. Is there a Bair Hugger patient warming blanket for example in this slide?

A So this is a slide. The patient is lying down. You see surrounded potentially by three anesthesiologists. And the Bair Hugger has been placed on the patient. The blanket has been placed on the patient's chest. I don't know that - I'm not sure if I can use a pointer here.

Q So let's go to the next slide please.

A Okay, that's where it is.

Q What do we see here, Doctor?

A The next slide illustrates the Bair Hugger which is being sealed off by an impervious clear drape.

Q Next slide please. What do we see here?

A There's a blanket that has been placed over that Bair Hugger.

Q Any particular kind of blanket?

A I refer to it as a warming blanket. Often it's been warmed.

Q Next slide please.

A Here you see the knee is being addressed. On the top of that knee is a tourniquet. There is a white padding and then the black is the tourniquet that's over the white padding.

Q What's the purpose of that?

A Most people do the surgical cases under - most of the time with a tourniquet. They only release the tourniquet for parts of the case and that lowers the blood loss. You can do the case without any field where you're seeing so much blood

splatter and you can visualize the bones much better. You want to minimalize the blood splattering when you're doing your case.

Q Next slide please.

A So the tourniquet gets put on the leg. It's raised to a certain pressure like 250 millimeters or 300 millimeters. It depends on the surgeon's preference. That's much higher than the patient's pressure which is, for example, the patient might have a pressure of 130 or 140. That basically cuts for that period of time cuts off blood supply to that leg so you are not getting bleeding during your case.

Q Next slide please.

A So in this slide - in the slide we just saw if you want to go back, that's the beginning of some of the draping. So there's typically at least two down sheets, that's one and two up sheets. That's just the process for putting sterile drapes around the leg or aseptic drapes around the leg to minimize any bacteria.

Q What do we see here?

A We call this a stockinette. So typically that's put over the foot and then the stockinette is brought up the leg. Again, it's another way to seal off. You don't want any bacteria that's coming from the foot to go into the knee wound. So that seals that part off to an extent. You'll see - coming up you're going to see some other draping.

Q Next slide.

A So in that slide where that stockinette was I usually use an Ace wrap. That's a material called coban, that brown material and that covers the stockinette and that's below the knee as you can see.

Q And what's that for?

A Again, that's sealing off any bacteria that's coming from the toes, the foot and you don't want that bacteria to migrate or anything to migrate into your sterile field.

So everything we're doing here is trying to prevent any type of bacterial pathogens from the skin that's going to enter that knee surgical field.

And the incision - you can see right there - you can see the kneecap. The surgical field is going to come across. When you incise the knee to do your case, you're going to come across the skin around that kneecap.

Q Next slide.

A This is just showing more draping. You're draping the the other leg out.

Q Next slide please.

A So this is even another set of drapes. Again, I said that there were two down drapes and two up drapes and there's another drape. And this drape typically comes up as in it's one of the two drapes that guards the - we don't want - it guards the anesthesiologist. So we don't want anything from the anesthesia area to come into her sterile field which is the

knee.

We also don't want what we're doing in the knee replacement - remember we're using high speed tools which I brought if we want to demonstrate that. And we're drilling - we're sawing the bone and some of the bone particles and the blood can splatter. We don't want that splatter to go to our anesthesiologists who are on other side of the table that are actually keeping our patient alive. So we don't want that to happen.

So this is typically the two drapes that we use to separate the surgical field from the anesthestiologists on the other side. Often there's another drape. It's a clear drape that goes above this. So it's a second one that goes above that big blue drape that's separating the two sectors.

Q Next slide please.

A And here you see this is this side of the case. You can see the blanket over the Bair Hugger and you can actually see the Bair Hugger. Clearly, this is very separated from the surgical field. It's not close in distance and it's completely separated away.

Q Let me see if we can pan our photograph out here or maybe it's the next slide.

A And there you see the Bair Hugger device. That blue - so that's the Bair Hugger machine that's connected to the Bair Hugger warming blanket.

Q And so this is the area behind the anesthesia screen

that you want to segregate off from the sterile field?

A Right. That's typically in the back of the table. Where you see it positioned is typically what I see in my OR in my cases.

Q Thank you, Dr. Mont. To be clear, this would be your description of a draping you would see in a typical orthopedic surgery case for a knee?

A I mean, there are obviously minor variations but 99.99 percent plus is going to be this. If you went to almost every operating room in this country or the world it's going to be what I just showed you. The patient is going to be brought in. This type of warming device and then you're going to have draping that I just described and that's an imperative for any knee replacement. It has to be done that way.

Q Thank you, Dr. Mont. Dr. Mont, would you tell us specifically what work did you do in this case? What work did you do?

A I had reviewed all the records of Ms. O'Haver. There are a number of depositions that I reviewed. My own deposition occurred. And then I reviewed a lot of scientific articles that were pertinent to what I feel are relevant features of this case.

Q Did you create a report?

A Yes, I did. So the report - yeah, it had a brief summary of the case and then went through a lot of different

facts about the Bair Hugger device and forced air warming and infection risks and then comments on depositions.

Q Did you do a supplemental report to correct a fact?

A Yes. I had - I had listed the wrong leg in the report. She'd had her other knee had been replaced two years before I believe in 2014. So I just mixed up the side. So when I noticed that the following day, I believe I sent the supplement saying that this is the correct leg.

Q Dr. Mont, have you formed an opinion as to whether the Bair Hugger caused Ms. O'Haver's periprosthetic joint infection?

A Yes, I have.

Q Please tell us that opinion.

A The Bair Hugger did not cause Ms. O'Haver's periprosthetic joint infection.

Q Is that an opinion you hold to a reasonable degree of medical certainty?

A Yes.

Q Dr. Mont, I'd like to talk with you about a timeline of Ms. O'Haver's medical history. Would reviewing that timeline would it be helpful to you in explaining your testimony to the jury?

A I think that would be helpful to the jury or I can explain that. That might make it helpful for the jury to see the timeline.

Q If you could find Exhibit 4148?

MR. BLACKWELL: We'd offer Exhibit 4148 for demonstrative purposes only.

MS. ZIMMERMAN: No objection.

THE COURT: May I have a title for this?

MR. BLACKWELL: O'Haver medical history.

A I think what I'll do is I'll hold things up when I find them so you're aware.

Q I will try to put them on the screen too so you can see it with Your Honor's permission.

THE COURT: 4148 is received for demonstrative purposes and may be published.

MR. BLACKWELL: Thank you, Your Honor.

Q So in a moment you'll be able to see it on your screen, Dr. Mont.

A Yes, I do right now.

Q So we can see the medical history from the November 29th surgery up through January 2nd which is after the irrigation and debridement procedure. Do you see that?

A Yes.

Q Now I won't go through every element on the timeline with you. I want to talk about certain specific ones with you just in the interest of time.

A Okay.

Q First, Dr. Mont, in looking at this timeline and having reviewed the records, do you find it to be an accurate

timeline?

A Yes, I find this to be accurate.

Q If we look at the November 30, 2016 date over to December 9, 2016, that represents roughly a 10 day time period?

A Yes.

Q Dr. Mont, is that a usual stay in the hospital following a knee replacement surgery?

A No, that would be completely abnormal to have a 10 day stay. Even in 2016 you would expect these stays to be sometimes the same day or one or two days.

Q So what explains the 10 day period her in your opinion?

A Well it's not even a guess in anyone's opinion. The patient had pharyngitis/laryngitis possibly a post-operative aspiration that they were worried about. And so basically the patient had to be put on two antibiotics and corticosteroids to treat that. So that was obviously very concerning. And even at the time it happened could be theoretically life-threatening. So you have to take that very seriously and they did the right thing. And it was a complication that they treated with, as I said, the antibiotics and the corticosteroids until December 9th.

Q So the pharyngitis and laryngitis, are those forms of throat infections?

A Forms of what infections? I didn't hear that. I'm

sorry.

Q Infections in the throat?

A Yes.

Q So when it says here no infection, does this relate to no knee infection?

A I'm just having trouble hearing. If you could move up a little. I'm hearing every second word. I apologize to the jury and the Court.

Q No, sorry, Dr. Mont. I had not moved back up. Hopefully, it's better now.

A Okay, that sounds a little better so thank you. I think we raised the volume also.

Q I wanted to clarify. The reference to no infection on November 30th, what does that refer to? Does it refer to the throat or is it referring to the knee or something else?

A We're talking about the throat with the pharyngitis and pharynx and your larynx, laryngitis. And they were very concerned so they treated this patient with antibiotics and the steroids. And I believe actually that continued even after discharge from the hospital.

Q Was there any evidence on that date of a knee infection?

A No.

Q Doctor, looking at the dates of December 14, 2016, "Staples removed and wound looks good." What's the significance

of that?

A At that point the staples were removed. The knee looked good. That wound looked good. There was no viewpoint that there was any problem, there was any infection at that point in time.

Q So if you look forward to the other entry on December 14th we see a reference to "the wound reopening while using the continuous passive motion machine." What's the significance of that?

A Well we sometimes - we sometimes call that a dehiscence. But for the purpose of the jury we'll call it the wound opened and started draining. I think the drainage was noted that night. And that can happen when - it has been reported with the use of a CPM machine. That's a mechanical means. It can happen after trauma, but that's certainly not a good thing. Because once the wound reopens the skin is not a barrier and bacteria can get in it.

Q And CPM machine is continuous passive motion machine?

A A CPM machine, we don't use that too often nowadays because the studies show that - the CPM makes your knee bend so the machine bends your knee.

And we'd rather have the patient bending their knee on their own so we typically don't use it. These types of things could happen where the knee gets bent by the machine and the wound can open up a little bit. That was reported more commonly

with CPM machines. So we call that a mechanical reason why the knee may have opened up.

Q So, Dr. Mont, the jury may have heard that there are two causes of dehiscence, malnutrition and infection? Would you agree with that?

A Well those are two causes. Are you saying that's the only causes? Malnutrition could be a cause if you were like, for example, if you're vitamin D deficient and you're not getting good wound healing because you completely have bad malnutrition. Is that what you are asking?

Q Dr. Mont, I'm asking are those the only two possibilities?

A Okay. I didn't here the word only. No, I just said that you could have trauma. For example, if you bang into a door knob then your wound can open up. If you fall down a flight of stairs. You could have this mechanical means that what happened here with the CPM machine. They're different mechanical means. Physical therapist sometimes is a little too forceful. You could have diabetes. Diabetes is cited in the articles. Obesity is cited. Smoking. There are many different reasons why - there's many different reasons why a wound might have a problem.

We were seeing it with diabetics and the smokers and the patients that were obese, myself and my partners over the last 30 years.

Q Dr. Mont, is there a connection between wound dehiscence or reopening and the risk of developing a periprosthetic joint infection?

A There is definitely a connection. If the wound opens up there are reports that show a much higher increase of getting a periprosthetic joint infection. Some articles it's a sevenfold increase. Some articles might say 30 percent or 40 percent chance of getting an infection. When you get a wound dehiscence it depends on a lot of different circumstances and it depends on the patient. It may depend on the patient's risk factors and how it gets treated.

Q Do you agree, Dr. Mont or disagree that a sinus tract is required for an infection to move from the surface of the skin to the joint itself?

A I would definitely disagree with that. There are different ways you could find a sinus tract but you don't need - a sinus tract is often considered a walled off track that goes from the way you're describing, it goes from the skin down to the joint. And that is not the only mechanism of how you could get bacteria going from the skin to the joint. You can get bacteria on the biofilm that stays in the subcutaneous tissue or above the fascial layer that just seeps down into the joint through - through micro fenestrations.

I've heard direct holes that you can see with your eye into the joint or you might have small holes the can't see with your

eyes. They're microscopic. So the bacteria can make their way down into the joint. I think that's answering your question.

Q So when you use the term micro fenestration, are you talking about microscopic size holes that the bacteria can use with biofilm to go from the surface of the skin down to the joint?

A Yeah, that's exactly what I'm saying. I'm using the term micro. I'm saying sometimes you can see with your naked eye or your eye. You could directly see the hole going into the joint. You could theoretically put your finger from the hole into the joint and as surgeons we see that.

But other times there are penetrants into the joint that you're not seeing with your eye but they are there because the bacteria can go right from that subcutaneous tissue down into the joint. And then variations of that, sometimes they are big holes and then just smaller holes.

Q Let's talk about the December 19th date where there were sutures placed, nine sutures in the open wound by Dr. Ballard. Is there any significance to that?

A Well in this scenario he's looking at this knee and he clearly does not see this hole that's going into the joint or the opposite where there's some pus that's coming out of knee. So he sees a relatively benign enough knee to suture it closed. If he thought the knee - that he was infected he would see swelling. If the dehiscence came from the knee joint there

would be a tract coming up and he would have noticed that but he didn't notice that. He saw that there was a dehiscence that or his PA noted a dehiscence under his direction and closed this knee up.

Q And PA is the physician's assistant?

A Yeah, the physician's assistant under his direction.

Q So if we fast-forward to January 2nd where there is a successful irrigation and debridement procedure, a DAIR procedure. What does DAIR stand for?

A It stands for debrideMONT, antibiotics and implant retention. So meaning when I showed you the implant, the two metal pieces are retained. Those are the main pieces you're putting in. Typically, that plastic piece that I've shown you, that's pulled out because you can pop that out easily. It doesn't take more than a few seconds.

Then you can get to the back of the knee and clean the whole back of the knee out. And then do your debrideMONT and clean it which means cleaning. You're cleaning any of the tissue out. You're irrigating out. Typically, we may use six or nine liters of fluids. That's like equivalent to like five to seven gallons of fluid to irrigate this out.

And then we can pop back a new plastic. We don't use the plastic we just took out. We take a new plastic, put that back in and this nice knee can hopefully be saved and that saves tremendously. If you want, I'll keep going on what that does.

Q Dr, Mont, would you say that Ms. O'Haver had a successful DAIR procedure?

A Yes because the fact is she never needed another procedure years later. An unsuccessful one would be that it typically within a few months her knee would blow up. She would have pus. We're usually know that by three months and then this whole thing, they would've had to go back in again and take out all the metal prostheses and put an antibody spacer so she never needed that.

She had one procedure that I believe took a little bit over an hour as opposed to a procedure that would have taken three hours to take out all of this, put a spacer in and come back eight or 10 weeks later and do another three-hour revision or more.

So she avoided two major procedures which were not guaranteed to work. We don't even know if those would have been guaranteed to work and she got one DAIR procedure. I like to call it an irrigation and debrideMONT procedure. And she got that one procedure and that's it. She got saved. So to me that's a tremendous positive for her.

Q And, Dr. Mont, does the successful irrigation and debrideMONT procedure say anything to you as an orthopedic surgeon about when the bacteria that caused her infection likely entered the joint?

A Yes, it absolutely says a lot to me. Well it's not

only to me. It's through the scientific literature that we know. It's all the evidence and there have been so many articles written on this. It's a major discussion item about when you get a successful DAIR procedure and when you don't get successful DAIR procedure. If you want, I'll keep going on that topic.

Q Well, I'll ask you a different question. If the - let's say the bacteria was not introduced at the time the wound reopened weeks after surgery, is it possible that the bacteria could have been introduced to the joint at some other time such as even during the surgery?

A It's certainly possible. The bacteria could've been introduced at the time of surgery. The pharyngitis/laryngitis could have led to the introduction of bacteria. There are other things that occurred after the doing of the surgery like you know the staples. There was a drain put in the knee. So there are other possibilities. I wouldn't call them a high probability but there are possibilities when bacteria could've occurred in Ms. O'Haver's case.

Q Dr. Mont, were you able to consider whether the Bair Hugger was a cause or source of any infection in Ms. O'Haver's wound?

A Yes. And I don't think the Bair Hugger would be at all a source of infection in her wound.

Q Why?

A In her case, I mean I might go into multiple, multiple reasons. We just showed how the Bair Hugger is so isolated from the surgical wound. It generates such small, small currents that wouldn't even go near the knee. I could illustrate that. There's so many other sources of currents or things that could - that might contaminate a patient in the OR that any possibility the Bair Hugger would be absolutely negligible, number one.

So that's the first answer to that. The second answer is there's no evidence scientifically from any credible papers that show that the Bair Hugger could show an increase in periprosthetic joint infections.

Number three, there's no evidence even that it increases bacteria in the wound by the scientific evidence. And continuing in that vein, that International Consensus meeting with all the experts, over 700 experts did not believe that the Bair Hugger had only had a theoretical risk, but 93 percent of those experts felt that the Bair Hugger should be continued to be used.

And the fact that myself and my colleagues continue to use this, we don't see an increased signal. In fact, periprosthetic infections in this country are going down.

So for those and many other reasons I would say that the Bair Hugger had no influence on periprosthetic infections in this case or any knee or hip replacements that are done.

Q Now Dr. Mont, in the interest of time I won't go

through all of the studies. But you have studied the scientific literature?

A I have studied that and I've even published on this as well.

Q Dr. Mont, did you prepare a demonstrative to give the jury a better understanding of what the activity is like in an operating room during a knee replacement surgery?

A Yes.

Q And would viewing that video be helpful to you in explaining your testimony to the jury?

A I think it would be very helpful because you had asked me about Bair Hugger which gives such small little - it just very gently warms the patient away from the wound and with just very gently pushing air out to the patient. I think that demonstrative really shows to the jury exactly what's happening with all the machinery and how things are moving in the OR and the different wave fronts and where things are moving. So I think that would be very helpful. Also the jury would see how a knee replacement is done. I think it would be a nice demonstrative.

MR. BLACKWELL: Your Honor, we would offer Exhibit 4144 which is the demonstrative video.

MS. ZIMMERMAN: We do have an objection to that.

THE COURT: Okay, come on up.

(BENCH CONFERENCE.)

MS. ZIMMERMAN: The objection is that this video is completely sped up and not representative at all of the full time of the knee surgery. The entire video is something like a minute long. And it shows people going fast forward motion back-and-forth and it just looks like a lot of commotion so it's not representative of Ms. O'Haver's surgery.

MR. BLACKWELL: It's not being shown to be representative of her surgery. It's to show the number of personnel in the OR. It's to show the equipment that's in the OR. And he acknowledges that it's sped up. Counsel can certainly slow it down if she wants in her cross-examination but it's not meant to portray the real-time signature of a surgery. It's meant to be illustrative.

THE COURT: The objection is overruled. I'll allow 4144 to be published to the jury.

(RETURN TO OPEN COURT.)

THE COURT: 4144 is received and may be published to the jury.

Q So Dr. Mont, I'm going to go over and show this video with you and it's admittedly a sped up version of a knee replacement surgery, isn't it?

A Yes, it is. I think it's - you have an hour procedure, maybe an hour and a half and I believe the video is only one minute and 24 seconds. If you could let me just

narrate for about 15 seconds before you start it when you want me to begin. It's 60 to 90 seconds compressed into a minute and 24 seconds.

Q It's 60 to 90 minutes compressed. We're about to play the video. So let's watch it then together.

A Okay. So before you push the button I just want - this is a typical operating room. You can see the back table. There's a bunch of blue trays and that's the instrumentation that's getting ready. That other little basin, it's a washbasin. There are tables all over the room.

In the back of the room you can see the anesthesia machine. You can see a lot of IV poles. There are three lights and light handles that are coming down and there's a lot of machinery.

In the back you're not going to see in the video there's a number of machines that allow the patient to have irrigation and have electric cautery. That will be blocked from view during the video. So we can now start the video.

So here you can see some people are entering the room. The surgical techs are preparing the back table. And it just stopped on me. Is that going for you or did it stop?

Q We will restart it.

A So here it is. The surgical tech is in the room preparing the back table. The instruments have been opened. The patient was just brought in. You can see so many people. The anesthesiologists are working on the patient now. The

surgeons are coming in the room. There's a lot of wave with the doors opening and closing.

You're going to see the lights move up and down. The leg was just draped and prepared. And they're working assiduously on getting the drapes. They'll have some gowns and there's a lot of movement, a lot of waves going on.

You can see the Bair Hugger would be way away from this field and you can see the door opening and shutting. There's a garbage pail that just got placed in which could be a source of bacteria. All of these things here are not sterile. We just try to keep it an aseptic environment as best we can.

And I can do a knee replacement this quickly. I'm joking. That patient has left the OR. You know it sort of reminds me when you watch the Kansas City Chiefs and you think you're watching a three and a half hour game but you're only seeing about 11 minutes of action if you actually count the time.

But that's a knee replacement in fast time. You can see the amount of waves and the light handle moving and everything like that.

Q Dr. Mont, have you studied the various sources of bacteria and sources of air movement in the orthopedic operating room?

A Yes, to an extent.

Q Can I ask you to look at Exhibit 4147 and 4146 which are illustrations?

A I heard the 4146. What was the first one?

Q 4147.

A Okay, I have the two.

MR. BLACKWELL: Your Honor, we would offer 4146 and 4147.

MS. ZIMMERMAN: For demonstrative purposes, no objection.

THE COURT: Can I have the title for 4146?

MR. BLACKWELL: 4146, Your Honor, is Sources of Air Movement within the OR. And 4147 are Forces of Bacteria in the OR.

THE COURT: Thank you. 4146 and 4147 are received for demonstrative purposes and may be published to the jury.

Q Dr. Mont, in the interest of time, again, I'm going to display for example 4147 Sources of Bacteria in the OR. Would you just tell the ladies and gentlemen of the jury whether you have reviewed and examine the research for each one of these areas establishing it as a source of bacteria in the OR?

A I've done research on almost every one of these areas, maybe not the cabinets along the walls which would have bacteria. But I've done a lot of research on cloth perforations, the instruments, a tremendous amount of research on skin and disinfection of skin. I'd be happy to elaborate on that disinfecting skin which allows us to reduce our periprosthetic

infections.

But all of these things that you see in 4147, they are sources of bacteria that could affect the patient and lead to a periprosthetic infection.

Q So, Dr. Mont, if we could look at 4146 and I would ask the same. Have you done research with respect to sources of air movement within the OR for each of these?

A Well I haven't published on every one of these things but I researched this. I looked at all the articles. This is sort of what I thought was going to be useful in that video where you see that the doors are opening and closing multiple times. On the bottom left the circulating nurses are moving all around and they're creating all these air movement, air flows. The surgical staff all over the place is doing that. And the bone saw especially is moving back and forth and the air is generated.

So that was really illustrated that this Bair Hugger is just gentle airflow on the opposite side of the patient, not near the operative field. It's not even - it's negligible compared to all of these things that you saw in that video.

Q Dr. Mont, of the equipment that we see here in Exhibit 4146 in front of you, do any of them contain filters other than the Bair Hugger that you're aware of?

A I think the Bair Hugger has a - I don't think any of these pieces of equipment, not one of them has a filter. I

think the Bair Hugger has a - a rating, a Merv 14 rating. I think that's higher than any of these other pieces of equipment in the OR.

It's obviously there's no filter on the doors and nothing on the bone saws and the monitors in the computer so none of these things have filters nor would I expect them to have a filter.

Q Dr. Mont, I'd like to turn your attention to the International Consensus Meeting on Musculoskeletal Infections that the jury has heard quite a bit about already.

Now the jury may have heard that the ICM International Consensus Meeting is political in nature. Would you agree with that?

A Absolutely not. The ICM was done by, as I said, a series of scientists, orthopedists. They could be dermatologists, rheumatologists, internists, pathologists. They alL had a scientific interest in understanding all of these questions and analyze this and debated this. I don't know where - everybody has a degree of politics in the system but I don't really - I think they were trying to get to the best scientific evidence would be my answer to that unless there's a different way that you're phrasing this question.

Q I want to ask you just a different question, Dr. Mont, because the jury may have heard that there could have been some improper influence on you in your role from someone named Cory

Gordon, a lawyer for 3M. Did Mr. Gordon in any way attempt to influence your work, your thinking or your work product with the ICM?

A He sent an email. First of all, right after this whole thing had been done and about did I consider an article or two. I mean that's not even issue because I just dismissed that. We had a number of - maybe not him but you might get sometimes different industry wanted us to consider that. But that was never - that could never be part of this ICM Congress. Although the Congress had some funding to put it together, there was absolutely no - there was no industry influence on any of the writing to the best of my knowledge of any of the questions that were done and they could not be done. So you hold that to the highest standards possible.

Q Did the ICM have, for example, Dr. Elghobashi's CFD?

A Yes, it did. Did it have it? It goes by - the article is by AG as the first author and it is mentioned - a sentence or two is mentioned in the last one, the 2018.

Q If you have some member of the public or a researcher feels that there is an important study that the ICM should consider, is it proper to bring it to the ICM's attention?

A If who is bringing it?

Q If a member of the public or a researcher felt there was an important study that the ICM should have considered, is it appropriate to bring it to the ICM's attention?

A I think things could've been brought to the ICM at a very early stage when things were being written or considered. But in a general sense the ICM was relying on the published literature. So what you're asking me generally would really be a no. So the ICM was based on the published literature. That was gone over and then discussed as an internal meeting and outside influence were minimized or eliminated.

Q Are you aware of anything improper that Mr. Gordon did?

A No, I don't think that - it was just a request, a benign request but there was an immediate dismissal. No, you can mention something to me. That doesn't mean that's going to occur. Anybody can send me an email. I could have gotten a whole bunch of emails but I know what the rules are as to the other members of the ICM. They all know the rules. From my viewpoint nothing improper occurred.

MR. BLACKWELL: Your Honor, my I approach?

THE COURT: You may.

(BENCH CONFERENCE.)

MR. BLACKWELL: I wanted to raise this and I just blurted it out in front of the jury. I was going to ask him about his reliance materials for the fact that he relied on the FDA's position on this. I did not want to do that in light of Your Honor's ruling about coming here first.

THE COURT: That's consistent with my ruling in the motion in limine and that objection will be sustained. I don't think that's proper testimony and you can ask the witness given that you can ask him if he's reviewed 4129 and 2798 and that ruling will not change.

MR. BLACKWELL: Okay. I won't do that.

THE COURT: I appreciate it. Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Mont, you testified earlier that you warm all of your patients?

A Yes.

Q Please tell us why.

A I don't want any of my patients to become hypothermic during the case.

Q Having reviewed the medical records, did Ms. O'Haver become hypothermic during her case in November of 2016?

A If we go by the new standard of hypothermia being 35.5 degrees by the recent Sessler study, then the answer is no. But for a brief moment her temperature I believe was 35.8 or 35.9 which might be just 1/10 of a degree or so below 36.0 which was the old threshold and that was only at the very beginning, at the very beginning.

Q Dr. Mont, when was the Sessler study?

A It was published this past year.

Q So what was the standard ...

A It was started - it was started in 2017.

Q So what was - we just have a lag, that's all. What was the standard for hypothermia in November, 2016?

A We would like to keep the patients over 36.0 as much as possible.

Q So if we took the standard that existed at the time of her surgery, was Ms. O'Haver hypothermic at times during her surgery in November, 2016?

A Yes, only at the very beginning. You could put the - you could put that temperature chart on which I did see once recently but she was briefly I believe 35.8 or.9. But in fact the Bair Hugger worked great because after that period of time she got warm.

MR. BLACKWELL: Dr. Mont, thank you. I have no further questions for now.

THE COURT: Cross-examination.

MS. ZIMMERMAN: Yes, Your Honor.

CROSS EXAMINATION BY MS. ZIMMERMAN

Q Hello, Dr. Mont.

A Hello.

Q I'll do my best not to talk over you. I haven't done this line in a trial. But we've met before?

A Okay.

Q My name is Genevieve Zimmerman. We've met on a number

of occasions before. You've written - you've written several reports about the Bair Hugger, right?

A Yes, I have.

Q You've had your deposition taken on multiple occasions, fair?

A Yes.

Q The reports, the depositions that you gave were accurate and true and given under oath when you did that, fair?

A Yes.

Q And just to be clear, we sent out a binder of materials. Do you have that in front of you, Doctor?

A I have expert witness materials. Then there's two others. Yes, I have two other binders here. This one looks like it resembles what you have.

Q And I hope we won't have to refer to that but you have it in front of you if you need it.

A Okay.

Q So I'm going to try to start with some of the things that I think we're going to agree about. You're a busy guy and you've go a lot on your plate, fair?

A Yes.

Q So you do somewhere in the neighborhood of 500 to 700 total joints every year, right?

A I did 500 to 700 at times in my career. But then I did not do that - when I was the chairman I was reduced to 50

percent. And then each time I have changed practices, I went back to a new practice when I went to New York. And then I came back to Baltimore so I had to build back up to 500 to 700. That's number two.

And number three, there are times that COVID has affected the number of joint replacements in the last few years for not only myself but for everybody. So I would like to get back up to doing 500 or more joints but I haven't - I'm getting there.

Q But on the average that's about what you've done in the last 30 years or so, fair?

A For a 20-year period, whatever. We can talk about what I did the first five years and then for a 15-year period or a 20 year period. Yeah, that's fair.

Q And total joints take you somewhere between 30 and 40 minutes apiece, right?

A Only straightforward ones. We just said 40 percent of the joint replacements I do are revisions and they do not take 30 to 40 minutes. Then I do a large population of obese patients and I do a large population of very complicated primary joint replacements and they don't take me 30 or 40 minutes. So there are some patients that have minimal deformity that take me 30 or 40 minutes. But many of my cases that were referred to me do not take 30 or 40 minutes.

Q So the easier cases take 30 minutes or so, is that about right?

A Which cases?
Q The easy sort of straightforward cases take you somewhere around 30 to 40 minutes?
A Yeah, about an hour for something like that, yes.
Q Revisions take longer, fair?
A Yes.
Q I understand you had to do an emergency revision certainly surgery last night at midnight?
A Yes.
Q Was there a catastrophic failure of the implant?
A No.
Q Why was a revision surgery done at midnight?
A A dislocation.
Q Typically, those are elective procedures that happen during the day, fair?
A No, but to deal with a dislocation that would be more of an emergency thing that I wouldn't want to wait to deal with.
Q So if you do somewhere in the neighborhood - at least on average you've done about 500 to 700 total knee or total hip surgeries every year and they take you at least a half an hour, that's going to take you somewhere in the neighborhood of probably about 400 hours a year, does that sound fair?
A No, not at all. That would take me - first of all 500 to 700 cases is going to take four hundred hours? As we said, 40 percent of the cases are revisions. Many of those take three

hours or longer. So we do the calculation that's not going to equate. Many of the cases are complex.

In addition, your - I guess we're not counting the time that you have to bring the patient in the OR where we showed on that video where the patient is brought into OR and the anesthesia is taken care of, the dressing is applied. I guess where I was answering is just the direct operative time with the straightforward cases. So to say that 700 cases take 400 hours would be - if you want, I'll start calculating how many hours that is.

Q It's an underestimate, fair? It takes a lot longer than that?

A Yes.

Q And you see somewhere in the neighborhood of 5 to 6,000 patients a year, right? You testified to that?

A At some points I was doing that, yes.

Q And your appointments can vary in time from a couple of minutes to 30 minutes, 60 minutes, something like that, is that fair?

A No, that's not fair because since the patients have - if an appointment starts going more than 30 minutes or so I get a knock on the door. The patients are getting my cell phone and I will often continue the appointment that weekend on a Saturday or a Sunday. Because I have to be able to see that many patients and I want to keep the clinic going and I don't want

anybody to not get my time.

And I also do all this work as part of the team. So I have a lot of people helping me to see a lot of patients. So I don't just see the number of patients that you just said on my own. I have typically in those periods of time I would have four or five people helping me.

Q If you see 5 to 6,000 patients a year and you spend 10 minutes with each, that's at least somewhere around a thousand hours a year, fair? Some certainly take quite a bit longer than 10 minutes.

A In that light, we can start calculating if you'd like.

Q Is that a fair estimate, Doctor?

A Fair enough. There's some people that come in - there are many people that come in just for - which I like doing injections and I like saving people from knee and joint replacements. And they come in for injections of their knee or their hip or their shoulder and those don't take that long.

So they can be - and I also often I have PAs helping me and fellows and residents. And a lot of the work is done and I can walk in there and so I would say that could be fair. And if they need more time, they always have the amount of time that's necessary to take care of them appropriately.

Q Fair enough. And Dr. Mont, you are also a course director for conferences that happen at least four or five times a year, right?

A No, I used to be course director but no, I'm not. I more participate in courses. Lately I haven't been doing as much course direction. I participate.

Q You're an editor for journals, right, 10 to 25 editions a year with a couple of editor-in-chief work, is that fair?

A We put out 15 per year, 15.

Q Fifteen editions?

A Yeah, 15 editions you could say. I would agree with that, yes.

Q That sounds like a monthly magazine or a little bit more often than monthly, is that fair?

A It's a monthly magazine and then there's a few other special editions. The Knee Society that I've been asked about earlier has a special edition just for them. The Hip Society and then that OPIS group of 5,000 members have a special edition. So those three plus the 12 monthly leads to 15.

Q And it's a significant part of the time that you spend every week, every month, all year long, fair?

A I don't know what the word significant is. It's a statistical term to me but what do you mean by significant? It's to me a labor of love. I enjoy doing it. I can do it in free time, between my cases and different times. So I don't know what we're --

Q I'm sorry, I don't mean to talk over you. Your

testimony has some challenges to it. It's fair enough to say that serving as an editor for various journals requires 20 hours a month from your time, is that right?

A Yes.

Q And you keep current on the journals. You actually read the articles and you provide feedback, fair?

A What is the question? I what?

Q If you're serving as an editor for a journal, you're actually reading the articles that go into each edition, right?

A Yeah, I read and edit everything that gets accepted. I also see everything that's submitted before I let it pass through.

Q In addition to that work as a journal editor, you have a lot of publications Mr. Blackwell asked you about. Roughly 1,200 so far in your lifetime, fair?

A Yes.

Q I think you testified before it's about 100 a year or maybe two to three articles a week that you publish, right?

A Yes. I'm going to just let you know and let the jury know that I keep getting these questions that are I. But I'm falling into this trap because I don't really do anything as an I. I do things as teams. I work - even though I'm the main surgeon I have people helping me.

When I do articles I'm working with people, three or four research fellows and I work with 30 centers around the country.

When I have - when I do the Journal of Arthroplasty I have nine associate editors that help me.

So you keep saying what I do, but the clinic that you described I'm working as teams. I enjoy all these aspects of my life that you're describing. I really love. They are labors of love and they don't come out in the hours that you're describing. But I'd rather say that I do this with groups of people and that's what makes it very rewarding as well, not just I.

Q It Dr. Mont, you may have a team but we've talked about this before and you testified under oath that on average you spend about 20 hours per article that you write, fair?

A Now, there are many - and I said under oath that there are some I spend less and some I spend more. I guess we could say 20.

Q Twenty is an acceptable average? That's how you've testified in the past, right?

A I never really - I may have given that answer. I never really added it up exactly, but there are some articles I may have spent a lot more time and there are other articles I may have spent only five hours.

Q So do you want to amend the answer you gave before?

A What?

Q So do you want to amend the answer that you've given under oath before or is 20 hours per article an acceptable

average?

A If I said that I'll keep the answer but I don't know if that's acceptable average. It probably is an overestimate but I don't have a problem believing that because there's other things that I do that probably help with articles like reading other articles about the article. So we can leave that.

Q So if you spend just on average 20 hours per article and you are publishing about 100 articles a year, that's about 2,000 hours every year, does that sound about right?

A Yes, that sounds about right.

Q In addition to the time that you spend on that, you get paid significant money for the work that you write, right?

A I do get paid for some of the work I write, some of the work I write.

Q In fact, you've testified in the past that you are on average paid about $10,000 per article, sometimes more, fair?

A Fair.

Q You've got some nonprofit work that's important to as well, is that right?

A That's right.

Q And you spend somewhere in the neighborhood of 10 to 12 hours every week on that Alaskan Science Foundation, fair?

A Fair. Sometimes more, sometimes less, that's fair. That's again a labor of love and I don't always add the numbers up.

Q In addition to that, you have been hired in the past five to eight years regularly by medical device companies like 3M, right?

A Correct.

Q You receive significant money for the medical/legal work you do, medical/legal consulting you do every year, right?

A Yes.

Q You testified under oath before that it's $1 million a year, fair?

A For my medical/legal work?

Q Yes, sir.

A No, that's not correct, absolutely not.

Q The truth is the industry paid over a million dollars a year to be their guy, right, Dr. Mont?

A Okay, first of all that is not medical/legal work. You just asked me a question about $1 million a year for medical/ legal work. And that is industry work where I'm basically an inventor/consultant and I've worked up to that, yes.

Q A million dollars a year from industry then is correct, right, Doctor?

A At this point, that has not always been that but in the last few years, yes.

Q And, in fact, in the last few years it's been significantly more than that, right?

A A bit more, about that though approximately.
Q When you testified to a jury last August, you agreed that it was probably about $8 million, fair?
A No, I did not. Per year?
Q No, over the last couple of years?
A Absolutely not.
Q Over the last couple of years it had been $8 million?
A No. That may have been over a 10 year period.
Q Would you like to go to the white binder as to I was going to hopefully avoid in front of you, tab J.
A Okay.
Q I know there's a lot of pages there so I apologize. We're trying to accommodate your schedule from a distance.
A Okay. So I'm at tab J.
Q Yes. Do you see the front-page talks about the testimony you gave in the Smith and Nephew trial last summer?
A It's hard to go through this notebook. Let me find it again. So it says --
Q Front page?
A I see the front page, okay.
Q And, incidentally, that was a trial about a recalled product, right, Doctor?
Q The Smith and Nephew BHR?
A The Smith and Nephew BHR is still being used so I don't know if we would describe it as a recall.

Q It was voluntarily removed from the market by the company in 2015?

MR. BLACKWELL: Objection, Your Honor. May I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: I'd object to the question just on the grounds of relevance. She's bringing in facts of other products and discussions. It's beyond the scope of the direct exam and I don't see the relevance of it.

MS. ZIMMERMAN: It absolutely goes to bias, Your Honor. Who he represents, what kind of testimony he gives and we'll get into the fact that he's not giving consistent testimony with what he said to a jury 11 months ago.

THE COURT: I think it's okay for you to impeach him using prior testimony but I don't think it's appropriate to ask him about any particular products. If you're going to use his deposition for impeachment, you may do that. Otherwise, the objection is sustained.

MS. ZIMMERMAN: But to the extent that who he works for and how often he works for different companies like this and in what situations, that absolutely goes to his bias and the jury is entitled to take that into consideration when they're evaluating his credibility.

THE COURT: I'm not disagreeing with you on that.

What I'm talking about is I don't want there to be testimony on whether or not a product has been recalled or not. I don't think that it's relevant to this. If you want to use his deposition for impeachment purposes then I think it's appropriate. Do you need any further guidance?

MS. ZIMMERMAN: Well, Your Honor, I mean I think about whether or not he's defending a product that even the manufacturer agrees is in fact defective is relevant for the jury to consider when they're looking at his credibility here.

THE COURT: I mean there could be circumstances beyond of what he says and what the process was in the recall or whatever the case may be. So I'm going to limit you to this. I don't want this to be about that.

MS. ZIMMERMAN: Certainly, I understand.

THE COURT: Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Mont, thank you for your patience. You were flipping to tab J. Can you hear me okay, Doctor?

A Yes.

Q So tab J, page 96. I actually tried to highlight this to make it easier. Hopefully, on the top of page 96 is it easy for you to see, Doctor? Do you see the question that was asked that's highlighted in yellow?

A Yes, I see the yellow.
Q And the question there was "You've been paid over $8 million in the last couple of years, four or five years, right?" Do you see that?
A Correct. But I said, "No, in the couple of years" - so this is what you asked me implies two years. So that number has probably been in about in a period of time. It's been a lot of money, yes.
Q Fair enough ...
A A little bit longer than two years.
Q Fair enough to say that the medical device industry has paid you over - certainly over $8 million, fair?
A Fair.
Q And you do testify from time to time in court and in depositions, right?
A Yes.
Q And that tends to be almost universally in favor of medical device companies like 3M, right?
A In the cases, yes. They have been - there been some things that I wrote letters against companies, but for the testimony, yes, I would agree with that.
Q Now you were hired by 3M certainly by 2016 with respect to the Bair Hugger, right?
A I don't know the exact date. I was hired by the lawyers that represent 3M and I couldn't tell you right now from

memory whether it was in 2014, '15 or '16. In fact, it would have been before '16 because in '16 I went to the Cleveland Clinic and I wouldn't have been doing those things except for cases that were grandfathered in. So it would have had to have been before '16.

Q So you've been hired by 3M with respect to the Bair Hugger since at least 2016, right?

A Well, as I said, before '16 to be more accurate. I can't give you the exact date right at this moment.

Q If I represent to you that the invoices that have been provided to us are - show that you charged at least $60,000 by May of 2016, you have no reason to disagree with that, fair?

A I don't necessarily disagree with it. I don't have it in front of me but if that's what it is if you have that then I would agree with it.

Q And I'd be happy to do that for you Doctor, but we have obviously limited time here as I understand it. By the way, on that point, this trial has been set for a year and a half, right? Do you know?

A I don't know how long this trial has been set exactly.

Q But this afternoon is the only time that you've made available to provide your testimony for the ladies and gentlemen of the jury, is that right?

MR. BLACKWELL: Objection, Your Honor.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, this is improper questioning, improper impeachment. The issue of Dr. Mont's schedule has been discussed with the Court, addressed as a matter. And for Counsel to imply some form of evasion or something through it is improper.

THE COURT: What's the relevance of this?

MS. ZIMMERMAN: The fact that he's not here.

THE COURT: I made that call that he's not here.

MS. ZIMMERMAN: Over our objection.

THE COURT: I understand that but you're not bringing it up here. The decision was made that you didn't like. It's not proper. It's not relevant to this. I'm the one who made the decision that he could testify over your objection. But I just don't think that you can bring up issues that I decided that you didn't agree with in front of the jury.

MS. ZIMMERMAN: I hear you, Your Honor.

THE COURT: The objection's sustained.

(RETURN TO OPEN COURT.)

Q Dr. Mont, in your work as editor of various peer-reviewed publications, you're certainly aware that there are requirements about disclosures of potential conflicts of interest, right?

A Yes.

Q And in fact, some the reasons that you have provided in your reports and depositions about why you discredit various peer-reviewed publications that connect Bair Hugger with potential infection risks has to do with what you think are conflicts of interest, right?

A You would have to -- you would have to show me what you're talking about. I'm not sure what you're referring to.

Q You prepared a report, a sort of general report that appears at Exhibit A, Tab A behind the white binder in front of you. Do you see that, Dr. Mont?

A So let's go to A. I pulled to J now have to pull the whole thing across which is hard to move everything. There's a lot to this. In reference to your conflicts of interest, I think I pointed out an Augustine article that was published about the Bair Hugger now that I'm thinking about it that I think was a conflict of interest article.

Q Dr. Mont, you were asked some questions posed to you by Mr. Blackwell today about the McGovern study which I understand from your testimony that you discount, correct?

A Yeah, for multiple reasons I ...

Q And I understand that, Doctor. Because we are short on time here today ...

A I can provide you - I can recount 10 reasons why I would say that there's some fallacious problems with that study

and I would discount that, yes.

Q Dr. Mont, my question was that you discount the study, right?

A That's a yes.

Q So if you testify to the ladies and gentlemen of the jury that in your opinion there is no evidence that links the use of Bair Hugger to deep joint infection, that is at least in part because you discount the McGovern paper, right?

A I more than discount that paper so yes.

Q But you say in your report that the findings of some of these published papers, the Legg study, the McGovern study, that those findings would be something that a company needs to investigate unless they had a good reason to ignore it, is that fair?

A That's fair and they weren't investigated, yes.

Q I guess that's exactly my point, Doctor. To your knowledge as you sit here today in October of 2022, nothing was done to investigate the findings raised by Legg and McGovern and the other authors, fair?

A No, that's not fair. There are probably - I can't even say. There are probably over 75 studies that investigated the Bair Hugger and the history of the Bair Hugger. I mean I didn't count every single one but there are many studies that were done to investigate the Bair Hugger.

Q Dr. Mont, you would agree that there are many studies

where perhaps the Bair Hugger was involved but there are no studies that were done to look at the potential risks of the Bair Hugger associated with deep joint infection that you're aware of besides McGovern, correct?

A Not correct. There was a ...

Q That's all right, Doctor.

A There were other studies ...

Q So getting back to the ...

A There were a number of studies - that's not correct. There were a number of studies that looked at the risk of deep infection when using the Bair Hugger.

Q Now you serve as the editor-in-chief for the Journal of Arthroplasty, right now, right?

A Yes.

Q And you've been involved in a number of different roles at the Journal of Arthroplasty over the past decade or more, correct?

A Yes.

Q And you'd agree, wouldn't you, Doctor, that these various journals including the Journal of Arthroplasty have rules about disclosure, about potential conflicts of interest, right?

A Yes.

Q And, in fact, you've filled out a conflict of interest statement from time to time listing off the different kinds of

research support and company support that you get with respect articles that you write, fair?

A Yes.

Q So if you had an article listed out that you received company support from 3M, is it Centrexion? Is that a company?

A Yes.

Q From Ceras Health, that's another one, right?

A Yes.

Q Flexion Therapeutics, fair?

A Fair.

Q Johnson & Johnson is another one of the companies that pays you?

A Okay, by the way, what you just said, almost all of those companies have not paid me. I haven't received any support. I may have been paid in the past some fees. Some of them I may be on a board or I may have potential for future royalty but at least two of those are probably not going to go forward. So we have to do that again. But some of those that you just said I've not been paid anything.

Q So when you fill out a conflict of interest statement about yourself, Dr. Michael A. Mont and you say that you're a board or a committee member for The Knee Society and The Hip Society, that's correct, right?

A That's correct.

Q And then you say received research support from the

National Institutes of Health, that's correct, right?

A Correct.

Q Then you say that you're on the editorial board for the General Arthroplasty, the Journal of Knee Surgery, Surgical Technology International in Orthopedics. That's all correct, right.

A That's correct.

Q And by the way, when you submit these conflicts of interest statements in the papers that you publish, you intend for them to be accurate, right?

A I not only try to be accurate, I try to - I have to update them every three or four months because they change.

Q And the rules for these various journals require that, right?

A Correct.

Q And part of the reason for that is so that the people that read those articles know whether or not you or a different researcher may have some bias that comes to bear on the publication that you've submitted, is that fair?

A Correct.

Q So when you list out that Dr. Mott receives company support, you have a full list - you try to make sure that that list is accurate and complete, right?

A Correct. But some of those are company support for the institution, not to me personally. Some of them are to me

financially and some of them are just to me because I'm a board member or something else where I haven't received anything but maybe I'm a board member which is some of the ones you read.

Q But your conflict of interest statement actually says Dr. Mont also receives company support and lists a number of these companies. Now I left out the Johnson and Johnson. You also receive company support from Kolon TissueGene, right?

A Correct.

Q From a company called NXSCI as well, fair?

A Fair.

Q A company called Pacira?

A That's science.

Q Pacira?

A Yes.

Q And Pfizer-Lilly?

A Yes but not for over a year so that will come off.

Q From Skye Biologics, right?

A I haven't gotten any funding from them but I got some stock and I don't think that's going to continue. That company - I haven't heard from them in four years so that'll probably - by the rules it should be removed but I tend to leave everything on. The rules say if you haven't had any support or any contact for a year they can come off. I have some of these companies listed there that have been listed for four years but nothing came of it.

Q And you also got company support from a company called SOLVD, S-O-L-V-D, all in capitals?

A I think SOLVD Health became Centrexion, that first one you read. They changed their name so that's an error. I mean that's you just the interpolation from one to the other, same company.

Q You've also received company suppor from Smith and Nephew, Stryker, MirrorAR, Peerwell, US Medical Innovations, RegenLab, Medicus Works LLC, Up-To-Date and Wolters Kluwer Health, right, to name a few?

A So you read off about 10 and I haven't received anything from at least five of those. The Smith & Nephew is for that legal work that you had mentioned on the case. So that's what that was but I don't any Smith & Nephew. Five of those companies are research support for the institution.

We can go through each one. You don't need to go through the whole bunch but we can go step-by-step if that's what you'd like.

Q There's a whole bunch of companies that provide support to you, Doctor, is that right?

A Correct, either me or my institution. For example, RegenLab that's only research support for Sinai Hospital or for Northwell. That's why it's listed. A number of those are listed because of support for the institution. So I try to be very all-inclusive of everything we're doing.

Q All right because being inclusive is important so the reader knows who it is they're reading, what kind of scholarship they're reading and whether or not there's some bias to it, fair, Doctor?

A That's fair.

Q And we started talking this afternoon that you've been a retained expert for 3M on Bair Hugger since at least May of 2016, right?

A Yes. We've already talked about that.

THE COURT: Ms. Zimmerman, is this a good breaking point?

MS. ZIMMERMAN: Sure.

THE COURT: Guys, we're going to take a break until 3:45.

(INSTRUCTION READ.)

We'll recess until 3:45.

(BREAK AT 3:27 PM.)

THE COURT: We're outside of the presence of the jury. It was brought to the Court's attention that Juror Number 7 has a plane ticket to Italy on Tuesday. Given that we have four alternates that remain, it is the Court's inclination and intention to excuse at the conclusion of today's evidence, excuse Juror Number 7 from service and seat Juror Number 13 Teresa Williams in her place. Any objection from plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From defendant?

MR. BLACKWELL: No, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

MR. BLACKWELL: Your Honor, just as we did with the last expert, if we could have at the end five minutes and five minutes.

THE COURT: How much longer are you anticipating for your cross-examination?

MS. ZIMMERMAN: I could go through Tuesday but I understand the witness won't allow for that.

THE COURT: The question is how much longer given today, given today, do you need for your cross-examination?

MS. ZIMMERMAN: Until the Court stops me.

THE COURT: So you want to go until 5:00?

MS. ZIMMERMAN: I do.

THE COURT: And then not allow an opportunity for redirect or re-cross?

MS. ZIMMERMAN: It would be my expectation under normal circumstances without a witness's limitation that this cross would continue till Tuesday. I understand that both the witness and the Court's ruling don't permit me to do that.

THE COURT: Well I'll also just note that one of the statements that was made earlier was that the cross examinations of the defendants is what caused the plaintiff's case to go a day and a half late. I just want to note that to my memory there was never an objection or any relief requested by the plaintiff regarding the length of the defendant's cross-examination of those witnesses.

So the fact of the matter is is that we have started the defendant's case a day and half later than what the plaintiff represented, that initially begin a day later and then it began a day and half later. So I just want the record to be clear that had some relief been requested of the Court during the presentation of the plaintiff's evidence regarding the length of cross-examination that the defendants were taking with witnesses, I would have considered it at that time.

But as it stands now, you have been going for about 37 minutes. The plaintiffs - I'm sorry, the defendant's direct examination was 99 minutes and 58 seconds. So I'll allow you the same amount. And then if we have any time left then we'll split in half for a redirect and a re-cross.

(RETURN AT 3:46 PM.)

THE COURT: You may be seated. We will continue with the cross-examination of Dr. Mont. Sir, I'll remind

you that you remain under oath. Dr. Mont, did you hear me? This is Judge Phillips.

A I can here you now. I was having trouble before.

THE COURT: I'll just remind you, sir, that you remain under oath.

A Yes, I understand.

THE COURT: Counsel.

CONTINUED CROSS EXAMINATION BY MS. ZIMMERMAN

Q Good afternoon, Dr. Mont. Are you ready to continue?

A I'm ready.

Q Dr. Mont, I'm going to show you what has been marked as Plaintiff's Exhibit 2240. It is an article entitled *No Evidence of Increased Infection Risk With Forced Air Warming Devices, A Systematic Review*. And it is published in the Orthopedic Surgery in Volume 31. I believe you were the author and I'm going to show it to you in just a minute. The technology is a little hard. So I'm going to ask your lawyers if they have any objection.

MR. BLACKWELL: Your Honor, no objection.

THE COURT: May I have the titles to this exhibit? Thank you. 2240 may be received for demonstrative purposes and published to the jury.

MS. ZIMMERMAN: Thank you, Judge.

Q Can you see the article in front of you, Dr. Mont?

A Now where is this article? Oh, there it is. Okay.
Q In the very top right corner it says, "Orthopedic Surgery." It says, "Surgical Technology International Volume 31." Do you see that?
A Yes.
Q And this is from the year 2017. And you're one of the authors on this. You're the third one down on the right-hand side. Is that you, Doctor?
A That's me.
Q And so you you're one of the authors of this particular published paper, right?
A Yes, I am.
Q I'd like to turn you - by the way, this is actually about a forced air warming devices which is exactly what we're talking about here in this trial, right?
A Yes, it is.
Q And I will turn you all the way back at the bottom of page 300. It's the second to the last page. It's highlighted. I thought that might make it easier for you. In the Authors Disclosure section, do you see that?
A It's not showing.
Q Do you see that on your screen, Dr. Mont?
A The screen right now is blank.
Q Can you see it now? So I'll read it to you, Doctor. It says "Dr. Mont is a consultant for ...

A I can see it now.

Q So it says in this 2017 article about forced air warming devices including the Bair Hugger, it says "Dr. Mont is a consultant for and has received institutional or research support from the following companies: Sage Products, TissueGene, Incorporated, OnGoing Care Solutions, DJO Global, MicroPort Orthopedics Incorporated, OrthoSensor, National Institutes of Health, Stryker, Johnson & Johnson, Pacira Pharmaceuticals. And in the next column it continues if you could pull that up for jury, Chris. Can you see that column too, Dr. Mont?

A Yes.

Q It continues. US Medical Innovations. Then it says that Dr. Mont is on the editorial/governing board of a couple of different places. See anything missing?

A Let me see the top of this article because ...

Q What would you like to see, Dr. Mont? I'm sorry, I can't quite follow.

A I'd like to see the cover page.

Q So the first page where it says, "No Evidence of Increased Infection Risk With Forced Air Warming Devices."?

A Just show me the cover. I'd like to see the cover page to see if this is the original article.

Q This is one of the publications on your CV, right, Dr. Mont?

A Yes, this one of my publications. I'm pretty sure

that ...

Q I apologize, Dr. Mont.

A I'm pretty sure this article ...

Q We have limited time here so I'm going to try not to talk over you and ask a question. When I read to you the list of potential conflicts ...

A This article was addended as of 3M - with 3M is one of those disclosures at a later point. To the best my ability if it wasn't then I had a different ruling.

Q It's your position that you edited this paper to disclose a previously undisclosed conflict of interest?

A I don't know. I would check that because it was either that or I asked the editor-in-chief and they felt that legal cases did not have to be disclosed at that point. But to the best of my ability 3M had been disclosed on this article. Sometimes a different version comes out as an errata that comes later.

Q But it's certainly not in this copy, fair enough, Dr. Mont?

A Not on this copy obviously. We just read that.

Q And that's despite the fact when this was published on December 22nd of 2017, you'd been a paid legal expert for 3M on this case for at least a year and half, right?

A At some point I was paid, yes. I'd been working for the lawyers for 3M, yes.

Q At the point that this article was published, correct, Doctor?

A Yes. What is the question?

Q That it's not disclosed in the article, fair?

A I believe that it was disclosed because there was an errata that that said that I did work for 3M, yes.

Q Okay. I'm going to show - I just showed your attorney what's been marked as Plaintiff's Exhibit or Trial Exhibit 2243.

MS. ZIMMERMAN: Mr. Blackwell, any objection to this?

MR. BLACKWELL: Your Honor, no objection with foundation.

THE COURT: Counsel, are you going to ask additional questions as it relates to 2243?

MS. ZIMMERMAN: I certainly will, Your Honor. conflict of interest statement published by that article, right, by that journal? Your practice is to be familiar with what the requirements are in terms of disclosure or potential conflicts of interest someplace you publish, fair?

A Yes, yes, yes.

MS. ZIMMERMAN: And, Your Honor, I will represent both to the Court and to the witness that 2243 is a copy of what's titled "The Copyright Transfer Agreement" which also details the conflict of interest policy for the Surgical

Technology International Publication.

THE COURT: And are you asking to publish this for demonstrative purposes?

MS. ZIMMERMAN: I am asking to publish it for demonstrative purposes so I can at least show the witness what he would have agreed to.

MR. BLACKWELL: Does the witness have a copy of this?

MS. ZIMMERMAN: He does not. I'm happy to read it to him.

MR. BLACKWELL: Your Honor, may I approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I'm launching an objection that the way that this was supposed to work. They'd have a person there that's going to have all the documents. They can take it into the room. They can take it into the witness. At this point it's simply ambush. The witness doesn't have a chance to review the document, doesn't know if things have been taken out of context and it could have been sent there. That was the whole idea was to have things there present, not to do it this way.

MS. ZIMMERMAN: Your Honor, we're doing the best that we can with a witness that is being presented remotely over our objection as the Court so ruled and I respect the

ruling.

It's challenging to try to impeach the witness with exhibits and with testimony and things like that when you're not in person and you can't it hand over.

THE COURT: It seems as though this is a problem that you have intentionally created, Ms. Zimmerman. I gave two days ago - you asked for someone to be present in the room two or three days ago. And at first, I said no and then this was a very issue that you came up with, right. And I said okay, we'll allow you to have someone there that can hand these exhibits because you have these concerns. Did you do that?

MS. ZIMMERMAN: We sent him a binder full of ...

THE COURT: Did you have the person there to give him these reports?

MS. ZIMMERMAN: We did not send up a person after the Court's ruling that we didn't have to have a hall monitor and somebody to be in the hallway. There wasn't going to be allowed to have a person inside to observe.

THE COURT: That was one of the issues you brought up. You brought up the issue. But then you shifted gears and we talked about this very issue. Then you talked about how you did not have your exhibits there. Now it comes up in your cross examination. So with that, I suggested okay, you could have someone there so you're not

giving him your work product or an outline for cross-examination and you chose not to do that, is that right?

MS. ZIMMERMAN: Your Honor, I guess we must have misunderstood your ruling. We thought that the person had to still stay in hallway and that he would have a binder. So he has reports. He has transcripts we can impeach him with, but the exhibits that we have are all electronic and have to be done by WebEx as we had we discussed with the Court.

THE COURT: That's not the impression that I got. What I got from this is that you were going to provide all of your exhibits that you wanted to use potentially to him in paper format there and that you would have someone in the hallway there. So that as you wanted to do these things, they could be presented to him. And so now I'm hearing is that didn't happen.

MS. ZIMMERMAN: We do not have every exhibit out there, no, we don't.

THE COURT: So how is that you intend to show him these exhibits?

MS. ZIMMERMAN: So this is precisely why we objected.

THE COURT: This a problem that you created, Ms. Zimmerman. I gave you an answer. I gave you a solution - first of all, I ruled a week or 10 days ago when you

brought it to my attention. I ruled 10 days ago that he could appear virtually. I ruled that.

Ten days passed before then you bring up the issue of his during his testimony or in the alternative you didn't want him to have your work product, okay. I didn't share your concerns regarding him testifying on those issues. I didn't share those. And then you said, hey, I want to have someone there with the exhibits. I said okay, you can have someone there that's all of your exhibits and that as you want that they can be passed into him in the room. I feel like I was very clear in that regard.

MS. ZIMMERMAN: I apologize if we misunderstood, Your Honor.

MR. BLACKWELL: Your Honor, to be clear for the record, we also wrote to them in addition asking them to have the documents there in a form that's easy for him to find in binders for just this purpose. We also wrote about it after Your Honor ruled it. But if the witness were on the stand you wouldn't be able to simply show parts of things and not give him a document to review.

THE COURT: So are you proposing that you're just going to read the exhibits without him being able to view them himself?

MS. ZIMMERMAN: I think that I should be able to ask if he's aware that there's a conflict of interest.

THE COURT: Because you did not provide these exhibits in the way that we discussed, we're going to have to take a recess. And I will tell you this is the path that you're choosing after the ruling that I made in the timeframe that I did it, I'm not confident that you're going to be able to conduct your cross-examination as you want. And if that is the choice that you want to make then so be it. I feel as though I was very clear in my expectation and I feel as though you chose not to do that.

So now your option is to just read exhibits without the witness being able to view them and there's under no set of circumstances where I've allowed that before. You can't put it on before allowing him to testify remotely.

The fact of the matter is I ruled on that two weeks ago, over two weeks ago, it may have been three. Regardless, I mean a lot of time has passed and there's been no effort to do anything. You've decided to ignore the Court's ruling and create this issue. I guess I need a few minutes to think about it.

MS. ZIMMERMAN: I'll move onto the next thing. screen. But I mean just reading something to him without him being able to look at it, I won't allow that to occur so I'll leave it up to you. If you want some time to figure that out or if you just want to continue, that's your call.

MS. ZIMMERMAN: Thank you.

(RETURN TO OPEN COURT.)

Q We're back online. Dr. Mont, can you hear us?

A Yes, I can.

Q It is your practice prior to submitting articles from peer-reviewed publications for consideration to review and comply with whatever the journal standards may be with respect to identifying potential conflicts of interest, right? Yes or no, Doctor?

A The answer to what this whole line of questioning is it was a very big debate about whether legal cases constituted company support directly and whether that had to be part of conflicts. That got discussed in January around that period of time in many of the other journals. So it was a source of controversy so we didn't immediately put companies down because they were part of legal cases.

When I noted that, I realized that I should amend that paper that you just presented and there was an errata released in the newer version which came right after that to the best of my knowledge has 3M listed. But many people do not list legal cases as part of their conflicts because they view that is not the company that they're working for companies and the majority - many of the journals do not do that.

But in this case I noted that and that was amended in the version right after in the way it appears in print now for 3M.

Q So your testimony to the ladies and gentlemen of the jury is that the article published on December 22nd of 2017 has been amended to disclose that you were in fact a legal expert for 3M in the Bair Hugger litigation?

A To the best of my knowledge there was an errata and then that got amended, yes.

Q And this journal by the way, Surgical Technology International is not alone in requiring that paid consultants, other authors that have potential conflicts of interest identify those potential conflicts of interest so that the reader knows about them, right?

A I didn't hear the first part. It's not a what journal?

Q I'm sorry, Doctor. So it's not controversial. Most peer-reviewed publications including for example the Journal of Arthroplasty where you are editor-in-chief, there are routinely requirements about disclosures from authors about potential conflicts of interest, right?

A Every journal has different requirements for how they want to conduct - how they want to deal with their conflicts of interest. Some of them are very strict and some of them are very loose so it's by journal.

Q But the Journal of Arthroplasty where you're editor-in-chief has such a requirement, right?

A We've gone through - the whole field has gone through

in the last two or three years a much more rigorous tightening of their requirements. In fact, we recently this past year we wrote a whole editorial about new requirements. You have to - all your studies have to be registered. All your database studies have to be another type of registration. So it's a lot more rigorous now than it was three or four years ago. And there's a lot of clamping down on what we're talking about right now.

Q And, Mr. Blackwell showed you portions of the International Consensus published in the Journal of Arthroplasty in 2018, do you remember that?

A Yes, I do.

Q That particular publication identifies potential conflicts of interest for various authors, fair?

A Yes.

Q Because that was a requirement of the Journal of Arthroplasty when that was published there in 2018, correct?

A Correct, yes.

Q And you know that in part because you're the editor-in-chief now, right?

A Yes.

Q So you're familiar with guidelines that govern authors in the Journal of Arthroplasty, is that fair?

A Yes.

Q The requirement for the Journal of Arthroplasty where

you are editor-in-chief is in fact meant if there any royalties, speaking engagements and things like it need to be disclosed to the reader, right?

A Yes.

Q Authors are also required to disclose if they are a paid employee or a paid consultant or if they have stock options or research support or other financial and material support or royalties, all of that needs to be disclosed in the article or in the journal where you're editor-in-chief, right?

A Yes.

Q And that's where the International Consensus for 2018 was published, right?

A Yes.

Q Chris, could you if you can bring up Defendant's Exhibit 3501. Do you see that on the screen in front of you, Dr. Mont?

A Yes.

Q On the bottom left-hand corner under the footnote, Mr. Blackwell called that out for your attention during his direct examination. Do you recall that?

MR. BLACKWELL: Your Honor, may I approach?

A This is part of the ICM.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I object on

foundation grounds. I pulled it up with Dr. Borak but I didn't do that with Dr. Mont.

THE COURT: The objection's overruled. One more thing counsel. Mr. Blackwell. So I think I was mistaken. So the 2243 exhibit, were you not able to share the screen with him on that either?

MS. ZIMMERMAN: Correct.

THE COURT: The IT guy doesn't have 2243?

MS. ZIMMERMAN: After the Court's ruling that I couldn't show it to him if he didn't have laid the foundation for it so the Court did not receive the objection.

THE COURT: There was a misunderstanding. If you are able to share the screen with him so he can look at this, I'm fine with you using 2243.

MS. ZIMMERMAN: Okay.

THE COURT: I was under the impression that it could not even be shared with him. If you can share the screen with 2243 and you can lay the foundation, you'll be allowed to show him 2243.

MR. BLACKWELL: Just for guidance, Your Honor, because I don't want to keep popping up and I won't. But if there's a question that says I showed him something and used it the direct examination and I didn't cause I didn't use it to show any studies.

MS. ZIMMERMAN: I apologize. I did think you showed this one. I guess you were talking about the questions and that was with Dr. Borak.

THE COURT: Counsel, you have about another 54 minutes which means we'll have to go past 5 o'clock in order to get that time in so there will be no opportunity for redirect.

(RETURN TO OPEN COURT.)

Q So Dr. Mont, I think you see on the screen in front of you what's been marked and received for demonstrative purposes as Defendant's Exhibit 3501. Have you seen that before, Dr. Mont?

A The article?

Q Yes, sir.

A I believe I've seen that. It's a series of one of the articles written by the ICM so yes, the answer is yes, Yes.

Q So the top of the exhibit there says the "Journal of Arthroplasty," correct?

A Yes.

Q And it shows the date of 2019. That's reflecting the meeting that happened in 2018, is that right?

A Yes.

Q And you were at the time this was published assistant editor-in-chief of this particular journal, right?

A I can't see you and I can't hear you that well.

Q I apologize, Doctor. Were you in fact ...

A I guess I don't need to see you but I can't hear too well. So if you can repeat that question.

Q Sure thing. Doctor, you were the assistant editor-in-chief of the Journal of Arthroplasty at the time that the last International Consensus was published, right?

A Yes, that's correct.

Q And, I'm going to direct you to the bottom left-hand corner. Chris, if you would. This section here will get a little bigger hopefully. Can you see that, Dr. Mont?

A I can see that it says a series of nine questions.

Q Well first it says "One or more of the authors of this paper have disclosed potential or pertinent conflicts of interest which may include receipt of payment either direct or indirect, institutional support or association with an entity in the biomedical field which may be perceived to have potential conflict of interest with this work." Right, do you see that?

A I see that.

Q And then I'll represent to you that these footnotes where it says, number one says, "Question 1." That corresponds with Author Number 1. Is that consistent with your understanding?

A Yes.

Q So these footnotes. First of all, the footnotes are really about potential conflicts of interest, right, not who was

responsible for which question?

A Correct.

Q And you know that because you reviewed the entire thing, right?

A Yes.

Q You edited the entire thing, right?

A Yes.

Q In fact, you testified that you went through every chapter, read every line and edited every line of that International Consensus in 2018, right?

A Yes.

MS. ZIMMERMAN: Chris, if we could pull up the author list.

A I can say that I did not read every line if they offered a disclosure. So the printed word I reviewed. I didn't read everybody's disclosures if that's what you're asking me.

A No, no, no. You read every line of the International Consensus document though, that's right, correct, Doctor?

A Correct.

Q And you offered edits to almost every portion of that entire ICOS publication, right?

A Yes.

Q In effect, you did that with Dr. Parvizi, right?

A Yes.

Q And you know, you know that Dr. Parvizi is also a paid

consultant for 3M, right?

A I would not know his relationship with 3M at that period of time. I believe he probably was a consultant for 3M at periods of time. I wouldn't be able to tell you at this period of time exactly.

Q So Dr. Mont, turning to this list of authors that's in front of you sort of calls out from that National Consensus, your name is not there, is it?

A This is only one of a lot of articles. But on this article my name wasn't on this because I didn't specifically write the sections. There were other sections - there were other sections that I did help write. Like there was a section on arthroscopy in the knee I believe that I helped write and my name would be on that article. I didn't want to put my name on all these articles just because I edited them.

Q And so the reader of these articles is unaware of your involvement as a paid litigation consultant for 3M when they read this publication in the Journal of Arthroplasty, fair?

A That's fair. I'm not understanding what your question is but there's nothing here that I did that changed the content of this material and I wouldn't deserve to be an author on this paper. So the answer is yes to your question. The answer is yes to your question.

Q Thank you, Doctor. And you've testified before that in fact you edited personally about 95 percent of the

International Consensus documents in 2018, is that right?

A If I used the word 95 percent, that might be an underestimation. I pretty much went through the whole document line by line. And knowing that it was going to be in the Journal Arthroplasty, but correcting typos and references and things like that, not altering the content.

Q And, Doctor, you testified about that in the past, right? You have your deposition in front of you at Tab A if you'd like to look at it.

A Yeah.

Q In that deposition ...

A Would you like me to look at it?

Q If you'd like to look at it or you can recall that you have in fact testified in the past that you edited 95 percent of the International Consensus, right?

A Do you want me to go and find that? I mean that would be - my recall would be that I did at least that, 95 percent or more and I did the best I can to make sure the content was correct and the references were correct and there were no typos and things like that. That was the editing that I did - oh, I know why I would've said 95 percent. Because there - because there were sections - I did the general, the hip and knee but there were sections on the shoulder and ankle that I didn't do. So that's why I would've said 95 percent instead of saying 100 percent. They didn't appear in the JOA.

Q So it was close to a hundred percent, just not quite, fair, that you edited from the International Consensus?

A Yeah, that's fair.

Q And that's what you testified to before? That's what you're going to tell the ladies and gentlemen of the jury here, fair?

A Yes.

Q And despite that fact, your name doesn't appear in this article, fair, as an author?

A Yes.

Q And while you were editing the 2018 International Consensus document line by line, 95 percent of the text, you were contacted by Mr. Blackwell's law firm, weren't you?

A I think that that was - I don't know the time sequence. It may have been after I finished it. I believe it was after I finished editing. But anyway, I need to know more about what your question is asking.

Q And at the time that Mr. Blackwell's law partner contacted you seeking edits to the draft International Consensus of 2018, you were a paid expert in the Bair Hugger litigation for 3M, fair?

A During that time period from '16 on, yes, I was a paid expert for 3M and the answer to that question is yes.

Q I'm just asking for the truth, Doctor. So at that time in 2018 before the final copy was done, 3M had an advanced

copy, fair?

A I don't know the whole time sequence of what you're asking me.

Q Well if Mr. Blackwell's law partner was asking for edits to be made to the International Consensus, he would've had to have had a draft before it was final, fair?

A I'm going to say, again, I don't know the time sequence. You'll have to take me through that. I believe whenever he got a draft it might've been before he got over - there was a point that it might've been open to the public. I'm not sure about that either. I know that - so that there could have been a point that it was open to the public and they got that. I'm not sure about that. And I believe that whatever question - whenever they got something it had already been edited and done but I don't know the exact time sequence.

Q And you know that Mr. Blackwell's law partner was in fact asking, requesting that you add in a reference to a paper written by another one of 3M's experts, one of their paid experts in this Bair Hugger litigation, right?

A I would have dismissed that outright, yes. That's an email that I just dismissed.

Q You thought that that was an unreasonable request, right, to try to influence the work that you were doing as part of the International Consensus?

A I think it could be unreasonable. It could be a lack

of knowledge. If you made a request before any of this whole thing was occurring then it would be appropriate. But you wouldn't make a request like that after the thing had been written and vetted and voted on and the editing done at that point. There was nothing that was going to be changed at that point and that was for anybody. Once all this was done and the votes were in, there was nothing at that point that was going to be changed except typos or things like that.

Q And Dr. Mont, you agreed that that would be an unreasonable thing for a company to do, right, to try to influence your work in that regard?

A You have to define what you're saying that's unreasonable in that regard. I mean people ask questions and then I just say no, we can't do that. I get questions like that every day. Can you do this with this article or that and I say no, we can't do that.

Q You routinely get contacted by manufacturing companies where you're a paid litigation expert asking for them to - asking for you to edit your work? Is that something that happens routinely for you, Dr. Mont?

A I don't even understand your question. Do I routinely get contacted by manufacturers - what does that mean? The answer is no, I don't get routinely contacted. There was an email that was sent. I agree with that and I dismissed it. There have been other emails by other companies asking for

things and I said no, we don't do that or that's not - things like that happen. Could you look into something or can you look into that and I'm trying to always be transparent and fair and things like that.

Q Dr. Mott, was your response to Mr. Gordon's email that's unethical, unreasonable, absolutely outside the bounds of something I would consider? Or did you say sorry, too late?

A I think I said something like it was too late. So the only way that a company could or anybody could have had us consider something would have been at a way earlier time while these things had been written and that happened with a number of companies, not just 3M, to consider this paper or that paper. But that has to be in a way, way earlier phase. So that's while the things are being written by the experts and then put in writing and then vetted out and discussed as being that early phase. So, of course, my answer, too late and sort of dismissing that. That case was way too late.

Q Dr. Mont, when the 3M legal team tried to edit the International Consensus paper, did you tell them that that was unreasonable or unethical or just that it was too late?

MR. BLACKWELL: Objection, Your Honor, lack of foundation as to what he told the legal team.

THE COURT: Overruled. Dr. Mont, you may answer.

A Okay. My answer was too late but my implication that I just dismissed that. It wasn't even - that wasn't even a

query that I would even consider and did not.

Q Now when I took your deposition earlier this year you testified it's your understanding that the patient warming market in the United States is worth at least $2 million a year, right?

A I did but I quantified that because I really don't know the numbers and the economics. For example, I don't know what's charged per device. I had an idea of how many were used and I was trying to put some numbers because I was pinned down but I said it under oath. I really don't know what the financials. I had no idea what a company makes per device and things like that. So for me to put numbers on, I can't do that and I really wouldn't know those numbers.

Q Dr. Mont, you agree with me that 3M has a significant financial interest in what the International Consensus has to say about the risk posed that the forced air warming Bair Hugger devices they sell are used in joint replacement surgeries, right?

A I would agree with that. The company has a device. They're trying to do well with their device. That's a business so they would have significant financial interest. I would agree with that.

Q Now in getting ready for the testimony that you were preparing for the ladies and gentlemen of the jury, you didn't consider corporate internal documents, fair enough?

A To the best of my knowledge, I did not consider internal documents.

Q But you agreed in your deposition that it's possible that internal documents might change some of your opinions you were prepared to share with the ladies and gentlemen of the jury, right?

A First of all, anything is possible. I think I also said it was not likely and I didn't think that anything internally would change my opinions based on my knowledge, my use, the ICM, the articles, the literature. So what's an internal document if you wanted to show me, you could show me something but I didn't think that it would change my opinions. That's what I said in my deposition.

Q And you didn't ask for any additional internal documents after we finished your deposition, fair enough?

A Fair enough.

Q So you haven't considered those in offering your opinion that there's no evidence that the Bair Hugger could cause deep joint infection, fair?

A What's the question again?

Q I'll try again. You haven't considered any of the internal corporate documents or frankly really the corporate testimony about the potential risk of Bair Hugger to cause deep joint infection, fair?

A Incorrect. I did - in the deposition I did read the

depositions, the two depositions of Al Van Duren. I read depositions by Mr. Issa. In those depositions I didn't have the actual documents that they were referring to but they implied there were certain documents so I can surmise something about certain documents.

In addition, you during the deposition showed me some documents as well which we read together. And based on reading those depositions and what you showed me, I didn't feel that it was necessary to see any additional internal documents from 3M.

Q So it's fair to say that I showed you more of the internal company documents from 3M than you received from 3M's lawyers, right?

A You showed me some documents from Arizant that were a call back, the equivalent and from Gaymar. If we define those as equivalent to 3M then the answer is yes. If those are not defined, then the answer is no because then we didn't really see 3Ms. We saw Arizant and we saw Gaymar which were precursor companies I guess.

Q And in any event, you didn't think you needed any internal documents to offer the opinions that you were going to offer to the ladies and gentlemen of the jury here, right?

A I felt that having used this for over 20 years with the millions that I've done and the review of the literature and the papers and the consensus conferences and all that scientific evidence and knowledge of this specific case, that I didn't feel

that an internal discussion or documents or what you were presenting would change my opinions about this case in terms of the cause of the periprosthetic infection or anyone's cause of a periprosthetic infection from forced air from the Bair Hugger forced air warming device.

Q For example, the fact that Al Van Duren admitted in 2010 that there is evidence that forced-air warming use is associated with an increased risk of infection, that wasn't relevant to the testimony you were going to provide to the ladies and gentlemen of this jury, fair?

A I thought that that's a way of paraphrasing him that he felt that certain people might think that there's evidence and he was getting discussion about that, that certain - there were certain practitioners that thought there might be evidence of an increased risk of infection. That is a very different comment from his deposition that there is actual evidence.

And if he said that it still doesn't change my mind because I've reviewed all the literature and the consensus conferences etc. and the same answer that I've given pertinent to this case and others.

Q Because there really wasn't any evidence that you were going to read or see that was going to change your mind that this is a risk-free product, is that right, Doctor?

A I'm always open to anyone showing me something. And you were in the deposition with me and I was willing to sit and

listen and show me something that I had not - I had reviewed all the literature, a whole series of articles, the consensus group which is a group of over 700 people the second time voted 93 percent on these issues. And they considered almost all the evidence available that's published when they made that decision.

So I didn't feel that I needed to necessarily examine an internal document which is what you were showing me which might assert an opinion. But I would be happy to consider anything and that's what I told you and that's what I would do anytime. I would consider anything.

Q And you discounted those documents, the internal documents, correct, Doctor?

A You mean the ones that you showed to me?

Q The internal documents.

A Is that what you're saying, the ones that you showed to me that were internal?

Q The internal documents?

A Is that what you're asking me?

Q I'm sorry, Doctor. I'm trying not to talk over you. This technology is difficult. You know from your deposition and from reviewing documents that Al Van Duren agreed in 2010, so 12 years ago that actually there is evidence that forced air warming use is associated with an increased risk.

MR. BLACKWELL: Objection, Your Honor. May I

approach.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, at this point Counsel is testifying. She's mischaracterizing what Al Van Duren in fact said. It's on a document and she's mischaracterizing it. I'd object for lack of foundation.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So Doctor, you discounted Al Van Duren's comment on the memorandum from 2010 saying actually there is evidence that forced air warming use is associated with an increased risk of deep joint infection, correct?

A I believe, first of all, some of that may have been out of context. I think it's being paraphrased that he said that some people might think that there is an increased risk of infection. And you showed me documents or where he said it shouldn't be used for orthopedic procedures and yet it's been used for millions of procedures.

So, therefore, coupled with all of that some of it is being paraphrased, some of it he amended later in his comments. So that would be the reason why I would discount some of those statements.

Q Dr. Mont, the ladies and gentlemen of the jury have heard an emphasis about the truth, the whole truth and nothing but the truth. I know this is a little difficult because you're

a ways away. But the ladies and gentlemen of the jury will be familiar with this document as Plaintiff's Exhibit 225. It's a blowup where Al Van Duren comments, "AVD. Actually, there is evidence that FAW use increases risk." You saw this document during your deposition, right, Doctor?

MR. BLACKWELL: Objection, Your Honor. On the basis of the rule of completeness I'd ask that she read the complete quote from Al Van Duren that she just put in front of the jury.

THE COURT: The objection is sustained.

Q The rest of the comment bubble, Dr. Mont. "This evidence was the motivation for Dr. Memarzadeh's work." So I'm not paraphrasing Al Van Duren's language. That's what he said, right, that actually there is evidence?

A Again, we don't know what he's thinking at that moment in time. And Number 2, I'm telling you that I don't see any evidence of increased risk with any evidence of bacteria studies, with the human studies, with the use. He also said that it's contraindicated on orthopedic cases. Millions of cases have been done so that it clearly was not contraindicated. Because if this device was contraindicated as you pointed out, we would not be able to use it in orthopedic cases.

So clearly, some of those statements were being said. I don't even know how those statements were being made. They were made in a meeting and they don't have context to me here.

Q Dr. Mont, at this point the ladies and gentlemen of this jury know more about internal documents from 3M about the Bair Hugger and the risks associated with infection than anybody outside this courtroom, fair? You had to sign a confidentiality order?

A They know more about the risk of infection from 3M. I don't know what that means. The risk of infection comes from all of the scientific evidence from the 75 articles that have been done about the risk of infection and bacteria and everything about 3M. That's the evidence and that's the information.

Q Dr. Mont, there are internal documents that are stamped Confidential Subject to Protective Order. You've seen some of those in this case, right?

A Yes, from you.

Q And, I'll represent to you that some of them have been shared with the ladies and gentlemen of the jury. But you'd agree that they have not been shared with your surgical partners, with anybody at the Cleveland Clinic, with most hospitals across the country, fair?

A I can't say yes without - I don't know what documents there are and how many there are. And I would imagine that any company that has documents, some of them are relevant, some of them are irrelevant. So any company is going to have a lot documents that are not necessarily shared. They're internal

documents to the business that they're running and some of them are relevant. So I'm not sure what you're asking me.

Q And it's your testimony then to the ladies and gentlemen of the jury here that because this device is still being used it must be safe, right?

A I gave you about 10 reasons and I didn't even get started on why I think this device is safe. I did not say what you just said at all. That's completely paraphrased as what I said. I gave a lot of scientific evidence of why I think this is safe and I can keep going.

Q Dr. Mont, you read Dr. Ballard's deposition as part of the testimony, part of the preparation in this case, fair?

A Dr. who?

Q Ballard, the orthopedic surgeon?

A Ballard.

Q Yes.

A Yes, I did.

Q You don't have any criticisms of the care that he provided, right?

A Do I have any criticisms of his care, no.

Q But you know from reading his deposition that he was shown documents that he wanted to see that he hadn't been aware of before he was deposed in this case, right?

MR. BLACKWELL: Your Honor, I'd object to the characterization of the testimony and not showing the

witness.

THE COURT: Sustained.

Q Do you recall that testimony from Dr. Ballard?

A Do I recall his testimony? Yes, I do. I read his deposition.

Q Do you recall that he - he testified in his deposition that he would want to know about the documents he was shown in this case, right?

A I don't think that's necessarily the way it could be. I don't know if that's how it was presented to him that way. If you presented it to me, would you want to know if something caused 200 times increased risk of infection and the answer to that hypothetical question would be yes, of course I would. I would say yes if you gave me that.

I think it's the way it was presented to him that he may have said an affirmative answer like yes.

Q Well the ladies and gentlemen of the jury have heard Dr. Ballard's testimony and they can recall it for themselves. But it's fair to say that there are documents shown in this courthouse and to you during your deposition that are not generally available to the public, is that your understanding?

A There were documents that would not have been shown to the general public, is that your question? And my answer would be yes. I would make that assumption from any company.

Q For example, you've never seen a letter from 3M where

they tell orthopedic surgeons that every single study both internal and otherwise shows an increase in particulate count when the Bair Hugger is turned to warm, right?

A That's probably true that most studies, I would not deny that. Most studies do show an increase in particulate count but that to me still does not mean anything. Because if the particles are a certain size they don't have bacteria so they're irrelevant.

Q Dr. Mont, you make a point about particles. You've seen the Bair Hugger blankets in the past, right?

A Yes.

Q And, I'm holding up an upper body blanket. You can actually see the holes on the blanket, right? You've seen these in person? They're visible to the unaided eye.

A Yeah.

Q That's not true for particles, is it?

A Correct. They could be a really thick particle. That's not true for what we're talking about here.

Q Fair enough. Because the particles that we're talking about and the particles that orthopedic surgeons are concerned about are the particles you can't see, fair?

A Fair.

Q But you can see the holes on the Bair Hugger blanket, right?

A Yes.

Q That's the reason that a particle that's smaller than that hole can get through, right?

A Yes.

Q Now Dr. Mont, I'm trying to get through at least some of the things that I think we agree on. You have no question by the way that Mrs. O'Haver suffered from a deep joint infection, right?

A I agree with that.

Q And you understand because you reviewed the reports and depositions of Dr. Jarvis, Dr. Bowling and even Dr. Anderson, 3M's infectious disease expert, that everybody else agrees with you that this was in fact a deep joint infection, right?

A Yes.

Q And you also know from your review of Dr. Anderson's deposition that it's his belief that the bacteria that caused that infection came - was introduced to her body in the operating room, right? I'm holding up - this is Plaintiff's Exhibit 2212. So you recall from reviewing his deposition?

A I recall that in his deposition. I'm not sure whether he altered that opinion since after reading my deposition or something like that. But yes, I do recall that, yes.

Q And Dr. Anderson was deposed before you were deposed in this case, right?

A I don't - yes, he was.

Q If you read his deposition prior to yours, he had to go first, right?

A Correct, that's what I was thinking about and yes, he was.

Q And, Dr. Anderson is 3M's disclosed infectious disease expert, you know that, right?

A Yes.

Q And it's his opinion that that bacteria caused Ms. O'Haver's deep joint infection was inoculated, was introduced to her body during the time of her surgery, right?

A It's a small possibility as I said but it's his opinion. It would be a very minority opinion to me.

Q But you've testified before and included in your reports that the majority of deep joint infections come from bacteria that does get in during the surgery, right, most of the time?

A The majority that you see in the first year or so are from intraoperative inoculation. And I've realized since then in our last deposition that a lot of infections happen like two or three years later and that's a whole ‘nother ballgame and that might be the majority.

But the infections that we're talking about, that one or two percent infection rate, I do agree that the majority of those do get introduced at the time of surgery, yes.

Q So most of the time ...

A But then you have to look at each individual case to try to put probabilities where you think it's introduced.

Q And that's what the ladies and gentlemen of this jury are going to be asked to decide. What is more probable than not, do you understand that, Doctor?

MR. BLACKWELL: Objection, Your Honor, as to the comments on the legal status of the case.

THE COURT: Sustained.

THE COURT: Hold on. Dr. Mont, Dr. Mont, this is Judge Phillips. Allow Ms. Zimmerman to ask her next question.

Q At any rate, you wrote in your expert report and in your testimony just now, you agree that most of the time, most of the time a deep joint infection comes from bacteria that got in there during the surgery, fair?

A And if it got in from the surgery it wouldn't be from the Bair Hugger but yes, I agree. The majority of cases in this country would be, yes, a periprosthetic joint infections of the knee.

Q Doctor, you'd agree that the most common cause of wound dehiscence is infection, right? You published on that in the past?

A Not necessarily.

Q Not always but most of the time if a wound is dehiscing, if a wound is coming apart, most of the time it's

because of infection, fair?

A It depends on how you're defining dehiscence. But in this case as to dehiscence, the answer is no.

Q And you know from your review of the medical records - I'm sorry, Dr. Mont. You know from your review of Ms. O'Haver's medical records that she had a documented well healing wound on December 14th, right?

A Correct.

Q Now when you were asked about - I apologize. I'm sort of jumping lanes here. We've got limited time. You were asked about various sources of air movement within the operating room. Do you remember that?

A Yes.

Q And, I believe your testimony to the ladies and gentlemen of the jury was that there were no other pieces of equipment inside the operating room that had filters, do you recall saying that?

A Yes.

Q You would agree certainly that the HVAC system diffusers, those are filtered, right?

A Yeah, that's true. There's some other things that could have a filter because I didn't look at that diagram as carefully. But many other things do not have filters, the greater majority.

Q In your report you also talked about the importance of

heat sources in an operating room, right?

A In my prior report I did say that, yes.

Q Not in this report?

A I guess I believe I said that there's more heat generated by the surgeons and the staff that are in front of the knee than would be generated by the Bair Hugger. And in addition to the Bair Hugger, any heat that's generated would be dissipated by the distance of the Bair Hugger to the patient.

Q Dr. Mont, you agree that you're not an expert in heat transfer in the operating room, fair?

A I got that information from articles, multiple articles. I'm not an expert but I can read the articles to try to understand the answer to a question you just asked me.

Q And so you know from your review then that human beings are estimated to be about 100 watts a piece as heat sources inside of an operating room? Do you know that?

A Correct. The total - I think I put in the report four people would be 400, total.

Q And you know that the Bair Hugger itself is a kilowatt, right, generates a kilowatt of heat? Do you know?

A I don't know the exact number but that heat would be dissipated by the square radius or the distance to the operative site which would make that kilowatt heat negligible when it got to that site.

Q You understand that the Bair Hugger has a larger

number of watts of heat in the operating room than anything besides the lights, right?

A I don't agree with that on principle because the electrocautery devices, I mean they burn the tissue and they can become practically red-hot so that's pretty hot. I would say that's right there. I use an electrocautery that would burn your hand off in a millisecond so that's pretty hot.

Q It is hot. But Dr. Mont, in a relative way it is not generating as much heat in an operating room as the Bair Hugger, do you know that one way or the other?

A You'd have to define whatever you mean in a relative way because I'm telling you the Bair Hugger is far away and that to me leads to a much - a very low relative heat than a device that I'm using right there that generates a tremendous amount of heat when we're cauterizing the tissue and trying to get hemostasis and bleeding under control.

Q Dr. Mont, you testified on some questions from Mr. Blackwell about sources of bacteria in the operating room. Do you remember that?

A Yes.

Q We can agree hopefully that sources of bacteria in the operating room are not a good thing, right? You don't want bacteria in the operating room?

A Yes, I agree with that.

Q And you list out or I guess on the slides that Mr.

Blackwell showed to you list out potential sources of bacteria in the operating room, right? Do you had that in front of you, Doctor?

A I have that. It's 4147.

Q Yes, you're correct, Doctor. And you list down here glove perforations. You're not aware of any random controlled trial that talks about an increased risk of deep joint infection associated with glove perforations, are you?

A There are a number of studies that show glove perforations leading to increased bacteria in the OR from agar plates that are there. To do the trial that you are suggesting would be unconscionable. You're not going to subject a group of people to have glove perforations. That goes against all the principles of Louis Pasture about cleaning your hands and not contaminating any surface. You would never want to contaminate a surgical wound.

Q We agree. You never want to contaminate a surgical wound, right, Doctor?

A Correct.

Q And you list out potential sources of bacteria in the operating room. You did not include on this list the Bair Hugger, correct?

A I did not exclude it?

Q You did not include it. There's no picture of the Bair Hugger on this chart, fair?

A Fair.

Q You just discount that that's a potential source of bacteria in the operating room despite the testimony that you read from Al Van Duren and Jay Issa agreeing to that fact, fair?

A Fair.

Q Now with respect to the sources of bacteria in the operating room that were listed on this Trial Exhibit 4147, you'd agree that there's no evidence in this case of a glove perforation in Ms. O'Haver's surgery, right?

A There would be no way of knowing one way or the other whether there is a glove perforation. We'd have to go backward in time and check all the gloves and that doesn't typically get recorded.

But I can say if I could finish when they have done studies and tracked glove perforations during knee and hip replacements they find way more than - they find an average of more than three or four glove perforations per case. Unfortunately, it happens. It gets noticed. You change your gloves. You irrigate. That does happen. So we don't know. We can't go backward in time here but we could maybe presume that could've happened. We hope it didn't happen.

Q So Doctor, because the jury is surely eager to get on with their Friday soon here, you have a list or a slide here with sources of bacteria in the operating room. And you'd agree with me that there's no evidence in Ms. O'Haver's case that any

one of these particular things is the actual source of her deep joint infection? In fact, you think that it came from bacteria that happened well after she left the operating room, right?

A A successful DAIR 34 days later has a chance of working a way under 30 percent chance. So if it happened in the OR it's so unlikely. That's number one.

And that's the major proof that it wouldn't happen in the OR. The presentation of the dehiscence. So you can't go backward in time to the OR to know and all these different things that occurred but you can look at the things that happened in this specific case to be able to ...

Q Dr. Mont, do you remember what my question was?

A It's something about what occurred in the OR about these things which you can't go backward. My answer would be you can't go backward in time to know that glove perforations or any of these things occurred or didn't occur.

Q You'd agree with me that there was no evidence in this case that any of these things caused a deep joint infection that Ms. O'Haver suffered from?

A Any of these things could have been a possibility that could've introduced bacteria in the OR typically in a susceptible host that might've caused an infection. That's unfortunately the case. That's why we do everything we can to wash off the wound, to maintain as much aseptic technique. We can never sterilize the wound or sterilize anything. We just

have to do the best we can to try to keep the bacteria under control as best we can to avoid infections. That's one of the biggest issues that I deal with and all my surgeons deal with all the time.

Q And that's why doctors want to have as much information as they can about the safe use and patient selection for a medical device that they may use with their patients, is that right? They need to know about the potential risks associated with a medical device so they can make appropriate decisions?

A Doctors generally want to know as much - they want to know appropriate information about a device to do the best they can for safety. Yes, I agree with that.

Q And you testified in the past that it's appropriate for doctors to rely on medical device manufacturers to provide them with complete and accurate information about the use of their medical devices for their patients, right?

A I don't know what that - that's not exactly how I testified, complete and accurate information.

Q It's reasonable for a healthcare provider to rely on the communications they get from a device company, right?

A Sometimes the surgeon knows more than the manufacturer does about how the device is working. Surgeons are actually putting in the knee replacement or the hip replacement so they know more about the technique and how to do this and things like

that. So it's a combination. Again, it becomes a teamwork thing between the manufacturer and surgeon who is trying to do the best for the patient.

I feel horrible for Ms. O'Haver to get this infection. I mean this is what I've tried to do my whole life, trying to avoid or treat patients like Ms. O'Haver so I agree.

THE COURT: Counsel, can you approach?

(BENCH CONFERENCE.)

THE COURT: So you've been going for 32 minutes. It's now 5:04. So I can give you about two more minutes but at that point we're going to recess for the day.

MS. ZIMMERMAN: All right.

(RETURN TO OPEN COURT.)

Q So Doctor, you can hear us still? You wouldn't fault a doctor for relying on the communications from a medical device company about the safe use of its products, right?

A Correct.

Q And prior to your deposition you had never heard, had you, that patients that are clinically obese are not appropriate - that there is no reason to use a Bair Hugger device with patients who are clinically obese, fair?

A First of all, there are at least three publications that disagree with that and I completely disagree with it because you would always use a warming device on a patient

that's obese. So that makes absolutely no sense to me whatsoever.

Q But you understand from the deposition clip that I showed you in your deposition the portion of Al Van Duren's testimony that 3M, that the company agrees that there's no indication ...

MR. BLACKWELL: I object, Your Honor. Counsel's testifying again.

THE COURT: Overruled.

Q You understand from hearing that deposition testimony that the company agrees that there was no reason to warm an obese patient because they are protected from intraoperative hypothermia. You understand that, right? You just disagree with it?

A We have a patient here that had a BMI of 42 that we just said needed to be warmed. They were slightly hypothermic and they got warmed during the case. So even within this case it's a complete contradiction. If you're obese, I would always use a warming device on an obese patient. You don't know how long the procedure is. You might think the procedure is going to take 45 minutes. It might take three hours. You would have to keep - whether it's a normal weight patient or an obese patient you have to use warming.

Q You understand that what you believe is different than what 3M admits to be true, fair, with respect to warming obese

patients?

A I know one person who made a statement there. I don't totally know the context. I know there's at least three articles that disagree with that statement. So I can't really know for sure the context of that statement that was made about obesity. It may have been something done many years ago just in the same way that the same person said you can't use these devices in orthopedic patients which does not make any sense.

Q You disagree with Al Van Duren, fair enough? Dr. Mont, you testified ...

THE COURT: Okay, counsel, we're going to recess for the day. All right, guys, we are going to go ahead and recess for the day, well I guess for the week. I will ask that you be back at 8:45 on Monday. I have to qualify jurors, Tuesday. Thank you. Goodness gracious, I cannot keep track of my schedule. So on Tuesday. So have a good weekend. We'll get started on Tuesday at 8:45. I again anticipate that you will receive the case for your deliberation on Thursday.

(INSTRUCTION READ.)

Thanks so much. Thanks for representing the Chiefs once again this Friday. Don't stay up too late Monday watching the game. We'll see you guys on Tuesday.

(JURY IS RELEASED AT 5:15 PM.)

THE COURT: Earlier when we had a bench conference I wasn't clear - we're outside the presence of

the jury. I wasn't clear on some dates and so I just wanted to make the record clear. So it was on September 21st that we had a phone conference that was not held on the record. At that time there was a request I think by your Mr. Torline that that Dr. Mont be allowed to testify virtually. I think Mr. Emison speaking on behalf of the plaintiffs lodged an objection to that.

And I don't mean to - if you want to correct me, Mr. Emison, please feel free. I think that one of your bigger concerns was kind of the logistics and then the technology aspect and the issues associated with that. I heard those but indicated that I would allow Dr. Mont to testify.

Mr. Torline, correct me if I'm wrong, but I believe it was at that time that you indicated that he would be testifying remotely at 11:30 on Friday and indicated his limited availability. Am I incorrect on that?

MR. TORLINE: That's correct, Your Honor.

THE COURT: So it was on September 21st that the timeframe and the limited availability was relayed to plaintiff's counsel. And I can't remember. I think it was Ms. Rogers that you began making the request and then Ms. Zimmerman chimed in as well. I can't remember whether it was on Tuesday or Wednesday of this week that we had the record regarding someone being present during - I think - was it Tuesday the 4th?

So then it was Tuesday the 4th that the request was made regarding exhibits and someone being present. Initially, I said no one could be present and then I changed my ruling and indicated that someone could be present from plaintiff's counsel or someone else because there was a concern by Ms. Zimmerman that providing the exhibits to Dr. Mont prior to his testimony would in essence be work product and allow there to be an outline of your cross-examination.

Based upon that request because although I did not share your concerns regarding him looking at phones or those types of things going on during his testimony, I did understand your concerns as it relates to the exhibits. So I indicated at that time that someone could be present to hand him paper exhibits of the exhibits to allow them to be present. So that was done I believe on October 4th. I can't remember. I feel like it was the end of the day.

Ms. Zimmerman it was on the 4th or the 5th that you expressed some concerns regarding the timing or the amount of time that you would have to cross-examine Dr. Mont. It was either on Tuesday night or Wednesday night and honestly, I can't remember.

MS. ZIMMERMAN: It was both and then at the pretrial conference when we heard about the scheduling issue, I think the letter was the 24th or 25th. We had a

pretrial conference then the next day. Mr. Emison made the representation that our primary concern was really with respect to the time and being able to fully cross-examine the witness particularly given the time concerns he had.

THE COURT: And I also understand that one of the concerns that you guys had or one of the bases as it was indicated earlier was that the defendants were able to cross-examine. And I will tell you that I don't disagree with that but at the same time I have no memory of there being an objection from the plaintiff regarding the length of time to the objection and that somehow that that was slowing down your presentation of evidence.

According to my memory, I think it was Dr. David's testimony and there was a concern about him getting off the stand. Am I wrong about that? It was Dr. David.

MR. BLACKWELL: Is was Dr. David.

THE COURT: And so efforts were made and I believe that I participated in those efforts to get Dr. David off the stand according to the timeframe associated with that.

So I just wanted to make the record clear regarding what my memory of things is. Any additional record from the plaintiff as it relates to these things?

MR. EMISON: Only that I'm not aware of an appropriate objection regarding the length of the cross-

examination so I don't - I didn't know that I was capable frankly of asking the Court to limit the defendant's cross-examination. I've never done that before. And the plaintiff's position is that the defendants conducted their cross-examination that they deemed appropriate and we shouldn't be penalized for that on the back end of the case during their presentation of the evidence.

THE COURT: The other piece of it that I will say is that I don't view this as being penalized although you may and that's obviously your perspective and I understand that. But the fact of the matter is that representations are made to the Court that the plaintiff's evidence would take four days. Plaintiff was given five and half days to present evidence. There was no objection that was made during any of the defendant's cross-examination.

And what I've done is I've tried to then make it equal. I'm not allowing plaintiff to have - I'm sorry, defendant to have a hundred-minute direct examination with half of that being cross-examination. I'm trying to navigate this and ensure that despite us running behind schedule as well as taking into consideration the scheduling limitations of the witnesses that it is equal time for direct and for cross-examination.

And based upon my decisions today, the defendant was not allowed any type of redirect. If the defendant wants

to make Mr. Mont available on Tuesday morning for additional testimony. But as far as I'm concerned there was an equal amount. And, in fact, I think plaintiff got six more minutes as it relates to the cross-examination of Dr. Mont. So that's all that I have to say on the matter.

MR. BLACKWELL: May we have a word in it also, Your Honor?

THE COURT: You may.

MR. BLACKWELL: First off, when Mr. David was on the stand, plaintiff conducted whatever direct exam they wanted. And when we started our cross-examination there were time constraints that were imposed on us in our cross-examination so that Dr. David could get out. We complied with it. We didn't have equal time. We had the time that was available under the circumstances and we worked with it.

And all of this talk about how much time we've taken in our cross-examination, I think if the Court went back to ferret it out, you'd find that to be true, Your Honor, for only one or two witnesses, not of all of them.

They have made representation after representation about when their case would be finished and then they creeped that in. And the ultimate result being instead they said they'd be done at noon when they said they'd be done, it was closer to 2 PM before they got done.

And what it translates into is what we received this afternoon. Our case is compressed. We've done what we could, Judge, to be compliant as we know the Court would want. The jury has to get the case.

But the way this translates to me and I'm sorry. We've spent a lot of time at the bench given the kinds of questions that were being asked. And, frankly, after all the effort that we put into accommodating what the parties wanted to be able to do this virtually, have a person present, they didn't even send anybody. So we're up here spending this time at the bench over that, Your Honor. And who paid for it, ultimately, it's the defense.

We appreciate that the Court did say to check with Dr. Mont to see what may be done to remedy it. But they took an extra day and a half. And after they've done it, they come in everyday and say it was the fault of the defense that they took an extra day and a half and then prepared to have us pay the price so they do what they want. For me it's just a call for fairness.

THE COURT: Sure. And that's one of the reasons that although earlier today there was a belief that the plaintiff had gone over, I'm stopping the timer as best that I can with all of the objections. So neither side is getting penalized for the others' objections or not getting their time taken.

As a result of that because we have a juror who rides the bus. So it's important that that juror be able to leave and to get on the bus every day and so recessing at 5 o'clock is important in that regard.

Here's what I will say. I'm happy to at the conclusion of this trial read my times into the record. I will tell you I think the record will speak for itself as it relates to the amount of time that each side has had. But I just want to make the best record that I can for those that will may disagree with the final decision in this case and for you guys to have the best record to either defend or attack the verdict in this case. And that's my intention here today. So any further record, Mr. Blackwell?

MR. BLACKWELL: No, Judge.

THE COURT: Mr. Emison or Ms. Zimmerman?

MS. ZIMMERMAN: I just make a record that I would have significant additional cross.

THE COURT: Yes and that's noted and I think that's been relayed and I appreciate that. Let's go off the record.

(OFF THE RECORD.)

(COURT IS IN RECESS AT 5:22 PM.)

PROCEEDINGS

October 11, 2022

THE COURT: We're outside of the presence of the jury. It's my understanding the plaintiff wants to make an additional record as relates to Dr. Mont's testimony.

MS. ZIMMERMAN: We would simply like to make a formal offer of proof later today regarding additional questions we would have asked Dr. Mont had he been available to continue his cross examination today.

THE COURT: And as I just indicated off the record, I feel as though the proper time to do that would have been on Friday so that I could make a decision as to whether or not to continue Dr. Mont's testimony. But obviously if you want to file your offer of proof, you may do so and the Court will receive it and we'll go from there. Does the defendant have any response to plaintiff's request?

MR. BLACKWELL: No, we don't, Your Honor.

THE COURT: Any further record from the plaintiff?

MR. FARRAR: We have some objections to demonstratives that were sent yesterday, two in particular and I don't know if the Court wants to deal but now. It might take a little time to explain so I'm happy to - I just want to note before we put him on that we have an

issue.

THE COURT: So is that something that is going to be played prior to either the first - or I'm sorry, is that something that's going to be used either prior to the first break or lunch break from the defendants?

MR. BLACKWELL: It may be before the lunch break, Your Honor.

THE COURT: Okay. Why don't we go ahead and do that at our morning recess and we'll take it up at that time.

MR. BLACKWELL: We've got an hour and 20 minute depo clip to play.

THE COURT: Okay, great. And are you guys good with me letting the jury know after you announce what you're going to play, the length of it?

MR. BLACKWELL: Yes.

THE COURT: And that's an hour and 20 minutes, is that right?

MR. BLACKWELL: That's right.

MS. PRUITT: Your Honor, there's one more issue. On the Augustine, they tried to cut down some clips last night. We've been working on this. And we did cut some things out but we still believe there are things in there that are stuff that they should have put in in their case in chief and we would still - this is a much shorter

version. So if the Court hasn't already gone through the long one, this is the same thing with yellow highlights that we still think should be out that they're there insisting that they play.

Their time is still longer than ours but I know the Court is focused on that issue and I just don't want you to have to do it all.

THE COURT: Okay. Mr. Emison, do you have any objection to me reviewing this? My thought is I can review it and then we can go from there regarding any additional argument that you want to make. I'm just not in a position to really question anything at this time.

MR. EMISON: I do have an objection to it on the grounds that they're objecting to the substance of my cross-examination. I'm entitled wide latitude in cross-examination. I am not limited to the scope of their direct examination on my cross-examination of this fact witness.

Whether or not this fact witness was brought in our case in chief or in the defense case, I'm entitled to conduct a fair and frankly broad cross-examination.

I took the Court's instructions yesterday to heart. I have reduced our total running time from one and half hours to 42 minutes. I am within eight minutes of their running time. So I do not see any unfair prejudice to the defendant with our length of time. And so long as our

length of time is a reasonable amount of time, I should be given full latitude to cross-examine this fact witness as to anything relevant to the case which I have done. So I do have an objection to trying to limit the substance of my cross-examination.

THE COURT: Sure and I didn't mean to suggest it. I figured that you had objection but just I need to review this before then I can kind of intelligently weigh in. And just given that we went from so much more to so much less, I just want to look at it through that lens. And then I will let you guys know probably at lunchtime. Does that work for your presentation of evidence?

MS. PRUITT: That works. Two things in response to Mr. Emison if the Court would allow it.

THE COURT: Sure, briefly.

MS. PRUITT: The Court will see that what they're doing is putting on their case in chief. And you were allowing some latitude in cross but you are supposed to keep it within the direct examination.

The two parts that they're trying to put their case in chief on is they go through and talk about a lot of FDA stuff and it's totally outside of what we asked.

And, secondly, they're trying to get this witness who is not an expert or qualified as an expert to give opinions on warnings. And so those are the two huge issues. Those

are issues that should have been put on by them in their case in chief and now they're trying to do it on the backend this way.

THE COURT: The Court will take that into consideration. Let's go off the record.

(OFF THE RECORD.)

(JURY RESEATED AT 8:57 AM.)

THE COURT: Good morning. Welcome back. I hope you guys had a good week and enjoyed that very exciting Chiefs game last night, kept us on the edge of our seat. So we'll continue with the presentation of the defendant's evidence. Counsel for the defendant, you may call your next witness.

MS. PRUITT: The defendant would call Mark Albrecht by videotaped deposition.

THE COURT: This deposition is about an hour and 20 minutes in length.

(VIDEOTAPED DEPOSITION OF MARK ALBRECHT WAS PLAYED.)

THE COURT: I have to take a quick break. I just got a message that the alarm in my house is going off. The glass in my dining room is broken.

(INSTRUCTION WAS READ.)

(BREAK AT 9:07 AM.)

(RETURN AT 9:30 AM.)

THE COURT: You may be seated. Sorry for the

interruption. I like to keep it exciting for you guys apparently. So we will continue with the presentation of defendant's evidence. Mr. Torline, you may continue.

(VIDEOTAPED DEPOSITION OF MARK ALBRECHT CONTINUED TO BE PLAYED.)

(BENCH CONFERENCE.)

THE COURT: So what's next up?

MR. TORLINE: We're going to call Abraham. We've got some exhibits to admit.

THE COURT: We're going to take our morning recess.

(RETURN TO OPEN COURT.)

THE COURT: Okay, guys, we're going to take our morning recess.

(INSTRUCTION READ.)

We'll get started at 10:55.

(BREAK AT 10:35 AM.)

THE COURT: Okay why don't we first make a record that you're going to move to admit based upon Mr. Albrecht's deposition.

MR. TORLINE: Judge, we'd offer the testimony as Exhibit 4168.

THE COURT: Any objection to the testimony being received, Mr. Emiston?

MR. EMISON: Not if it's not going back to the jury and just for completion of record so the court

reporter doesn't have to type that.

THE COURT: That will be received for those purposes only, 4168.

MR. TORLINE: Exhibit 1, Depo Exhibit Number 1 we will offer. It's Trial Exhibit 2739.

THE COURT: Any objection?

MR. EMISON: I do have an objection. It's hearsay. It's an unsigned study that Mr. Albrecht was talking about. There was no foundation laid for this document as a business record or authoritative publication and so it's not subject to any hearsay exception. It's also not an admission of any party opponent so it doesn't come in for that reason.

It's unsigned. Another entity did part of the work. It's not statistically significant and there's just been no foundation laid that allows this to come before the jury.

THE COURT: Mr. Torline.

MR. TORLINE: Your Honor, he authenticated it beginning on pages 22. He recognized it. He wrote it. We think it's a business record.

THE COURT: The objection will be sustained. 2739 will not be received.

MR. TORLINE: Your Honor, we'd offer Depo Exhibit Number 3 which is Trial Exhibit 2740.

MR. EMISON: Your Honor, plaintiff has the same

objections here. It's hearsay. There was no foundation laid to anything about this document at all. Again, it's unsigned. It's not statistically significant; had a small sample size of units; was not identified in any way as a business record. It was not authenticated and no foundation was laid. It's a truly complete and accurate copy of the report that was kept and maintained as part of anyone's course of business. There was just no foundation laid and no exception to the hearsay rule.

THE COURT: Mr. Torline.

MR. TORLINE: He authenticated it. Again, he was one of the drafters of the document and he acknowledged that it is what it purports to be.

THE COURT: The objection will be sustained. 2740 the document itself will not be received. Obviously, I think testimony regarding it is appropriate but the report itself, the objection is sustained.

MR. TORLINE: We would offer Depo Exhibit Number 4 which is Trial Exhibit 2712 for demonstrative purposes.

MR. EMISON: Again, Your Honor this article was mentioned. I don't know that it was discussed. It was never identified as an authoritative publication. So there's no foundation that's been laid for any hearsay exception.

THE COURT: Mr. Torline.

MR. TORLINE: Your Honor, he is one of the authors of this article and it's for demonstrative purposes.

THE COURT: 2712 will be received for demonstrative purposes.

MR. TORLINE: We would offer Exhibit Number 5 which is Trial Exhibit No. 2711.

MR. EMISON: Same objection. It's hearsay and no foundation has been laid. It's an authoritative document that would put it within this exception hearsay rule.

THE COURT: Is this for demonstrative or for its admission?

MR. TORLINE: It's for demonstrative.

THE COURT: The objection is overruled. The Court will allow 2711 for demonstrative purposes.

MR. TORLINE: Judge, we'd offer Depo Exhibit Number 6 which is Trial Exhibit Number 2713 also for demonstrative purposes.

MR. EMISON: Same objection.

THE COURT: 2713 will be received for demonstrative purposes. The Court also notes that 2713 was used during Dr. David's testimony.

MR. TORLINE: We would offer Depo Exhibit Number 7 which is trial Exhibit 3387 which is another piece of literature that we'd offer for demonstrative purposes.

MR. EMISON: Same objection, Your Honor.

THE COURT: That was 3327?

MR. TORLINE: 3387.

THE COURT: 3387 will be admitted for demonstrative only.

MR. TORLINE: We would offer Depo Exhibit Number 8 which is Trial Exhibit 2707 - 2011 McGovern/Albrecht study, "Forced Air Warming and Ultraclean Variation Ventilation" for demonstrative purposes.

MR. EMISON: No objection.

THE COURT: That will be received for demonstrative only. The Court will also note that was used during David's testimony and Borak's testimony.

MR. TORLINE: And then we've got Depo Exhibit Number 9 which is Trial Exhibit 2708. *Effect of Forced Air Warming on the Performance of Operating Theater Laminar Flow Ventilation* for demonstrative purposes.

MR. EMISON: We'd incorporate our earlier objection as to hearsay, Your Honor.

THE COURT: The Court will receive 2708 for demonstrative purposes only.

MR. TORLINE: Finally, Judge, we would offer Depo Exhibit Number 12 which is Trial Exhibit 3444 which was the email string between Mr. Albrecht and Mr. Augustine and others.

MR. EMISON: Your Honor, Plaintiff objects to Exhibit 3444 as hearsay. This is series of emails between nonparties. There was no business record or foundation laid. It is not an admission of a party opponent and there is simply no exception to hearsay for this correspondence.

THE COURT: Mr. Torline.

MR. TORLINE: In the testimony Mr. Albrecht admitted that this refreshed his recollection and that it went on to talk about the statistical analysis that he performed.

THE COURT: The Court will sustain the objection. The Court finds Trial Exhibit 3444 contains hearsay to which no exception applies. The objection is sustained and 3444 will not be received. Any further record as it relates to that?

MR. TORLINE: No, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: I believe Mr. Farrar you had anticipated the use of demonstrative exhibits on the next witness, is that correct?

MR. FARRAR: Yes, Your Honor. There's three of them. Two they'll talk about together and the second one we have an objection to.

The first two that could be talked about together are videos from the study that was published by Saarinem S-A-A-R-I-N-E-M. The issue is - let me give you the title of the article cause it's important. *Large Eddy Simulation of Air Escape Through a Hospital Isolation Room in Doorway in Validation.*

The issue is that study was done in what's called an isolation room which is basically the exact opposite of an operating room.

An isolation room is where you put a sick person and it has negative pressure. The idea is if you want to walk into that you don't want anything from that room getting out. So it's to not spread whatever communicable disease that person may have.

An operating room has positive pressure. So we talk all the time about the air vents coming down. And when we open the doors everything goes out and away from the patient.

So the study was done to show the effect of walking into an isolation room. Obviously, it's crazy. The idea is you want everything sucked in. So there's two videos that are shown and it's completely a misrepresentation of what an operating room would show. It shows what an isolation room or a negative pressure room shows.

But the issue is - it's really not relevant at all.

And in fact, Dr. Abraham says - he's asked real quick - he's asked, "I represent to you that there's something called an isolation room. That's different than an operating room. You have no understanding of what exists in an isolation room, correct?" He says, "Correct."

So not only does it completely misrepresent what happened in our case, the expert doesn't know what an isolation room even is so we don't think it would be appropriate, Your Honor.

MR. BLACKWELL: Your Honor, these are all cross-examination points. The fact of the matter is the Saarinem study was relied upon in Dr. Abraham's report. The video related to it is on the exhibit list. They've known about it for years. They've questioned him on it in his deposition. The point of using it is to show to the jury the impact on airflow of opening the door when there's a pressure differential on either side or differences in temperature.

The points that Mr. Farrar wants to make are fine cross-examination points for him. And I would remind the Court that when they wanted to play their McGovern green smoke videos despite the fact that we hadn't questioned the witness on it, despite the fact it was not on their exhibit list, they were going to play it in their case as illustrative.

The guidance that the Court had given as previously was if a particular demonstrative piece of evidence is referenced in the expert's report or if the expert is questioned on it in their deposition, then it's fair game. This is both and they've done so repeatedly. And the videos, all of them are on the exhibit list. They, in fact, are referenced also in this Saarinem study itself.

THE COURT: What's the exhibit number on this, Counsel, just so that the record is clear.

MR. FARRAR: The video is 3336 and 3333.

MR. BLACKWELL: In the Saarinem article is ...

THE COURT: Just so you know, it's 10:47. I appreciate it but I just have limited time in order to give everybody a break. So do you have any brief response?

MR. FARRAR: Sure. The McGovern study was in operation with a ventilation system similar to Ms. O'Haver's. This is completely different. There was no ventilation and negative pressure of which, of course, is going to show a crazy impact when the door opens with a person walking through. That's what that room is designed to do. It's not just cross-examination. It's completely prejudicial and unfair.

THE COURT: The objection is overruled. The Court will allow inquiry regarding 3333 and 3336.

MR. FARRAR: There's a schematic of the actual

operating for Ms. O'Haver that's a demonstrative.

THE COURT: Do you know the exhibit number?

MR. FARRAR: I do. It's 4152. Dr. Abraham was questioned about this. "Question: Did you do any analysis or calculation on a hospital room involving Ms. O'Haver's case" and he said "I did not."

He later said, "You have no opinions on the design of the operating room in the O'Haver surgery?" And his answer was "Correct."

So I can't imagine how showing him the schematic would possibly be relevant to any of his opinions when he doesn't have any opinions about her operating room.

MR. BLACKWELL: Your Honor, he certainly most definitely does speak to both the conditions of the CFD as well as their applicability to any airflow issues in this case. They've examined him and it's demonstrative for illustrative purposes. If it's pointed in his testimony it appears not to be relevant to something, then that's an objection Counsel could make. But they're not surprised by it. They've questioned him on it. It's on our exhibit list.

THE COURT: The objection at this point to 4152 is overruled. Obviously, Counsel, if you feel as though that you want to raise the relevance or foundation or whatever it may be, objection, the Court will take it up

at that time. Let's go off the record.

(OFF THE RECORD.)

(JURY RESEATED AT 11:00 AM.)

THE COURT: You may be seated. We'll continue with the presentation at the defendant's evidence. Mr. Torline.

MR. TORLINE: Yeah, Your Honor. We would offer Albrecht Deposition Exhibit Number 4 which is Trial Exhibit 2712 for demonstrative purposes.

THE COURT: You can just go ahead and go through those since these are all demonstrative.

MR. TORLINE: Deposition Exhibit 5 which is Trial Exhibit 2711; Deposition Exhibit 6 which is Trial Exhibit 2713; Deposition Exhibit 7 which is Trial Exhibit 3387; Deposition Exhibit Number 8 which is Trial Exhibit 2707; Deposition Exhibit Number 9 which is Trial Exhibit 2708.

THE COURT: Mr. Emison, given these are for demonstrative purposes, any objection other than the ones that you noted earlier?

MR. EMISON: No, Your Honor.

THE COURT: So 2712, 2711, 2713, 3387, 2707 and 2708 will be received for demonstrative purposes.

MR. TORLINE: And we'd offer Trial Exhibit 2168 which is the testimony of Mr. Albrecht.

THE COURT: That will be received. Mr. Blackwell, you may call your next witness.

MR. BLACKWELL: The defense would call Professor John Abraham.

JOHN ABRAHAM,

having been first duly sworn upon his oath by the Court testified as follows:

MR. BLACKWELL: May I approach, Your Honor?

THE COURT: You may.

Q Professor Abraham, I'm giving you a copy of your report.

A Thank you.

DIRECT EXAMINATION BY MR. BLACKWELL

Q First off, would you introduce yourself to the jury.

A My name is John Abraham and I'm from Minnesota, Minneapolis, Minnesota.

Q Can you tell the ladies and gentlemen why we asked you to come here today?

A Yeah, sure. So my area of expertise is in an area called thermal sciences which is a fancy word for heat and fluid flow.

Q Are you currently employed?

A I am.

Q Where do you work?

A I'm a professor at the University of St. Thomas which is the largest private university in Minnesota.

Q Dr. Abraham?

A Yes, sir.

Q Where are you from?

A Well I was born and raised in Minnesota and have lived there my entire life with some. I worked in New Mexico shortly and I went to Notre Dame for a brief period of time. But besides that, I've lived in Minnesota.

Q Did you prepare a set of demonstrative exhibits on your background to help introduce yourself to the jury?

A I have.

MR. BLACKWELL: Your Honor, we would offer Exhibit 4151.

MR. FARRAR: No objection for demonstrative.

THE COURT: 4151 will be received for demonstrative purposes.

Q So you see Slide 1. Tell us about where you went to college.

A Most of my college experience was at the University of Minnesota which is the largest university in Minnesota and it's located in the Twin Cities.

Q And did you only go to what we call the U of M or did you go to any other schools?

A I went to the U of M but I also went to Notre Dame for a brief period of time so those two universities.

Q And so you started at the University of Minnesota, then you went to Notre Dame?

A That's right.

Q And did you come back then to U of M?

A I did.

Q And, at the University of Minnesota you earned what degree?

A I earned three degrees. I earned a bachelor of science. I earned a Master's degree and a PhD.

Q Would you tell us what was your Master's degree and PhD in?

A Well they are in the broad area of mechanical engineering which is a really, really broad topic. I specialized in an area called thermal sciences.

Q Would you tell the ladies and gentlemen of the jury what is meant by thermal sciences?

A Well, yeah, sure. So thermal sciences refers to the flow of things. And it could be the flow of fluids and it could be the flow of heat. And heat is just energy so the flow of energy and fluids.

Q Is there a certain concept known as heat transfer that's a part of thermal sciences?

A Absolutely. So heat moves from areas that are hot to

areas that are cold. That seems sort of obvious. But heat transfer is one of the major topics of thermal sciences.

Q Are there different kinds of heat transfer?

A Yes, there are.

Q Let's talk about the different types of heat transfer. So what's one type?

A Well one type of heat transfer is called conduction. And conduction refers to heat transfer within solid objects or between solid objects. So, for example, I'm holding a water heater and the water is cooler than my hand. Heat is transferring by conduction from my hand to the water bottle. So that's an example of conduction.

Q So that's the temperature going directly from the water bottle into your hand?

A It's actually the other way around. It's heat going from my hand into the water bottle so heat always goes from hot to cold.

Q What's a second type?

A A second type of heat transfer is called convection. And convection is heat that's transferred when you have a flowing fluid. So I live in Minnesota and Minnesota winters get really cold. If you can go outside and you feel that breeze of cold air, that is convection heat transfer. If you open up an oven and you feel the warm air come out, that is also called convection.

Q And then is there a third kind?
A There is.
Q What is that?
A The third kind of heat transfer is called radiant. You might've heard of radiant heaters. One example of radiant heat transfer is if you go outside and you feel the sun on your skin, you'll immediately feel warm. That's heat by light. So radiant heat is the third way that heat can transfer.
Q So in this case we're obviously here talking about patient warming and the Bair Hugger patient warming device. Is the Bair Hugger one of these three types of heat transfer?
A It is. It's convection.
Q Convection. Why is it considered convection?
A Well it's considered convection because heat is transferred from the air, the warm air to the patient's body. So when you have heat transfer between a fluid like air to a surface, that's convection.
And I don't know if I mentioned this but I use the term fluids. Fluids can be liquids like water is a fluid. If you water your garden the water coming out the hose is fluid. But also gases like the air in this room is a fluid. So when a scientist talks about fluid he means things like air and water.
Q So help us to understand a little better. How does your area of thermal sciences apply to the real world?
A Oh, man. So thermal sciences is everywhere. Everyone

in this room is warmer than the air in this room. So we are all losing heat to the air in this room by a process called convection.

If you drink a cup of hot tea or coffee, you're going to have heat transfer. This room I bet is at about the same temperature year round whether it's really hot in the summer or whether it's really cold in the winter.

Q I'm sorry, this room is not the same temperature even on the same day.

A If you have a really well functioning furnace and air conditioner, it will be kept approximately the same temperature. And that process that keeps your house warm or buildings warm in the winter or cool in the summer, that's also heat transfer. Heat transfer affects us everywhere every day all the time.

Q And just by way of learning more about you and your background, can you give us an example of how your experience and expertise in thermal sciences plays out with the real-world projects that you've worked on?

A Well I've worked on a lot of projects because I've been doing this for long time. But I started a company about 10 years ago that uses heat transfer to pasteurize water. If you travel around the world, especially to developing countries, one of the biggest health risk especially to young kids is unsafe water. I mean we don't really think about that in the U.S. We can drink water out of a water fountain and we're not worried

about it. But many people around the world drink very dirty unsafe water.

And so I invented a device that pasteurizes water using sunlight so that people in the developing world can drink water and not get sick. That's one example of a heat transfer problem that I've worked.

Q Where did you work on this project?

A Well we started in Uganda and Kenya which are in East Africa. We are now deploying our devices in Haiti. And we have deployed it in South Sudan. We're putting one in Cameroon and in Turkey as well as more devices in Kenya and Uganda. So, generally, the developing world it could be South America, Asia or Africa.

Q So you're basically able to use solar energy to pasteurize water?

A That's exactly what we're doing.

Q And so how do you do that using thermal science?

A Well we have a very efficient reflective mirror that focuses sunlight onto a pipe and we run water through the pipe. And we have a special sensor in the pipe that can tell us when all the bacteria have been killed. And when all the bacteria have been killed, a valve opens up and people can get the hot water and they know that it's safe to drink.

Q So when were you last anywhere in Africa implementing this kind of a project?

A In July and August of this year so two months ago.
Q Now tell us just a little bit about your family. Married, have kids?
A Married. I had a fantastic wife in Minnesota and I've got four daughters, two birth children and two adopted children.
Q And one of the children your adopted from Uganda?
A That's right. And, in fact, that's - when we took our trip to Africa two months ago it was to meet her birth family but also to work on the pasteurization project. And I fell in love with Uganda and I'm fortunate to have a daughter from Uganda.
Q Let's continue on with your professional background, experience and your education. So you talked to us a bit about the University of St. Thomas already where you are a professor?
A That's correct.
Q And is that in St. Paul?
A Yes, it is.
Q Now how long have you been there?
A Approximately 20 years.
Q Can you walk the jury through your history as a professor at St. Thomas?
A Well I started there as what's called an assistant professor, that's the starting position. Then I was given tenure. An assistant professor is a probationary period. I was given tenure and promoted to associate professor. Then

thereafter I was promoted to a full professor which is the top ranked professor at the University, at any university actually.

Q And so in terms of - well who do you teach? Do you teach just undergraduates or who you do teach?

A I teach undergraduate students and graduate students. I teach approximately an equal split of undergraduate and graduate students in the area of thermal science.

Q And do you also do research?

A I love research. I do a ton of research.

Q Now you've been a Professor of the Year in the past?

A That is correct.

Q What did she do to get that recognition?

A The Professor of the Year award is given to the professor who excels in two things; being a good teacher but also being a good researcher. And you're voted on by your peers and they give it out to one person each year.

Q Are you involved in some other activities too such as being a guest commentator on news programs?

A I fortunately or unfortunately am on TV and radio quite often.

Q What for?

A I do a lot of work on weather so weather projections, what's happening to the weather. And, in fact, I was on TV twice recently when the hurricane was just coming into Florida to talk to people about some of the concerns about that

hurricane. But I would say I do 20 or so TV and radio appearances each year related to weather.

Q The jury has heard quite a lot already about computation of fluid dynamics CFDs. Do you also have a background in dealing with CFDs?

A I do a ton of work on CFDs. That's a major part of what I do.

Q And is modeling the weather, is that a kind of CFD?

A Yes, it is. Weather models are CFD models.

Q Would you tell the jury a bit about what your background is with CFDs?

A I don't know if you're looking for specifics but I have done - I've done a number of things with CFD research. I've done what are called publications where you complete a study and then you publish your work so other scientists can read it.

I've written numerous chapters on CFDs. I've written some instruction manuals for other faculty members on how to do CFD and how to do something called validation. I've consulted for approximately 40 companies who needed help on design. Not all of those use CFD but a good portion of them have. And I teach CFD to my students.

Q Do you have experience running CFDs on a supercomputer?

A Yes.

Q What makes a supercomputer super?

A Well a supercomputer is – a supercomputer is a computer with a lot of processors so that it can run calculations very quickly. And they tend to have a lot of what's called data storage so you can store results.

Q That's your bottle of water by the way.

A Thank you.

Q So let's talk about your specific work related to human body temperature management. So first, the whole notion of human body temperature management, do you have experience with respect to that subject?

A Yes. I've worked on human body temperature management for approximately 20 years.

Q Would you please explain to the jury something about that work? What have you been doing or have done?

A Well I've worked on the design and evaluation of different devices that maintain human body temperatures. I've worked on devices – I've worked on the Bair Hugger device and have worked on competing devices from other companies that work just like the Bair Hugger. I've also worked on other devices that warmed the body in different methods but it's been about 20 years of work on human body temperature management.

Q You were awarded a grant in 2004 from Urologics?

A That is correct.

Q What was that for?

A That was on using temperatures to treat benign prostate hyperplasia. So as men get older they often have what are called prostate problems and surgeries can be dangerous. And so we worked on a device that would help men with the enlarged prostates without having to have surgery. One of the things that I do with companies is try to come up with less invasive medical devices that can still accomplish the task.

Q You had a grant from Swiss Medical in 2014, didn't you?

A That's correct.

Q What was that for?

A That was to help them design a patient warming device that is used in operating rooms.

Q What about a grant from Precision Air in 2016?

A Precision Air is a company in Minnesota that designs ultraclean operating rooms. And I helped them determine how effective their ceiling vents were at maintaining a clean environment.

Q And do you have a history of having done work with the Bair Hugger?

A Yes.

Q Going back to when?

A It is a long time ago. I think 2004 or 2006, the early 2000's.

Q So you have had experience then with various patient

warming devices and modeling the operating room with the way the air transmits particles through the room?

A Yes, I have experience in both of those areas.

Q And do you have that experience with respect to the Bair Hugger?

A Yes.

Q Let's just talk about a couple more of your awards and recognition. We talked about you being Professor of the Year. But did you receive some award called the John Arian award?

A I did in 2009.

Q What is that?

A That is an award given to the top researcher at my university. So it's the professor at the university who completes produces the most research is given that.

Q And you've also been recognized as an engineering professor of the year?

A That is correct.

Q How does that come about?

A Well it's actually my favorite one because it was voted on by the students. And the students voted me as the top professor in the Department of Engineering at the university.

Q Let's talk about a few of your publications and patents. You have a number of patents also?

A Yes, I have 16 patents.

Q Dr. Abraham, how old are you exactly?

A I'm 48.

Q All right. You've done a lot. So go to Exhibit 4151. I can't get away with just asking anybody how old are you. So we see here to give the jury a chance to see something of your publications and patents. Now you have served it says as a member of 14 editorial boards. Could you give is just an example of just a few of those?

A Yeah. I'm on the editorial board of a journal called Energies which deals with thermal energy which is thermal sciences. I'm also on the editorial board of a journal - it's got a really long title but it's translational medical devices. I've forgotten the full name because it's a very long name of a journal. And that journal deals with how you take an invention, let's say, at a university and translate that to a company so that a device can be made.

Q So you've it says authored or co-authored three books, 35 book chapters, 256 journal articles, etc. Is there any book or article that stands out in your mind that might be relevant to the jury in this case that you might want to mention?

A Yeah, sure. Just focusing on book chapters, I wrote a book chapter on a process called validation when a CFD model is made so these are little weather models are made. You want to validate in a real-world task. And I wrote a book chapter instructing people how to do validation.

I have written a book chapter on how to do CFD models.

That was published in the year 2021. I've written a - are we limited to book chapters or do you want me to talk about other publications?

Q Tell the jury about things you have written, book chapter or not that you think might be good for them to know about you as it relates to this case.

A Great. I wrote a journal paper on what's called bouyant flow or thermal plumes. That is hot air rises or heat rises. You've proved that adage. I helped to develop a way to calculate thermal plumes.

And I also wrote a journal paper on airflow in an operating room.

Q Now you've also done consulting?

A That's correct.

Q Can you give the jury an example of the kind of consulting work you've done?

A Most of my consulting is in the medical device field. Companies will come to me and they either want a product to be made or made safer or made more effective. One example that comes to mind is a cryo-surgical device that I helped a company with. Cryo means cold. And this a device that was used to treat kidney tumors.

So if someone has kidney cancer, it is often very difficult to remove the tumor with a scalpel. And, in fact, sometimes tumors are inoperable. But it turns out there's other ways to

kill a tumor. And I worked with a company that inserted a small needle into the tumor and then they would freeze the tumor from the inside so they would create an ice ball. And that freezing would kill the tumor. So instead of cutting it out you would freeze it and remove the cancerous tumor. That's just one example of a consulting project that I worked on.

Q Another one involving treatment of fibroids?

A Yes, that's right. So well we're talking about prostates and uteruses today. So fibroids are a very, very common thing that happen to women and they are on the uterus, the uterus of women.

Now fibroids are not cancerous but they can be really debilitating. They can be painful. They can be associated with something called menorrhagia. And I apologize, I should probably spell that. Menorrhagia is very intense menstrual bleeding and they can also make women infertile.

So the treatment for fibroids is a hysterectomy and that's not the best treatment. I don't have a uterus but if did, I'd want to keep it.

So I worked with a company that went in and they cauterized the fibroid. So I helped them design a device that could go into the uterus, find the fibroid and then burn off the fibroid and not have to remove the entire uterus so that is the example of that.

Q And so the examples you just gave us, do all of these

fit under the heading of thermal science?

A Yes.

Q How so?

A Well the cryosurgery was freezing and that's heat transfer. I mean cold and hot are both part of heat transfer. The fibroid problem was burning. You're burning tissue off in a very controlled way. That's also heat transfer. And, in fact, with the fibroid we were injecting a liquid into the uterus to cause the burning. So all of these projects that I've discussed deal with thermal sciences.

Q Now do you also do litigation consulting like you're doing now?

A Yes.

Q For how long have you done that?

A Approximately 10 years, maybe a little bit longer.

Q Is it possible to describe or characterize what kind of cases you do litigation consulting in?

A Yes. Most of my consulting is either on patent infringement cases. So if a company invents something, they patent it. Another company might come along and try to make that device without paying royalties. So I do patent litigation and I also do personal injury cases. I'd say the majority of my litigation work is injury or patents.

Q And have you been hired both by plaintiff's lawyers like my esteemed colleagues here and by defense lawyers?

A Yes. I'd say for personal injury cases I'm typically hired more often by plaintiffs.

Q Now in your work on the Bair Hugger, had you ever done any work for 3M?

A No.

Q Never consulted for 3M in the litigation context?

A Correct.

Q Let's talk about how you get compensated for your time to be here. I'm assuming you do get compensated for your time?

A I have been compensated.

Q And for what kind of work are you compensated?

A Well I'm compensated for my review of materials and developing my opinions. So I'm reading and coming up with opinions. I call that office work. I'm compensated for that. And I'm compensated when I'm in a deposition.

Q What rate - well how much would you say you've earned for your time so far with respect to this case and Bair Hugger?

A With respect to the O'Haver case?

Q Yes.

A Approximately $25,000.

Q If you look at the sum total of time that you've done any sort of consulting around the Bair Hugger whether it's O'Haver or not, how much would you say that is overall?

A I would estimate $110,000.

Q What rate do you charge if you are in a deposition?

A I charge $500 an hour in deposition.
Q And then if you do any other work that's not a deposition, what do you charge?
A $350 an hour.
Q Your here in trial today testifying. What do you charge for your time to testify at trial?
A I do not charge to testify at trial.
Q Did you hear my question? I was asking what do you charge to testify at trial.
A I testify at trial for free.
Q And so why is that?
A Well, I've done the work. I've done work for years on this case and now is my opportunity to just tell the jury and tell the Court what I found. So I don't think I just don't need to charge.
Q Now have you written any article that's based on the work you have done around the Bair Hugger?
A Yes, I have.
Q Is the name of the article *Comprehensive Review and Study of the Bouyant Airflow Within Positive Pressure Hospital Operating Rooms?*
A Yes.
MR. BLACKWELL: You Honor, I would offer Exhibit 4159 for demonstrative purposes.
MR. FARRAR: No objection for demonstrative

purposes, Your Honor.

THE COURT: The title of 4159?

MR. BLACKWELL: *Comprehensive Review and Study of the Bouyant Airflow Within Positive Pressure.*

THE COURT: I'm just going to stop at bouyant. Thank you. 4159 is received for demonstrative purposes.

MR. BLACKWELL: Your Honor, may we show?

THE COURT: You may publish.

Q So Dr. Abraham, this is the article that we were talking about?

A It is.

Q When was it published?

A 2017.

Q When did it appear in print?

A I believe it appeared in print in 2018.

Q Are you the only author of this?

A I'm not.

Q Who else is on it?

A Two of my former students, Brian Plourde and Lauren Vallez.

Q And why did you include your students as co-authors?

A Because they provided some assistance in the work.

Q Just to clarify for the jury, did 3M ask you to publish this article?

A No.

Q Did 3M ask you not to publish this article?
A No, they did not.
Q And did you disclose the fact that the work you'd done here was funded by 3M as it relates to this case?
A I did.
Q So if we look at page 12. So that was and acknowledgment where you acknowledged that?
A That's correct.
Q And so the support that you received from this from 3M, was this money paid to you personally or the form of a grant or what was it?
A The support for this - the work that was underlying this paper was a grant to my university.
Q So not payment to you?
A Correct.
Q Did 3M have any involvement oversight, editing, ability to alter this work at all?
A None.
Q In what journal was this article published?
A It was published in a journal called "Numerical Heat Transfer."
Q And where is that journal headquartered?
A It's headquartered in England.
Q So why did you publish the article through this journal in England?

A Well it's an international journal so the location of the headquarters doesn't matter. But it's the top journal in the world for this type of work.

Q And had you done any similar study on forced air warmers that had been published with this journal previously?

A I think I believe so. I published my work for Smith's Medical forced air warmer and I think that was also in this journal.

Q Now you know who Dr. Eloghobashi is, don't you?

A Yes.

Q You've heard of him?

A Yes.

Q And he published an article also on the work done with respect to the Bair Hugger in this case. Were you aware of that?

A I am.

Q Do you remember in what journal Dr. Elghobashi published his article?

A It was a biomedical journal but I don't remember the title.

Q International Journal of Biomedical, something like that?

A Something like that.

Q Do why didn't you submit yours to the same journal?

A Because what is discussed in this article is CFD and

bouyant flow. Bouyant again is heat rises and this journal specializing in those topics.

Q As in this journal in England with respect to your article?

A Correct.

MR. BLACKWELL: Your Honor, at this time we'd tender Dr. Abraham as an expert in thermal sciences and computational fluid dynamics.

MR. FARRAR: No objection, Your Honor.

THE COURT: His testimony will be received as such.

Q Now Dr. Abraham, you previously mentioned working with the Bair Hugger and other patient warming devices before this case?

A Yes.

Q Do you know how to operate the Bair Hugger and turn it on?

A I do.

Q Do you know how to get it to function?

A I do.

Q Would you be able to show the jury how to function - how the Bair Hugger functions?

A Sure.

MR. BLACKWELL: Your Honor, if we could have a couple of minutes, we'd like to just set up the Bair

Hugger.

THE COURT: Counsel, any objection to setting up the Bair Hugger?

MR. FARRAR: No, Your Honor.

THE COURT: You may do so.

MR. BLACKWELL: Would it be all right if Dr. Abraham steps down to point out things to the jury.

THE COURT: Sure. As long as Doctor, I'd ask that you keep your voice up. And if you turn away from the court reporter just make sure you keep your voice up so she can hear everything you're saying.

A Thank you, Your Honor. And if I'm not audible, please let me know.

Q I'll ask you to do the honors and show the jury how the hose is attached to the blanket.

A So this is the hose that carries warm air from the Bair Hugger device into the blanket. And there's support of the blanket.

Q We have the blanket now attached to the hose and we have the Bair Hugger unit?

A Correct.

Q Model 750?

A That is correct.

Q Now would you show the ladies and gentlemen of the jury - tell them how the this works.

A Certainly. So the Bair Hugger has a number of buttons on the front. And the one that is lit up and I don't know if you can read it. It says, standby. That means it's on standby mode, not operating. There's an ambient button. Ambient means it's going to blow what's called ambient air into the blanket which is unwarm air.

There are three temperature sensors. Now these re in Celsius. I apologize for that. 32 Celsius, 38 Celsius. 38 Celsius is slightly warmer than your body temperature so around 99 Farenheit. And 43 Celsius is 109 Farenheit. So there's three temperatures. There's four temperature sensors if you include ambient. When you press one of these buttons ...

Q What's ambient?

A Ambient would be the room air.

Q So when you - let's say for example we're going to turn it on to the highest temperature, the 109. Typically, how long does it take to heat up?

A It typically takes two minutes but up to five minutes to reach its full temperature. But you'll know if it reaches its full temperature because there's a temperature display here. And also, there is a small light here - the label here says temp in range. So once it reaches temperature this light will turn on.

Q So holding here in my hand a blue clip. What is this for?

A The blue clip is to attach to a rod or a pole because if you don't have it attached, in some cases if you're not careful this hose can pull the blanket off the patient. So this blue clip is just meant to support the white hose.

MR. BLACKWELL: So if we could, Your Honor, we'd like to turn it on.

MR. FARRAR: No objection.

THE COURT: You may.

A So I'm going to turn it on. I'm going to use the highest power setting. So the device is on. Can I continue talking?

Q Yes if you can be heard. So the device is on?

A Right now the temperature is 25 Celsius, 26 and it's slowly rising. And we're going to wait until the temperature gets in the range. Underneath the blanket on the bottom side are very small holes that allow air to leave and warm the patient's body. So the patient would be underneath this blanket.

Q So where are we?

A 35 degrees Celsius. So we're actually nearly at body temperature. Human body temperature is 37 Celsius in the Celsius scale. So you can see that the temperature of the Bair Hugger rises pretty rapidly. We are now at 38 degrees Celsius.

Q And so the blanket has its own model number?

A That is correct.

Q And what is the blanket called, model?

A 522.

Q Model 522.

A And this is the Bair Hugger Model 750. So there's a model number for this device and model number for the blanket. We are at 41 degrees and you should see temp in range light. So it's now in range. That's how long the warm-up process takes.

MR. BLACKWELL: And Your Honor, if we may, we would like to be able to have the jury just to pass by and be able to pass their hands under the blanket to feel the airflow.

MR. FARRAR: Objection. May we approach.

THE COURT: Sure, come on up

(BENCH CONFERENCE.)

MR. FARRAR: If this was on a patient there would obviously be blankets and drapes over the patient. It's significant as to how that would feel. So I think as we have some sort of instruction to the jury that this is not how it would be set up in an operation, that's fine.

MR. BLACKWELL: There's a big difference. But I think, Judge, that can be brought out in their examination. They were able to show the jury the blanket, point out the holes in it. And any points we wanted to make about that we made with Dr. Elghobashi on the stand. And it's fair that they do the same. This is simply experiencing the

product.

THE COURT: The objection is overruled. If you want to redo this, you're welcome to.

(RETURN TO OPEN COURT.)

THE COURT: Okay, so the jury can pass by. The goal here is to have a juror not fall. So I don't know if we want to maybe do the front row first. If you guys just want to kind of pass through. And then - and why don't we - we won't have any commentary during this part.

MR. BLACKWELL: No commentary. That's right.

THE COURT: Yeah. We'll just allow the jurors to pass through. So if we want to start this in the first row. Okay, second row. Can the doctor retake the witness stand?

MR. BLACKWELL: Yes, Your Honor.

Q Now Dr. Abraham, are you familiar with the draping process that might be involved when the Bair Hugger is in actual use in the operating room?

A Yes.

Q Could you speak to the ladies and gentlemen of the jury about what is the relevance of the draping process with respect to the airflow from the Bair Hugger?

A Certainly. So in an operating room when draping is used, that draping covers the Bair Hugger and that draping extends down off the table closest to the floor. And so that

draping prohibits the air from going from the Bair Hugger straight upwards. It forces the air downwards.

Q So would you get into your opinions in this case? Would you please tell the ladies and gentlemen of the jury what materials you've reviewed in preparing your opinions for this case?

A I have reviewed the Elghobashi's expert report and his deposition. I reviewed other literature, so independent researchers not involved in this case that discuss airflow in operating rooms. I'm trying to think if there's any external literature. Of course, my own deposition and my own report and any of the materials cited in my report.

Q Did you perform any calculations?

A I did.

Q Of what kind?

A I performed calculations called CFD calculations. And we've heard about those calculations before. And those are called computational fluid dynamics simulations.

Q And did you do something called an airflow visualization?

A. I did.

Q Would you tell the ladies and gentlemen of the jury what is an airflow visualization experiment?

A And airflow visualization experiment is a real world experiment where we actually look to see where air is going. So

it's an experiment in the real world to actually tell what the airflow patterns are.

Q And these are patterns you can't visually see with the naked eye?

A That is correct.

Q And so you prepared a CFD for this case also?

A That is correct.

Q And did you write a report?

A I did.

Q And have you formed any opinions about the Bair Hugger and its effect on operating room airflow based on the work you've done in this case?

A Yes, I have.

Q Do you hold those opinions to a reasonable degree of medical and scientific certainty?

A Yes.

Q How about engineering certainty?

A Yes.

Q And all the opinions you expressed in our discussion, our exchange, well you expressed all of your opinions to a reasonable degree of scientific certainty?

A Yes.

MR. FARRAR: Your Honor, may we approach real quick.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: He said he holds his opinions to a medical certainty. He's not a doctor. I could do that on cross but I think ...

MR. BLACKWELL: I'll clarify he's not offering medical opinions.

THE COURT: Thank you.

(RETURN TO OPEN COURT.)

Q To be clear, you're not a medical doctor and you're not giving medical doctor opinions?

A That is correct, I'm not a medical doctor.

Q You're an engineer?

A That is correct. I'm an engineer.

Q With expertise in thermal sciences?

A Correct.

Q Now would you please tell the jury what's your opinion about the Bair Hugger and its impact on operating room airflow?

A Well it's my opinion from my investigation that the Bair Hugger does not disrupt airflow in the operating room.

Q Are you familiar with something that may be referred to as unidirectional airflow in an operating room?

A Yes, I am.

Q What is that?

A Unidirectional airflow means flowing one direction. And in an operating room it flows from the ceiling down toward

the floor of the operating room.

Q And have you seen any evidence from the perspective of your background as a thermal scientist that shows that the Bair Hugger air caused or contributed to cause injury to Ms. O'Haver?

A No, I've seen no such evidence.

Q Could you tell us what you base your opinion on?

A Well I base my opinion on the experiments that I performed in an actual OR with moving people. I base my opinions on my review of independent researchers that aren't associated with this litigation, independent people. And I base it on the results of my CFD analysis.

Q And the calculations you've done?

A That's correct.

Q Could you explain to the jury how you go about doing airflow calculations that relate to the Bair Hugger in an operating room?

A Yes, I can.

Q So when you do a CFD calculation you subdivide a space into a large number of points or blocks. Think of them as puzzle pieces that make a picture of a puzzle. And at each puzzle piece you calculate the speed and the pressure and the temperature in the air. And then you reassemble all of those puzzle pieces to get a picture of what has happened in the entire room?

Q So how many points are you talking about reassembling?

Is it 10 or 20 or millions?

A Millions.

Q You mentioned that airflow visualization experiment. Did you - you did this experiment with a mock or an actual OR operating room?

A It was an actual operating room in Minnesota.

Q Who was in the operating room?

A There were people, I believe they were surgeons or medical staff who performed what's called a facsimile surgery. So they were going through the motions of what would actually happen during the surgery but they weren't doing the surgery. There was a patient lying on the table. The patient was not being cut open. They were just lying there and they were - it was a mock experiment.

Q Did you bring some videos to show the ladies and gentlemen of the jury what you did?

A I did bring videos.

Q We're going to come back to those in a minute. But you also mentioned that you had reviewed literature. Was there a specific literature that you looked at?

A Yes. There's was a lot of literature that I looked at. I believe I looked it over 30 independent studies. I found that those studies confirmed my opinions. And some of those studies were very informative showing what really happens in an operating room and what can really disrupt airflow.

Q Dr. Abraham, are there things that a CFD can tell us and things that no CFD can really tell us?

A Well what we say is a CFD is never right but sometimes it's useful. So CFD can answer very, very specific and targeted questions but it's extremely limited to the types of questions you're asking and the inputs that you provide for the CFD.

Q So, for example, can we get a CFD that will allow us to go back six years to November 29, 2016, between the time of 2:07 PM and 3:58 PM in Ms. O'Haver's surgery and tell us how invisible bacteria moved in the wound during that surgery?

A A CFD cannot tell you that.

Q Well can Dr. Elghobashi's CFD tell us that?

A No.

Q Now, again, why not?

A Well there's a number of things that you need to account for in a CFD and I would be happy to provide you a list if you'd like or I'd be happy to mention some things.

Q We're going to come to that in just a minute once I learn how to put it up on the screen. You made a comment about CFDs and you said they are?

A Always wrong but sometimes useful.

Q Always wrong, sometimes useful.

A Correct.

Q Why do you say that?

A Because a CFD could never account for all of the

things that matter in a situation. What CFDs are used for is to answer very, very specific and targeted questions so they can be useful to answer very, very particular questions.

Q So would you explain that answer from the standpoint of CFD inputs?

Q There's a phrase that we use in my field; garbage in gives you garbage out. And what that means is everything depends on your input, the inputs that you put into the computer. Would you like me to mention some outputs?

Q Well let me ask it this way. The answer is yes but I want to ask you a question. If we were in fact trying to calculate the actual airflow in Ms. O'Haver's operating room, operating room number eight on November 29, 2016 during her surgery, what would we have to know to actually calculate how the air moved at that time in her surgery six years ago?

A Well there's going to be a large number of items. To start, you have to know where the ceiling vents are. You remember unidirectional flow ...

MR. FARRAR: Your Honor, may we approach.

THE COURT: Sure. Come on up.

(BENCH CONFERENCE.)

MR. FARRAR: This is a case specific opinion. He's a general cause expert. He doesn't have opinions specific to Ms. O'Haver's case. He doesn't have opinions regarding her operating room, the personnel. He hasn't

looked at the medical records. He can talk about I generally don't think the Bair Hugger can cause an infection that would imply to Ms. O'Haver's operating room that we're not prepared to talk about.

MR. BLACKWELL: This is a generic opinion is what would have to be known if one were calculating this in any operating room. And he in fact even comes back to talk about which things were missing from Dr. Elghobashi's general assessment. So this what you'd have to know for any operating room.

THE COURT: The objection is overruled.

Q So Dr. Abraham, you're telling us we have to know something about the air vents?

A Yes. You'd have to know where they were. You'd have to know how many there were and you'd have to know the velocity and temperature coming down from those vents. That's one example.

Q And let me ask you. I know I asked you this in the framework of Ms. O'Haver's operating on a specific date and a specific time. But are you telling us things you'd have to know if it were anybody's surgery at any time in order to be able to tell the jury how the air moved through that space at a specific time on a surgery? Are these things you generally have to know?

A These are things you generally have to know.

Q So you would have to know something about the air

vents?

A Well more than something. You would have to know how many, where they were, what the airspeed was and what the temperature. Those are just examples for the air vents.

Q Are there other things?

A You would have to know where the exhaust vents are. So the exhaust vents are how air gets out of the room. You'd have the right number of exhaust vents and you'd have to know where they are.

Q Are there other things?

A You would have to know the shape of the room. You would have to know where the surgical table was. You would have to know where obstructions are. So things can obstruct airflow. You'd have to know where those are such as lamps that are used in surgery. You'd have to know how many surgeons there were. You would have to know whether the surgeons moved during the operation. You would have to know whether the door opened during the operating room. You would have to know what other equipment was in the operating room that also my cause airflow. So those are just some of the examples of things that you would need to know. You'd need to know whether the vents were powered or passive. So that's a partial list.

MR. BLACKWELL: Your Honor, may I approach.

THE COURT: You may. The witness or the bench?

MR. BLACKWELL: I'm sorry, Judge, the witness.

Q And could you tell us Dr. Abraham, without details, just generally describe what do you see there, what those photos are?

A These photos are photographs that I understand were taken in the operating room where Ms. O'Haver had her surgery.

MR. BLACKWELL: Your Honor, I would offer Exhibit 4153 for demonstrative purposes only.

MR. FARRAR: Foundation, Your Honor.

THE COURT: Come up.

(BENCH CONFERENCE.)

MR. FARRAR: He's never been there. He can say if these are fair and accurate representations of the way - and he certainly can't say it's a fair and accurate representation of the way it looked in 2016 when Ms. O'Haver was there.

THE COURT: Given that it's being used for demonstrative purposes, you're not going to ask that it be admitted into evidence, correct?

MR. BLACKWELL: I'm not, no.

THE COURT: The objection is overruled for demonstrative purposes.

MR. BLACKWELL: Your Honor, may we show?

THE COURT: You may publish. I'm sorry. 4153 is received for demonstrative purposes and you may publish.

MR. BLACKWELL: Thank you, Your Honor.

Q So Dr. Abraham, these are photographs that are for illustrative purposes of operating room number eight. Now these were taken at some time after Ms. O'Haver's surgery.

A I understand.

Q Now tell us - we have four of them. And I'd like you to tell us kind of what we see in them and then I have a question for you.

A Well we see a lot of people. We see a number of obstructions in this operating room. I'll just point out a few. There's some - it appears three large lights above the surgical table. In the ceiling there is some venting. And that's where the airflow is coming down from the ceiling into the room. There's some other medical equipment throughout the room. Most of it appears to be to the right of the surgical table.

Q Over where I'm pointing?

A Yes.

Q Okay. So is this just another orientation of same area?

A It is.

Q What's this?

A That's the Bair Hugger. It's attached to a vertical pole and you can see the blue Bair Hugger with the white hose.

Q Just another orientation of the same thing?

A Correct.

Q Next photo please. What do we see here?

A This is a closer view of the center of the room and it's focused on some the lights that are above the surgical area.

Q And do you have a pointer there next to you?

A I do.

Q Point to what you are referring to as the lights. So those are the surgical lights about the surgical table?

A Correct.

Q And the vents that you are referring to where the unidirectional flow might be, can you point to those? Thank you.

Now I wanted to point all of these various things that are in the OR so that now we can talk about how you treated these various things or ideas in the CFD that you prepared. Did you include all of those things in the CFD?

A I included vents and lights. They weren't in the exact same location so my CFD was not a perfect match to this OR.

Q And were you attempting to match this OR to your CFD?

A I was not.

Q What were you trying to do in the CFD that you did?

A Well going back to that phrase, CFD is always wrong but sometimes useful, I wanted to answer a very specific question. I wanted to remove all of the major disturbances that are in the room, doors. I wanted to remove moving lights,

surgeons, surgeons moving, even surgeons bending caused tremendous air disruption. I wanted to remove all of that and I wanted to answer this question. By itself does the Bair Hugger air that comes out of that blanket, is that able to disrupt the downward airflow that's coming out of the ceiling vents? And that is a specific question I wanted to answer.

Q And for that reason you removed just about everything from the OR?

A Correct.

Q Now we talked about the importance of the inputs that go into the CFD. Is another name for inputs boundary conditions?

A Yes.

Q So how important are those inputs to the balance CFD?

A They're crucial. If you have the wrong inputs, you will have the wrong outputs.

Q So is a CFD predictive then if you have the wrong inputs?

A It is absolutely not predictive.

Q Now so you modeled the Bair Hugger then by itself to see that the vents in there, but you wanted to see if the heat and the air coming from the Bair Hugger and it's after the drapes and things?

A Correct.

Q You wanted to see if that is sufficient to overcome

the force of the unidirectional airflow coming down from the ceiling?

A Correct.

Q So when you decided to take that approach, Dr. Abraham, what science were you basing that on to take that approach?

A Excuse me, what science?

Q What science, yes.

A Your question is a little confusing. Could you ask it again?

Q I'll try that. So does the scientific literature look at the various activity or equipment in the operating room disrupt airflow?

A Yes. So by removing all of that stuff I was taking a worst-case scenario or a conservative approach.

Q For example, you removed the lamps from the OR?

A Well I had lamps. But if I recall, they were removed from the table and I didn't have them on or moving.

Q And so you had said in the scientific literature about the ability of lamps that are turned on and moving to disrupt airflow?

A Yes, lamps that are in the downward airflow from ceiling have tremendous effect on the air.

Q And has anybody demonstrated this effect?

A Yes.

MR. BLACKWELL: We would offer 4156 for demonstrative purposes only.

THE COURT: And may I have a title?

MR. BLACKWELL: Your Honor, Lamps.

THE COURT: Lamps, go it. I like that title.

MR. FARRAR: No objection for demonstrative.

THE COURT: 4156 is received for demonstrative purposes and may be published.

Q And so before we see this and tee it up, could you introduce the jury to it? What group put together this particular video related to the role of lamps in disturbing airflow?

A This is a research group in Germany. They are located in Berlin. And they were conducting a study to see if could they make lamps in an operating room that were less obstructive. Could they make lamps that would make the air less disturbed. And so they looked at these different shapes of lamps.

Q And this is roughly a 15 second video?

A That's approximately correct.

MR. BLACKWELL: Your Honor, we would like to play it.

THE COURT: Counsel, any objection?

MR. FARRAR: No, Your Honor.

THE COURT: Okay, you may.

A So this is flow visualization experiment. You can see

the cloud underneath the lamp. There's downward airflow and this cloud shows that the lamp disrupt that airflow.

Q Do see the eddies there also?

A I do see the eddies.

Q Now could you provide some additional examples of things that either move air or generate heat in the operating room based upon the research you've done?

A Well many things move air or disrupt the airflow. A great example is doors that open would be another example.

Q What about moving personnel?

A Moving persons are one of the critical, one of the most important ways that you disrupt airflow. When you move you carry air with you. And when surgeons bend over a table near the surgical site they are one of the key disrupters of air.

Q So we go back here to with respect to CFDs, not predictors but they're on inputs. Would you please tell the ladies and gentlemen of the jury something about the inputs you used?

A Now I used - the inputs that I used in my calculation were inputs from the Bair Hugger device so it's flow as well as the dimensions of the room, the deployment of the vents in the ceiling and the airflow that came out of the ceiling vents.

Q Did you consider how the air leaves the room?

A I did.

Q And through what exit vents?

A I had four exit vents in my CFD.
Q Now we're going to show the jury your model in just a minute. But did you actually validate your model?
A I did.
Q Now would you tell the jury what validation means to a CFD, what it is and how important it is.
A The validation is critical. You have to show that your results match the real world. The gold standard for scientific studies are experiments. And a validation is when you compare your calculations with what happens in the real world. They need to match. Otherwise, we don't have confidence in the calculations.
Q So how reliable is a CFD that has not been validated?
A It is not reliable.
Q So we know that that CFD is not reliable without validation, right?
A Correct.
Q Now we have discussed inputs that impact airflow in an operating room. And one of those inputs is the opening and the closing of doors, right?
A That is correct.
Q Would you please tell us how is it that opening and closing doors impacts airflow?
A When you open a door, let's say the door in the back of this courtroom gets opened. You will get airflow that comes

into this courtroom from the hallway and you'll get air from this courtroom that goes into the hallway. It's unavoidable.

And, in fact, whether the room is pressurized or not pressurized you will get airflow disturbances when you open a door. And you're also going to get airflow disturbances if someone walks through the doorway. They carry with them what's called a wake of air. Door openings are a known major disruption of airflow in a room.

Q Major disruption?

A Major.

Q Now has that been scientifically researched?

A Yes.

Q And where would that be? Is there anything particular that you relying on?

A Well there's a number of studies that have looked at that, in particular, a study by a researcher named Saarinem S-A-A-R-I-N-E-M.

Q And what was Saarinem?

A Saarinem studied the airflow patterns when you walk from between two rooms that are different pressure. The O'Haver operating room was what's called a positive pressure operating room.

Q First, positive pressure operating room, what does that mean for the ladies and gentlemen of the jury?

A It means that the pressure in operating room is higher

than the pressure in the adjoining rooms.

Q So what happens when you open the door?

A The airflow is disturbed. And the airflow is going to be disturbed even if you have different pressures in the rooms.

Q So what if it were a negative pressure room?

A Same thing. You will have an airflow disturbance. Because what really matters is the pressure difference between the rooms. When you open a door, airflow is disturbed. You can't avoid it.

Q So was Saarinem then a CFD?

A Well Saarinem was like my work. It was a CFD that they validated it with some experiments. So it was an experiment and is CFD calculation.

Q And how was it validated?

A By a side-by-side comparison, an experiment and the CFD and the results were compared to each other.

Q So did the study come with a video so you could see what was actually done in the Saarinem study?

A It did.

Q And did those videos accompany the study?

A Yes.

Q What does the video show us again?

A Well if we watch the video we will see a door open and a person walk through the door and you will see the ingress of unclean air into a room.

Q And did you, again, you reviewed Saarinem as a part of your research for forming opinions in this case?

A Yes.

Q Did you rely on it?

A Yes.

MR. BLACKWELL: May I approach the witness, Your Honor.

THE COURT: You may.

Q Dr. Abraham, is that a copy of the Saarinem study?

A It is.

MR. BLACKWELL: Your Honor, I would offer Exhibit 2899 for demonstrative purposes.

MR. FARRAR: No objection.

THE COURT: 2899 is received for demonstrative purposes and may be published.

Q If we could first show the title. *Large Eddy Simulation of Air Escape Through Hospital Isolation Room Single Hatch Doorway: Validation by using Tracer Gases and Simulated Smoke Videos.* Quite a title?

A Quite a title.

Q I want to turn our attention though to page 2 of 19. And I want to focus particularly on this paragraph. So I want to read it together and then I want to ask you a question about it. "Hence, there's a need to understand the flow patterns caused by flow motion and staff passage through these isolation

room doorways. In this paper we compare a computational fluid dynamics CFD modeling approach using a time resolve large eddy simulation method LES to measurements obtained from a full-scale mockup with identical geometry to determine whether CFD is an accurate and robust alternative method for understanding and characterizing the flow behavior leading to possible containment failure.

To this end we also introduce methods to produce CFD simulated smoke videos that are easily comparable to those produced experimentally in the same experimental scenarios.

A It is but they're really saying we validated our CFD.

Q And that's what it means in plain English?

A Yes.

Q They did a CFD and they validated it?

A Correct.

Q This paper as we just read also makes reference to producing CFD simulated smoke videos that are comparable to those produced experimentally. What does that mean?

A Well it means that they are using smoke as a flow visualization in a flow visualization test to see where the air moves. So I don't want people to think there's a fire and there's smoke. They're using the smoke to show the airflow patterns. And they do the same thing in there CFD calculation.

Q Can you turn to page 17 to a section called Supporting Information?

A I'm there.

Q Would you explain for ladies and gentlemen of the jury what each of these supporting videos are referring to?

A Sure. So the video 1 is a simulated video where they show mixing of air between two rooms where the door is open. In figure 2 they show simulated smoke with two experiments. And in videos 3 and 4 they compare experiments and simulations.

They take a view from above the doorway as someone walks through the doorway. Now why do they have two videos? Because they take a video of both sides of the door because they will show that regardless of which side of the door it is on you're going to get air passing through the doorway.

MR. BLACKWELL: Your Honor, we would offer Exhibit 3336 which is a CFD video showing the impact of the door opening.

MR. FARRAR: Objection on the relevancy grounds we talked about earlier on.

THE COURT: Come on up.

(BENCH CONFERENCE.)

THE COURT: I just wanted to confirm that we were on the other record when you made that.

MR. FARRAR: I believe so. I can make a two second one to be sure.

THE COURT: Go ahead.

MR. FARRAR: I would object to this video. He

said it's a negative pressure room. And the study itself shows there's no ventilation in the room. This is completely distinct and different than any operating room in America much less Ms. O'Haver's so it is misleading and not relevant to the issues of the case.

MR. BLACKWELL: Your Honor, it's a demonstrative that's meant to show the impact of differential air pressures on airflow movement in and operating room of any sort.

THE COURT: The objection is overruled. 3336 is received and may be published. I'll tell you, Mr. Blackwell, that I'm interested in breaking for lunch. So we can either break now and you can pick up at the video or you can show the video and then we can break. What's your preference?

MR. BLACKWELL: I think I'd rather pick up after lunch with the video after lunch.

THE COURT: To start with the video after lunch?

MR. BLACKWELL: Yes.

THE COURT: Okay. Sounds good.

(RETURN TO OPEN COURT.)

THE COURT: We're going to go ahead and recess for lunch. We will get started let's say at 1:40.

(INSTRUCTION WAS READ.)

Have a good lunch and we'll get started at 1:40.

Thanks so much.

(LUNCH RECESS AT 12:25 PM.)

THE COURT: We're outside the presence of the jury. I think it's fine if we do this with Dr. Abraham here. Does anyone disagree with that? I'm just gonna say what my ruling is. I'm not going to allow any additional argument unless you guys want it.

MR. EMISON: No.

THE COURT: Okay. So earlier today we took up the matter of Dr. Augustine and the depo designations. And it's going to be the defendant initially requested that the plaintiff reduce their designations which they did. There was then the second request that the plaintiff further reduce their designations of which the Court received a copy of the new deposition with the amended designations. The Court is going to deny the motion by the defendant. I'm not going to strike any of the designations myself and the Court will allow the deposition with the designations that runs one hour 60 minutes and 48 seconds to be presented to the jury. Any further record from the defendant?

MR. TORLINE: No, Your Honor.

THE COURT: From the plaintiff?

MR. EMISON: Nothing further, Your Honor. Thank you.

THE COURT: Are you guys read to bring out the jury?

MR. BLACKWELL: Yes, Your Honor.

(JURY IS RESEATED AT 1:45 PM.)

THE COURT: You may be seated. Okay, we will continue with the direct examination. Sir, I will remind you that you remain under oath. Mr. Blackwell.

MR. BLACKWELL: Thank you, Your Honor. Judge, if I can ask, I think 3336 was in for demonstrative purposes.

THE COURT: If I didn't announce it formally, yes, 3336 is received into evidence for demonstrative purposes.

MR. BLACKWELL: Thank you, Your Honor.

CONTINUED DIRECT EXAMINATION BY MR. BLACKWELL

Q So when we broke for lunch we were talking about the Saarinem study that showed the effects of airflow opening and closing doors in the operating room environment.

MR. FARRAR: May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: He may have said in an operating room. It's specifically not an operating room. It's an isolation room. It's a completely different thing. That's why this gets so misleading.

MR. BLACKWELL: Your Honor, with respect that's his argument. We don't agree.

THE COURT: The objection is overruled.

MR. FARRAR: Is it in the literature.

THE COURT: Okay, hold on. Come back up. So it's really difficult for Gail to make a record as you're making side comments as you leave up. And so when you're done talking that's when you turn to leave.

(RETURN TO OPEN COURT.)

Q So did you again review the Saarinem CFD in formulating your opinions here?

A I did. It was a CFD but also an experiment.

Q So would reviewing that with the jury help in explaining your testimony?

A It would.

MR. BLACKWELL: Your Honor, we'd request to show Exhibit 3336.

THE COURT: Subject to your objection, Counsel, any further argument?

MR. FARRAR: No, Your Honor.

THE COURT: Okay. You may.

MR. BLACKWELL: Thank you, Your Honor. Could we dim the lights? Thank you, Carly.

Q Could you tell us what we're seeing in the video?

A And if we could hold off playing it for just a second,

I'll explain what's going on. As I mentioned before lunch, this is an experiment that involves opening of the door between two rooms and then someone is going to walk through the room.

Now on the left-hand side you'll see a camcorder and that's because this is experiment with a video camera above the door. comparison, that part makes up the validation that we've been talking about.

But you will see a door open and then you will see smoke. Now the smoke - I don't want you to think it's a fire or anything. It's just used to visualize where the air goes when the door is opened. So left side is experiment. Right-hand side is CFD.

And what you'll notice is the smoke which again represents air has penetrated very far into the room. And, in fact, it's penetrated beyond the top of the screen in both images.

Q So what does that tell you in terms of the experiment and the validation?

A Well (a) validation is critical. I say it's essential. You've got to validate because the real world is the real world. And the real world has to be the test of your calculations.

In addition, what we see here is that opening the door disturbs that airflow in a very, very large space and that's the important thing in these videos.

Q And do you know whether or not a door was opened in

operating room number eight?

A A door was opened in operating room number eight.

Q So with respect to Dr. Elghobashi's CFD, did he consider the doors opening and closing in his simulation?

A No, he had no doors opening or closing.

Q In your opinion, would the opening and closing of the doors in operating room number eight on the date of Ms. O'Haver's surgery at that time, could that in, of and by itself have a significant impact on airflow during her surgery?

A When doors open as we saw from the video they have a tremendous impact on airflow in a room.

Q But they weren't accounting for that though in Dr. Elghobashi's CFD?

A He did not account for that.

Q Let's talk more about the specifics of Dr. Elghobashi's CFD. We talked a bit already about CFDs in general; that they are not predictive if they have the wrong inputs. And did you evaluate Dr. Elghobashi's CFD for his inputs?

A I did.

Q And what's another technical name for inputs?

A We call those boundary conditions. It's the technical term.

Q And the boundary conditions matter tremendously?

A They do, absolutely.

Q Were you able to compile a list of what you thought were the distinctions between the CFD that Dr. Elghobashi did and the real environment?

A Yes, I was.

Q And let's talk about those differences. And if you need to refer to your notes, that would be fine.

A Certainly. So difference number 1 between Elghobashi's calculation and the real world is he did not include any bacteria shed from people especially surgeons.

Q So it may be obvious but please tell us why that matters.

A Well because bacteria that are shed from surgeons over the operating table have a high likelihood of falling into the wound site or into the surgical site.

Q Were there other differences?

A Yes. He had incorrect venting. Earlier we talked about venting and the importance of the vents. He had the wrong number of vents in his CFD and he had them in incorrect locations.

Q And it may be obvious but that affects airflow?

A That does affect airflow.

Q Is there another one?

A He had the incorrect outlet vents. He had four outlet vents in his model. But in the operating room there were only two. So he had incorrect outlet vents.

Q So incorrect number of outlet vents. He had four instead of two?

A Correct.

Q What else?

A He neglected door openings. And we've seen the impact of door openings on airflow.

Q Is there more?

A Yes, there are. He had surgical lights that were not the right shape and they were far from the surgical site.

Q Not the right shape and far from the surgical site?

A Correct.

Q And it might be obvious to the jury but why does that matter?

A Well we saw video earlier about how one surgical lamp could impact the flow. Surgical lamps are obstructions to the airflow. They have a major impact.

Q What else?

A He had the wrong shaped room.

Q And that affects the airflow?

A Yes, it does.

Q Because how?

A Well air is entering into the room from the vents and it disperses around the room. And if the room isn't the right size and shape you're going to have a different airflow.

Q What else?

A He neglected many other sources of heat that are in the operating room.

Q So if he purported to include the Bair Hugger, why would the other sources of heat matter?

A Well other sources of heat could potentially disrupt the airflow in their vicinity.

Q Are there other inputs that you thought were not proper?

A Yes. He neglected other sources of air movement.

Q Do you have some examples?

A Yes. Think about a computer that you've got at home, it has a fan in it and that fan will blow air in the room. Similarly, most electronic equipment has fans and they are blowing air.

Q Anything in addition?

A Yeah, and I know that this is number 9 but this actually - I should have said this earlier because it's very important. He neglected motion. He had no people moving in the operating room.

Q And how significant is that?

A When people move they carry with them air. In fact, we saw in the Saarinem video when the model walked through the room it would carry with it some of that air. That's a major source of air motion which he neglected.

Q Is there a number 10?

A He had an incorrect number of people the operating room. If I recall correctly, he had two people in the operating room and there were more than two people in the operating room.

Q Is there a number 11?

A Number 11 is he provided no data for heat or airflow near the head of the patient which is near the anesthesia drape.

Q Why does that matter?

A Because that is an area where there's air motion and if you want to account for air motion you've got to include - well he didn't take measurements so he didn't have information about heat or airflow in that region.

Q And so when you say didn't take measurements, he didn't take measurements where?

A Anywhere.

Q So when you say anywhere, he didn't take measurements of airflow or heat around the neck and head?

A Correct.

Q Did he take your measurements of the heat and velocity of the Bair Hugger airflow as it exited from under the drapes?

A No. He used his hand to decide how much airflow there was but he didn't take measurements.

Q No measurements?

A Correct.

Q Number 12?

A This'll be the last one. He had incorrect draping.

So he had parts of the table that had no draping on them and that is not how I understand draping is done in an OR.

Q So you said parts of it with no draping?

A Correct.

Q And, the Bair Hugger would've been used in a typical OR with draping?

A Correct.

Q Now in terms of the number of ceiling vents, do you recall whether that was correct or incorrect?

A Well that was incorrect. He had the incorrect number of ceiling vents and he had them in incorrect locations.

Q Any other inputs for Dr. Elgobachi?

A That's actually all I can think of right now.

Q In getting back to your overarching point about CFDs in general, only as useful as the inputs that go into them?

A That is correct.

Q So I have some additional questions about draping. I'm going to move on past those now. Now you watched Dr. Elghobashi's simulation of the CFD?

A I did.

Q And the squames that were depicted in it?

A I did.

Q Again, for the jury's recollection what's a squame?

A A squame is a group of skin cells.

Q Was there anything significant about the timing of the

squames in the video that you observed?

A Yes.

Q Would you please tell the jury about that?

A In the video that I observed from Elghobashi, I did not see a squame impact the surgical site.

Q And did you see the rate at which the squames were appearing in his CFD?

Q Is there anything significant about the rate?

A Well I noticed that the squames near the surgical site according to Elghobashi began to appear around 20 seconds after he started the simulation.

Q And is that significant?

A Well I think he said that he only needed - I think he implied that he only needed 20 some seconds of simulation to make his determination.

Q So if we take into account the various differences, distinctions and inputs that you pointed out with respect to Dr. Elghobashi's CFD, do you at the end of all of that find his CFD to be meaningful from a thermodynamics point of view as a predictor or not?

A It is not a predictor. It cannot be a predictor.

Q Well was the CFD validated in the real world?

A It was not.

Q And, again, why does that matter?

A Because it is trust and verified. I think Ronald

Reagan said that in dealing with some Cold War issues. He said let's trust but verify. You've got to verify the results.

Q Did he use though something called a numerical simulation?

A Yes.

Q And is that something he knows how to do, a numerical simulation?

A He has done numerical simulations in his career.

Q So that's a term of art, isn't it, numerical simulation?

A It is.

Q Would you tell the jury what that is?

A A numerical simulation means that you use a computer to try to predict what happens in the real world.

Q And, I take it here you don't have any criticisms of the supercomputer, do you?

A I don't.

Q It's a machine?

A Correct, it's a machine.

Q Now we've talked about Dr. Elghobashi CFD. Now let's talk about yours because you put together a model to show airflow in the operating room also, didn't you?

A I did.

Q And it did purport to reflect the actual airflows in the operating room number eight?

A No, I did not model the operating room number eight.

A I put together a CFD model that used a technique called the - I'm going to give you an acronym, LES method. So it's a mathematical method.

Q Large Eddy Simulation?

A Correct.

Q And that's a report you're familiar with that you've used before?

A Yes.

Q So did your LES model, large eddy simulation, did it actually include the airflow from the Bair Hugger?

A It did.

Q Did it include both temperature and velocity?

A Yes.

Q Would you tell the ladies and gentlemen the jury what are some of the inputs that went into your CFD model?

A Certainly. So when I performed my calculation some of the inputs that I needed were the temperature of the Bair Hugger. We saw the Bair Hugger has a temperature sensor; the airflow from the Bair Hugger; the dimensions of the room; the location of the ceiling vents; the airflow coming from the ceiling vents the temperature of the room. Those are some of the factors that I considered in my calculation.

Q And did you consider the outlet vents also?

A That's right.

Q Now for your calculations did you create an image that was a simulated the operating room?

A Yes.

Q Would being able to look that assist in explaining your testimony to the jury?

A Yes.

Q Could I have Exhibit 4154? So you have an illustration of an operating room that you prepared?

A That's correct.

MR. BLACKWELL: Your Honor, I would offer Exhibit 4154 for demonstrative purposes only.

MR. FARRAR: No objection, Your Honor.

THE COURT: 4154 is received for demonstrative purposes and may be published.

Q And can you tell us what we are seeing here in 4154?

A Sure. It's a mostly blue image. And most of the blue are the walls of the operating room. And in the operating room you can see a gray object and that's the table, the surgical table with the patient on top of it.

Q If you have a pointer, Dr. Abraham, you can point if you need to.

A That's the table with the patient. Here's the surgical drape and stand. These are lights. This is a computer monitor. Up here are ceiling lights and the ceiling diffusers that allow airflow to enter the room. And down here are what

are called return vents. Those are the areas where air leaves the room.

Q And so the patient is lying on his or her side?

A Correct.

Q The so there are two poles that hold the anesthesia drape?

A Correct.

Q Can you point to those?

A One is here and the other one is right here.

Q And you have four vents where the air leaves the room?

A That's correct.

Q And are those which, the return vents?

A Those are the return vents.

Q Was there also another computer-generated drawing you created without the walls?

A Yes, there was.

Q Would it help the jury and your testimony in seeing that?

A Yes, it would.

Q So what are we seeing here, Dr. Abraham?

A This is a similar figure but I've removed the blue walls so that you can see the equipment a little more clearly. You can see the lights. You can see some monitors. This is an equipment piece. This is another monitor. So this image here, this over here is a table that was in the room. So this image

just shows you the internals of the room without the walls so it's easier to see.

Q And so did you use operating room dimensions?

A Yes.

Q And where did you get those?

A Well I got those from this file. So with this what's called CAD file, computer automated design file, you can make measurements. But then I physically took measurements of the actual operating room and confirmed the size of the room in my computer calculations.

Q So did you ever get to see the actual room that the diagram illustration is based on?

A Yeah. And in fact, I ran experiments in this same room. Q And what kind of experiments did you run?

A What are called flow visualization experiments where you are able to see the flow patterns in a real situation.

Q So would you tell the jury what were your boundary conditions or inputs for the CFD?

A I think I mentioned some of this earlier but I included the boundary conditions of the Bair Hugger which involved its temperature settings, it's airflow rate, boundary conditions from the ceiling vents including the velocity and temperature of the ceiling vents, temperature of the room. So those are some the boundary conditions.

Q So in describing the model you used can you tell us

whether you felt it was a best or worst-case scenario for the Bair Hugger?

A It was a worst-case scenario for the Bair Hugger.

Q And tell the jury what do you mean. How was it a worst-case scenario?

A Well it stacks the cards against the Bair Hugger. I wanted to know if the Bair Hugger - forget all of the other things. Forget doors, forget people moving, forget lights, forget the patient, forget the patient moving, forget the surgeon's bending, forget all of that stuff.

We know all of that stuff matters. But let's just forget all of it and let's just the question, can the Bair Hugger by itself interrupt the airflow from the ceiling? And that's the question I wanted to ask. Or I'm sorry, that's the question I wanted to answer.

Q So are you ready to look at your CFD and talk to the jury about it?

A I'd be happy to.

Q So it's Exhibit 3328

MR. BLACKWELL: Judge, we would offer Exhibit 3328 which is Dr. Abraham's CFD.

MR. FARRAR: No objection for demonstrative.

THE COURT: 3328 is received. Can you guys come up.

(BENCH CONFERENCE.)

THE COURT: Did I have that number right, 3328?

MR. BLACKWELL: Yes, Your Honor.

(RETURN TO OPEN COURT.)

THE COURT: 3328 is received and may be published.

Q So Dr. Abraham, should we start the video and you can us what we're seeing?

A Actually, if I could just explain it briefly and we can start the video. This is a top-down view of using my CFD looking down from the ceiling. You can see the patient. You can see the orange leg of the patient. The patient's covered by a grey thing, that's the anesthesia draped.

There are two blue lights that you could see. And what is going to happen when the video turns on is I'm going to use colors to show the path of flow, the path of airflow.

Q And just for orientation purposes, where would the Bair Hugger be?

A The Bair Hugger device would be - it's typically on a stand separated from the surgical table. It's often to the right of the surgical - it's often to the right of the anesthesia drape where you just showed.

Q Over here?

A That's correct. Thank you.

Q So playing the video and tell us what we're seeing?

A Yes, please. Not I'm going to have colored images

here, colored dots and those represent the airflow. These colored dots are the air trajectory as it emerges from the Bair Hugger. And you can see that it is pushed away towards the right-hand wall and it is pushed away from the surgical site.

Now why is that? Because you've got downward clean air coming from the ceiling that pushes that green stuff away. So the green lines represent airflow from the Bair Hugger and they are pushed away from the surgical site.

Q Now the momentum of the air coming down from the ceiling in comparison to the force and velocity of the Bair Hugger, are you able to characterize that?

A Yes. The momentum of the air coming from the ceiling is 60 times larger than that momentum from the Bair Hugger. And so think about a car that is driving. Heavy cars have a lot of momentum. Small cars have a little bit of momentum. And the air coming from the ceiling is 60 times more potent than the air coming from the Bair Hugger.

Q Are you ready to show another segment of this, Dr. Abraham?

A Yes, I am. I think the next video that you're going to see is going to show you air from underneath the surgical table because there's been some testimony that the Bair Hugger brings up the air from underneath the surgical table and brings it to the surgical site. So I wanted to test that idea. And so in the next video I will show what happens to the air underneath

the table.

This air is going to be colored purple. So the air starts out underneath the table and the air is pushed away from the surgical site and toward the sidewalls and then out through the vents. The vents are in the upper right and left corner and the lower right and left corner so you can see the air leaves from the vets but it's pushed away from the surgical site.

Q Again, just to be clear, what's pushing air away from the surgical site?

A It's the downward air from the ceiling. That's the purpose. It comes down. It has a lot of momentum and it's pushing all of the air away.

Q Now in your model the air that's coming from underneath the table, is that meant to reflect air from only the Bair Hugger?

A No.

Q Then what is it?

A It's just air. Like underneath this table is air even if the Bair Hugger is not on. The reason why I wanted to do this study is because the plaintiff's expert gave the opinion that he feels air underneath the table gets on top of the surgical site and I wanted to see if his opinion was correct.

Q Thank you, Doctor. So Dr. Abraham, having just seen the simulation, can the CFD, that CFD even yours tell us in, of and by itself what happens in the real world?

A No, not in the real world where people are moving, doors are opening, you've got patients moving. I mean as I said before, CFD answers a very specific question and it's a very limited question.

Q And so, again, in order to accept the CFD as predictive we have to do a validation?

A That's right.

Q Not reliable without validation?

A Correct.

Q And did you do one?

A I did.

Q Is there any way around it? I mean can the CFD in your opinion be viewed as predictive without doing a validation?

A No, absolutely not.

Q Now do you know whether Dr. Elghobashi did a validation of his CFD?

A He did not.

Q Now tell us what you did to validate the CFD that you prepared.

A So my validation experiment was attempting to be as close to real life as possible. It was done in the operating room that matched my calculations. It was an operating room in Minneapolis. It was a simulated surgery. So we had medical professionals there doing the actions of a surgery but not actually cutting anyone open. And there was a person lying on

the table acting as the patient.

And while they went through their motions of surgery we looked at the airflow patterns. And the question we wanted to know is does the Bair Hugger disrupt the downward airflow in that operating room?

Q And so what did you use to be able to see the movement of the air?

A Well we had to use what's called a visualizer. Now you can't see air movement. I mean you can't see that with the naked eye. So we used a fog generator to show how the air moved in the room.

Q And did you record that validation?

A Yes.

Q Did you come prepared to show what you recorded to the jury?

A Yes.

Q And would being able to look at it kind of help you in explaining your testimony?

A It would.

MR. BLACKWELL: Your Honor, I'd offer Exhibit 3332 for demonstrative purposes.

MR. FARRAR: No objection for demonstrative.

THE COURT: 3332 is received for demonstrative purposes and may be published.

Q So before we play it, again, tell the jury what we're

about to see.

A So on these videos you're going to see a series of videos with the Bair Hugger on and the Bair Hugger off. And you're going to be able to determine whether the Bair Hugger changes the airflow patterns. So are there differences in the fog with the Bair Hugger on versus off? That's the issue.

Q And we'll play the video now. So we'll start with the number 1.

A Okay and can we just pause it for second. There's a hose that is used to blow the smoke. That's not the hose of the Bair Hugger. The smoke is that white stuff that's coming out. And that is simply used to show us the airflow patterns. And what we wanted to know is was the Bair Hugger blowing air up over to the surgical site and is the airflow different than when you don't even have to Bair Hugger on. On the left screen the Bair Hugger's on. On the right side of the screen the Bair Hugger is off.

Q Again, why do you need an on-off comparison?

A Because I want to see if the Bair Hugger changes the airflow.

Q So should we continue?

A Please. So what we see here are there's no differences. I mean there's no meaningful differences in the airflow whether the Bair Hugger is on or off. Now that video was shown from one location in the operating room by the

patient's head but we took other videos in other location.

Q So should we look at another of those?

A Please. Now here's a video where we're going to raise the fog generator so you can see whether there's an impact of the Bair Hugger whether it's on or off.

Q And then you've got air that this coming down unidirectional from the ceiling?

A That's right. And there's no noticeable difference in the airflow patterns.

Q And did you also look at it with another illustration?

A Yes, I did. Now this is - can we pause it for just a second. So on the left-hand side is Bair Hugger on. On the right-hand side is Bair Hugger off. And we're showing the same image from two different directions so you can get two perspectives. And the question is is there a significant difference in airflow? So please play.

Q Did you see any difference?

A I did not.

Q Did you then look at this from additional perspectives?

A I did.

Q So altogether seven?

A I think seven.

Q So let's look at number four?

A Okay. And if we could pause it for a second. This is

showing the airflow under the table because Elghobashi has the impression that the Bair Hugger brings air from under the table up above and when the Bair Hugger's not on that doesn't happen. So we're looking for differences in airflow underneath the table. Bair Hugger on is the left. Bair Hugger off is the right. Please play it.

Q Did you see any difference?

A No.

Q And what do we see in number five?

A So while this gets queued up can we just pause. You're going to see a series of videos where now we're really trying to get fog to go over the site. So we're going to release the air - release the fog right near the surgical site. Left-hand side is as we've seen before, Bair Hugger's on. The right-hand side is Bair Hugger off. Please proceed.

Q So is it overcoming the force of the unidirectional flow?

A No.

Q Let's look at just two more.

A This is in a similar location and you can play it. The Bair Hugger on and off are on the left and right. And, again, you could see even though we're releasing air right near the surgical site that air is being pushed away from the surgical site. There's no noticeable difference in airflow when the Bair Hugger is turned on.

Q And the last one?

A And this one is my favorites. This is we're pointing, purposely pointing the air at the surgical site, pointing it trying to get air to go over the surgical site. On the left-hand side is with the Bair Hugger. Right-hand side is without. Please proceed.

Q Thank you. Now Dr. Abraham, please make this plain for the jury. How does this airflow experiment we saw validate your CFD?

A Well it confirms what I found with my CFD. What I found with my CFD is the Bair Hugger by itself is not able to disrupt the airflow in the room. But at the end of the day experiments are what matters the most. And these experiments show there's no difference in airflow patterns when you have the Bair Hugger on versus off.

Q Now are three other computational fluid dynamics models that support your conclusion with respect to the Bair Hugger and the airflow disruption?

A Yes.

Q Such as?

A Well the National Institute of Health had scientists do a study similar to the study that I did.

Q For the record, I'm holding up Plaintiff's Exhibit 225, the Al Van Duren report that the jury has seen. And I want to particularly focus on the comment. "Actually, there is

evidence that forced-air warming used increases risk. That evidence was the motivation for Dr. Memarzadah's work." Now do you know who Dr. Memarzadeh is?

A Yes, he is the person at the National Institute of Health that carried out his own independent study.

Q Now what kind of study did he carry out?

A It was a CFD study.

Q And did Dr. Memarzadah's work provide any support, foundation or assistance for the formation of your opinions?

A His work confirmed my opinions.

Q And who did Dr. Memarzadeh work for?

A The National Institute of Health.

Q And what was The National Institute of Health looking at that's referenced here in the plaintiff's exhibit, what were they studying?

A They wanted to know whether a forced air warmer like the Bair Hugger could increase or disrupt airflow and increase risk to patients.

Q And have you relied on Dr. Memarzadeh's work also?

A I have cited - I will say his work confirms my findings.

MR. BLACKWELL: Your Honor, may I approach the witness?

THE COURT: You may.

Q I'm handing you what is marked as Exhibit 2174. And

would you just please tell the jury first what is this?

A This is a letter from Dr. Memarzadeh in a journal called the Journal of Hospital Infection.

MR. FARRAR: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: Your Honor, there's no foundation for this. He said it confirms his but it's not relying or not even authoritative. He potentially says in his deposition that this is way different than what we have in our case.

MR. BLACKWELL: What he in fact just said is that he did rely on Dr. Memarzadeh's work in his opinion. This particular Memarzadeh study is referenced on page 22 of his report in the O'Haver case. He's been deposed on it by the plaintiffs also granted in the MDL. But he incorporated his testimony on a portion of the MDL into this case. So it's not a surprise to them and it's on our exhibit list.

MR. FARRAR: I didn't say it's a surprise. It's that he didn't say he relies on it. He said it supports - confirms his findings, not I relied on it to form the basis of my opinions.

THE COURT: The objection is overruled. Can I have that number again?

MR. BLACKWELL: 2714, Your Honor.

(RETURN TO OPEN COURT.)

MR. BLACKWELL: Your Honor, I'd offer Exhibit 2714 for demonstrative purposes.

THE COURT: 2714 is received for demonstrative purposes.

MR. BLACKWELL: May I show it, Your Honor?

THE COURT: You may.

Q So could we first just see the title. *Active Warming Systems to Maintain Perioperative Normothermia in Hip Replacement Surgery*. Now is this the Memarzadeh work that you read that you just referenced to the jury?

A Yes, it is.

Q And to be clear, the work of Dr. Memarzadeh was work you also relied on in forming your opinion?

A That is correct.

Q Can we turn to the first paragraph. So let's read this together and I'll have a question for you. "In response to Moretti's article active forming systems to maintain perioperative normothermia in hip replacement surgery: a therapeutic aid or a vector of infection. The National Institutes of Health NIH use computational fluid dynamics CFD a particle tracking methodology to assess whether a forced-air patient warming system increases the risk of nosocomial infections at the surgical wound site.

NIH analyzed laminar airflow disruption and room airflow

patterns to determine the effect of squame impingement from personnel surrounding the operating table as a source of surgical wound infection."

First off, Dr. Memarzadeh is a scientist and did he have a specific position and title at the NIH?

A He did.

Q Was he a director there?

A He was I think the Director of Technical Resources at NIH. I think that's what his title was.

Q So what forced-air warming device was used in their study?

A The Bair Hugger.

Q And so what was the concern again that Dr. Memarzadeh studied?

A He was looking at the question as to whether a forced-air warming device like the Bair Hugger provided a risk of infection.

Q Now we can look at another quote from this page 1. I want to focus on the highlighted language where it says, "NIH analyzed laminar air flow disruption and room airflow patterns to determine the effect of squame impingement from personnel surrounding the operating table as a source of surgical wound infection." What's that mean in plain speak?

A Well it means that the National Institute of Health looked at one of these operating rooms with the vents in the

ceiling that provide downward airflow and they looked at airflow patterns. And they wanted to know if squames from personnel around the table could impinge on the surgical wound and cause infection.

Q Let's look at what Dr. Memarzadeh at the NIH concluded. "The percentage of squames deposited on the patient was zero both when the forced-air warming was on or off." Involving the Bair Hugger?

A That's correct.

Q Now do you find the results from National Institutes of Health to be consistent or inconsistent with the work you did?

A These results are consistent with my findings.

Q And if we want to look just one more quote here. "NIH concludes that in both scenarios," both meaning with the Bair Hugger on and with the Bair Hugger off, "in both scenarios there's zero percent deposition on the patient for the containment sources and the heat generated by the patient provides some protection." So zero deposit on the patient?

A Correct.

Q And it says the patient's heat provides some protection?

A That is correct.

Q Doctor, I'd like to talk to you about what that means when the patient's heat provides some protection. Have you ever

heard of a concept or a thing referred to as a thermal plume?

Q Would you tell the jury what that is?

A It's hot air rises. When you heat up air it wants to rise. And, in fact, near every person in this courtroom there is warm air that's rising from our body. That is a thermal plume so it's hot air that rises.

Q And so do understand what relevance thermal plume might have to an orthopedic surgery from someone who's a thermal scientist?

A Yes, I do. So when you're having surgery and you've got a person on an operating table and they're warmer than the room, warm air rising from that patient provides some protection against squames getting into the surgical site.

Q And so, again, that has some impact on whether contaminants that may be deposited in the surgical site?

A That's correct.

Q And does the thermal plume create a protective effect as described by Dr. Memarzadeh?

A It does.

Q And did he in fact find it to be protective in his study?

A Yes.

Q And, again, looking at the model of Dr. Elghobashi, his CFD, did you see any of his particles ever land in the surgical wound?

A No, I did not.

MR. BLACKWELL: Thank you, Dr. Abraham. Your Honor, I'd pass the witness.

THE COURT: Cross-examination.

MR. FARRAR: Yes, Your Honor.

CROSS EXAMINATION BY MR. FARRAR

Q Good afternoon, Dr. Abraham.

A Good afternoon.

Q My name's Kyle Farrar. I don't think we've had the pleasure of talking, is that right?

A I don't believe we have.

Q I'll start where you left off with Dr. Memarzadeh. I'll start with a couple of easy things. You know that's not a published study, correct?

A What we saw on the screen was not a published study.

Q It's a letter to the editor, correct?

A That is correct. What we saw on the screen was a letter to the editor.

Q No peer-review process for that, correct?

A For the letter, I don't believe so.

Q By the way and we're going to come back to it. The paper that you discussed that you wrote and published regarding Bair Hugger was also not peer-reviewed, correct?

A It was not peer-reviewed.

Q It was not peer-reviewed in accordance with either the journal or a double-blind peer view, correct?

A It was not a double-blind peer review.

Q Let's talk about Dr. Memarzadeh first. There was no drapes used in Memarzadeh, correct?

A I don't recall.

Q If you would, I'll help refresh your recollection, Ta 1 is your deposition you gave in 2017. If you'd flip to page 339. Are you with me?

A I'm there.

Q 339, line 5. "Question: And does the fact Memarzadeh that showed a slight disruption in laminar flow using the 505 did not use the 750 in his study and that might show a more increased disruption of laminar flow if you recall?"

And your answer: "Is this the Memarzadeh study where he had the air jets just emerging from the top of the patient?"

The question is "No.

Answer: "So there was no draping on it.

Question: Yes."

Answer: From you, your words. "Boy, that's so different from this case." That's what you said, right?

A That is.

Q But, Memarzadeh is nothing like what Ms. O'Haver had in her case, correct?

A Well if this is the Memarzadeh study that we're

talking about and I don't know the Exhibit Number then it would be an undraped case which is different from the O'Haver case.

MR. BLACKWELL: Your Honor, may I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I object to this particular line of questioning. The impeachment that he pulled out was not from this case. It's from the MDL in 2017. So when the witness says it would be so different from this case, he's discussing another case. Mr. Farrar is confusing the jury to suggest it's O'Haver and that's misleading and not appropriate.

MR. FARRAR: It's from ...

MR. BLACKWELL: And potentially they filed a motion in limine and talking about other cases.

MR. FARRAR: He just said he relies on stuff and then he says it's so different from her surgery. The other case was a surgery. He knows it's a completely different situation and we don't have drapes. That's the point I'm trying to make.

THE COURT: You need to rephrase the question because the way that you phrased the question it gave the appearance that you're comparing what he said and that he was talking about the O'Haver surgery. So the objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Abraham, the testimony you gave where you said it's so different from this case, that was actually a hip replacement surgery that you were testifying in, correct?

A I don't recall because there were multiple Memarzadeh studies.

Q The case was a hip replacement case you are testifying was so different than this case, correct?

A Okay, I just want to make sure I understand your question. You're saying the case --

Q I'll rephrase. You say, "Boy, that's so different from this case" and I just would be clear. You aren't talking about Ms. O'Haver. You were talking about fellow named Mr. Garris's hip replacement surgery, that's the case we were talking about?

MR. BLACKWELL: Objection, Your Honor. May I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, there's motion in limine that counsel is absolutely not to be bringing up other cases involving the Bair Hugger. Now he's even saying the name of the other litigation, other hip surgeries, etc. I think it's improper. And it's an improper impeachment as to Ms. O'Haver in the first place.

Now he's just gone further down the road to try to interject the fact there are other lawsuits and cases.

MR. FARRAR: He asked me to make it clear that it wasn't this case, that it was a different case.

THE COURT: He didn't. I did but I didn't ask you to highlight the motion in limine doing that. So I mean I don't understand why you think that based upon my ruling up here that you were misleading the jury with that question, that you get to talk about the circumstances of another case. The objection is sustained and I'd ask that you move on.

(RETURN TO OPEN COURT.)

Q You know that the Memarzadeh CFD that you're talking about was done at the request of a consultant for 3M, correct?

A I don't know that.

Q You know that there's no conflict statement on that Memarzadeh, right?

A Can you just clarify which Memarzadeh we're talking about because Memarzadeh published papers in 2002, 2004, I believe 2010 and 2012. So I'm just not clear which Memarzadeh.

Q Which Memarzadeh were you talking about?

A Well we were just talking about the Memarzadeh letter in I think it was the Journal of Hospital Infection.

Q Correct. And you could see conflict of interest, none declared, do you see that?

A I do.

Q Did you know that this was actually done at the behest of 3M. And one of their consultants reached out to Dr. Memarzadeh and asked him to do it?

MR. BLACKWELL: I object, Your Honor, assumes facts not evidence.

THE COURT: Sustained.

Q I'll hand you an exhibit that's been marked as 2251 and ask you look at this email and confirm for me that it does indeed show that this was done at the behest of 3M's paid consultant, Russ Olmsted.

A I don't know who Russ Olmsted is.

MR. BLACKWELL: I'm sorry, Your Honor, I have to object. May I approach.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, Mr. Farrar has put out an email that's not in the exhibit list. The witness has no knowledge of. Mr. Farrar is testifying about its context. I've never seen it. The witness hasn't seen it and he's just sort of whipped it out.

MR. FARRAR: The defense has our exhibit list. I just can't find the one on the defense exhibit list cause I didn't think they we're gonna go down this road. So they've seen it and we've actually discussed this very email with other witnesses. The fact that he relies on

this I get to poke holes in it and show that 3M paid for it.

THE COURT: So you're using an email that he's never seen before?

MR. FARRAR: Sure, Your Honor. That's the point. He hasn't seen it.

THE COURT: That is an email. And so if he hasn't relied on it, you're using it to prove a point that he knows nothing about it. And there's no foundation that's going to be able to be laid for this exhibit.

MR. FARRAR: The point is he's using unreliable literature. And I get to point out and show the jury that that is unreliable literature and why it's unreliable.

THE COURT: And you can but you have to do it by showing exhibits that are admissible and that a proper foundation can be laid. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Is it good science, Dr. Abraham, to do your CFD on an airplane?

A It could be.

Q Is it good science to just to have companies edit and review papers before you publish them?

A If the company changes the findings, then I would say no.

Q If they have a chance to make edits, then the answer

is no, right?

A Well, no, that's not what I said. If they change the finding it's no, but often times - and in fact this has happened to me. I did a project for Medtronic and I wrote a number of articles on their medical devices and they had to edit it because there was some intellectual property that they didn't want included in the paper so they edited that. So it depends.

Q I want to talk about a few things that you discussed about Dr. Elghobashi's CFD. You went through a list of 13 different items and you used the word "wrong" a lot, the wrong number of vents, the wrong shaped room. Do you recall that?

A Yes.

Q Did you mean to imply to the jury that Dr. Elghobashi was incorrect in his work?

A What I meant to imply - let's take the vent issue. He had 10 vents and the O'Haver OR had 12. So he had the wrong number of vents.

Q A different number, not the wrong number, correct?

A Well he had a different number than the O'Haver operating room.

Q Do you know his CFD was done before Ms. O'Haver even had her knee replacement surgery, correct?

A That is correct.

Q So it wasn't that he made mistakes in the CFD with the number of vents. He modeled a model OR, a model operating, not

Ms. O'Haver's, right?

A He modeled a different OR, not Ms. O'Haver's.

Q There was no attempt to model Ms. O'Haver's, correct?

A That's correct. I don't believe he's attempted to model O'Haver's OR.

Q When you kept telling the jury that it's the wrong number of vents or the wrong size, you weren't trying to mislead them to say that Dr. Elghobashi made mistakes, were you?

A Well with respect to the wrong number of vents, what I intent to tell the jury is the number vents he used was not the number of vents in the actual OR where the operating room took place.

Q Because he did his CFD before Ms. O'Haver even had her surgery in November of 2016, right?

A That is my understanding.

Q So there's absolutely no way Dr. Elbgobashi's model would be perfectly aligned with Ms. O'Haver's, correct?

A I agree.

Q And it's not your opinion that you have to do a CFD for every single operating room in America to determine whatever you're trying to determine based on your CFD, correct?

A It's my opinion that you, as I said before, CFD is able to answer very specific questions and they are particular to the inquest. And if your inputs are different from the situation you're trying to model, your results will be different

and that's what I was attending to get across.

Q Not that he made mistakes, right?

A No. I mean he used a different number of vents. In his model he had a different number of vents than were in the O'Haver operating room.

Q And your CFD model actually also predated Ms. o'Haver's, correct?

A That's correct.

Q Would it be fair to say that every single - every single one of the 13 issues that you had with Dr. Elghobashi would be equally true for you?

A Yes.

Q So number 1, no bacteria from the surgeons. Your CFD had no bacteria from the surgeons, correct?

A Correct.

Q In fact, Dr. Elgobachi's had 30 million squames. That's bacteria, right, where bacteria came out of squames, correct?

A Yes but they weren't from the surgeons. That's the point I was trying to make. I believe his were on the ground or near the ground.

Q Because the point that he was making, he said I'm just trying to solve a small question. And the question he was trying to solve was can squames on the ground get to the surgical site, right?

A Well that's what he thinks he tried to solve. I agree with that.

Q So he is going to put them on the ground to see if he can solve that problem, correct?

A Well that's maybe what he intended to do with the simulation.

Q And, I do want to correct something. I said 30 million squames, 3 million squames, correct?

A I take your word for it.

Q I don't want to be incorrect on stuff. I want to be very precise and very accurate. You said there was the wrong number of vents. Actually, Brett, would you mind putting up 4154 for demonstrative purposes. This is your CAD drawing, correct?

A That's correct.

Q So and I don't think you were trying to mislead the jury on this. This is not the CAD drawing of Ms. O'Haver's operating room, right?

A No, no it's not and I did not try to imply that it was.

Q I don't think you did. I think the way the questions came out, it sounded a little bit like it and I just want to be clear. This is some operating room in Minnesota, correct?

A Yes, that's right.

Q Fairfield I believe is where it's at, right?

A And think it's Southdale.
Q Southdale. Cause you're from Minnesota, correct?
A Well that's part of it but also this is the operating room where the experiments took place.
Q Sure. But you're from Minnesota, correct?
A I am.
Q 3M is a Minnesota-based company?
A Correct.
Q One of M's in 3M stands for Minnesota?
A That's right.
Q And, Mr. Blackwell's firm is a Minnesota-based firm, correct?
A That is correct.
Q So about 50 percent of your work comes through litigation, correct?
A Approximately, yeah.
Q You do teach but that's about half of your work and the other half is litigation work, correct?
A Yes, that's correct.
Q So you testified that Elghobashi and I'm using the quote, "used the wrong number of vents and wrong location." You too, sir, if you're trying to compare it with Ms. O'Haver used the wrong number of vents and the wrong location, right?
A Yes, that's right.
Q You said he had the incorrect number of outlet vents.

He had four instead of two. You also used four instead of two, correct?

A That's correct.

Q You said he neglected door openings. You, sir, too did also did not model door openings?

A That's right.

Q You said the surgical lights, they were not the right shape or location. You, in fact, have no idea what shape and location Ms. O'Haver surgical lights are, correct?

A That is correct.

Q So not only do you use the wrong ones. You don't even know what the right ones are?

A That is correct. My model - I'm not purporting my model to have the same surgical lights.

Q You said that he used the wrong shaped room. You also used a wrong shaped room, correct?

A That is correct.

Q You said that Dr. Elghobashi neglected other sources of heat. You also neglected other sources of heat, correct?

A That is correct.

Q In fact, if we look at your model, the one thing that we're here to talk about in this entire trial is not included in it, correct? There's no Bair Hugger in there?

A The blue object as a flow blocker - the blue object is not there but I have the Bair Hugger blanket with the hot air.

Q Not the actual device that we are here to determine whether not it was defective and caused Ms. O'Haver's infection? It's not in yours?

A Correct. I had the blanket with the air but I don't have the blue plastic device.

Q You said Dr. Elghobashi neglected other sources of air movement like a computer. You did the exact same thing, correct?

A Correct.

Q You said in Dr. Elgobashi's model there is nobody moving. There is nobody moving in your CFD model, correct?

A That is correct.

Q You said that in Dr. Elgobashi's he had to the incorrect number of people. You said he had two. He actually had three. Do you recall that?

A He may have had three. I won't argue.

Q Well he had three and the patient also, correct?

A That's what I recall.

Q You had only a patient, correct?

A That's correct.

Q You had no surgeon, no surgical staff, no nurse at all, correct?

A Correct.

Q You said that he had no data for heat near head of patient under the drape. That would be true for you too,

correct?

A Well not quite. I took measurements in my room and he did not.

Q I want to come right back to the measurements but I want to finish this list first. You said that Dr. Elghobashi had incorrect draping?

A Yes.

Q You too had incorrect draping, correct?

A Yes.

Q And interestingly enough, I looked at yours and the thing you said - do you remember when you were doing the sort of demonstration up here. You said the drapes reached almost to the floor, right?

A Yes. On part of the table the drapes reached almost all the way to the floor.

Q And then right after that you said and the hot air would be forced out below the drapes, correct?

A The hot air is forced downwards from the blanket and some of the hot air will get underneath the table.

Q You told us, Dr. Abraham, when air is blown into that blanket it has to go somewhere, right?

A That's right.

Q And, I think this is an important point to make. Hot air comes out from underneath the drapes, is that fair?

A Yeah, I agree.

Q The draping that you use in your models, we're looking at it, it does not go anywhere near the ground, correct?
A I agree.
Q You said he used an incorrect number of ceiling vents and incorrect locations. Would the same be true for your model?
A Yes.
Q Because she didn't model operating room eight, correct?
A That is correct. I did not model operating room number eight.
Q And the patient - I'm sorry, Dr. Elghobashi didn't model operating remember eight, correct?
A That is correct.
Q You had the patient on her side, correct?
A Correct.
Q So this blanket would have - if somebody is having knee surgery like Ms. O'Haver, she would be on her back and have her arms out like this, correct?
A Correct.
Q And the blanket would go from hand-to-hand, correct?
A Correct.
Q You have modeled somebody on their side like this, correct?
A That is correct.
Q So the blanket is sort of on this part of the body,

correct?

A Correct.

Q Not like Ms. O'Haver had?

A I would agree that there are differences in the draping and the blanket layout.

Q You testified that Dr. Elghobashi did no measurements or calculations in connection with his LES CFD, correct?

A I think I said no measurements. The computer did the LES calculations.

Q You said to determine heat and velocity he just stuck his hand down there?

A That is when a recall from his deposition testimony.

Q You know for a fact, sir, that is incorrect, that he had calculations that he did to use that, correct?

A Well we were talking about - I was intending to talk about measurements. My recollection from his deposition was that he measured the airflow by putting his hand under the drapes.

Q I'm going to hand you what I've marked as Exhibit 448. You recognize this from Dr. Elghobashi's calculations, correct?

A I do.

Q And you see the calculations right there for the velocity of heated air leaving the Bair Hugger blanket?

A I do see a calculation of velocity.

Q So he didn't just stick his hand under there. He did

actual real number calculations, correct?

A I was referring to measurements. He didn't do measurements. His measurements were with his hand.

Q He did calculations to make those determinations, correct?

A No. This is different from the measurement he made with his hand. Those are two different issues.

Q Did he do calculations to determine the heat and the velocity of the air leaving the Bair Hugger blanket?

A He did a calculation on this page.

Q I'm jumping around a little bit. You talked about validation, right?

A Correct.

Q You did your validation before you did your CFD, correct?

A I think the experiments were done before the CFD.

Q Right. So you didn't do your CFD and then get the results and then say, you know what, I need to check my work and then go do an experiment? You did it the other way around, right?

A I believe I did the calculations after the experiments.

Q True or false, Dr. Abraham? Dr. Abraham's CFD work is never right?

A I believe that CFD work by anyone is never correct.

Q So true?
A True.
Q In this particular case when you were doing your CFD on your computer, by the way, you did it on a laptop?
A No.
Q Is it a desktop?
A It was a multicore machine.
Q Computer I could buy at Best Buy?
A No.
Q I couldn't?
A Well was I think a 32-core machine with nine terabytes of storage. I mean maybe you could get that at Best Buy but it's a pretty high-end computer.
Q I think you said 16 compared to a 32?
A Well each - they're dual cores.
Q Nonetheless, I could order this on Amazon if I put it together, right?
A If you spent enough money you could buy the computer yourself.
Q When you were doing your CFD you got error messages, correct?
A Yes.
Q Often, correct?
A I don't if I'd say often. I meant I got some warning messages.

Q More than one?
A Yes.
Q Errors, correct?
A Yes, they were errors but there were errors that I was able to deal with.
Q True or false? Dr. Abraham's work is sometimes not useful?
A I would say that my work might sometimes not be useful.
Q One of the questions that you were not asked to answer in this case is whether or not the Bair Hugger is safe in surgeries, right?
A I was asked - I was not asked that specific question. I was asked to determine whether the Bair Hugger would disrupt airflow in the operating room.
Q Your CFD was not intended to answer this question. Is the Bair Hugger safe for all surgeries, correct?
A Correct. It was not intended to answer that question.
Q In fact, what you told us it would be a stretch for 3M or anyone to say that your model demonstrates the Bair Hugger safe for all surgeries, correct?
A I agree. I think that would be a correct statement for anyone's CFD.
Q You talked about that CFD answered a very specific question that you're asking, correct?

A Correct.
Q The question that you asked is about airflow, correct?
A Correct.
Q You did not ask about particles, correct?
A Correct.
Q You understand that this case is about particles, right?
MR. BLACKWELL: Objection, Your Honor. May I approach.
THE COURT: Sure.
(BENCH CONFERENCE.)
MR. BLACKWELL: Your Honor, I object on the basis of the assumed fact and the question of him declaring that the case is about particles. That's their perspective. It's certainly not ours. And it's certainly not a fact that can be a premise for a question to a witness.
THE COURT: The objection is overruled.
(RETURN TO OPEN COURT.)
Q Dr. Abraham, the question was you understand this question is about particles, right?
A That is not my understanding.
Q Do bacteria fly on air streams or on particles?
A Well, bacteria would be - bacteria or particles would be carried by air streams.
Q You know that the Memarzadeh study that you talked

about looked at particles, correct?

A That's correct.

Q You know that all the studies that have looked at the Bair Hugger have concluded that it increases the particles over the surgical field, correct?

MR. BLACKWELL: Objection, beyond the scope of this witness's testimony.

THE COURT: Overruled at this time. You may answer.

A Can you re-ask the question.

Q You understand that every single study issue that has looked at the issue of whether or not the Bair Hugger increases particles over the sterile field have concluded that it in fact does, correct?

A That is not my understanding.

Q You've seen that testimony from Mr. Al Van Duren, have you not?

A I may have. I may have.

Q If you'll look in your notebook at Tab 4, page 95. "Question: If 3M has admitted to this jury that every single article that has looked at the issue has shown that particles - that the Bair Hugger increases particles over the sterile field, you would not disagree with that, correct?"

A I'm sorry, were you reading a question?

Q I wasn't but that may be easier. I'll read.

A Well I can answer it. I answered, "I would not disagree with 3M."

Q The fact that 3M has said every single article shows an increase in particles over the sterile field in no way impacts her opinion, does it." You just discount it, right?

A No, I disagree with that.

Q How do you disagree?

A I wrote - my first report did discuss different studies that talked about particles. So I discussed them in my first report.

Q So particles is part of your opinions?

A I discussed studies that dealt with particles in my initial report but I did not offer an opinion on particles.

Q You know - I mean if we're talking about what does your CFD answer, you have to be asking the right question, right?

A I agree.

Q If you're asking the wrong question who cares what the answer is, right?

A I agree.

Q But you understand that all the other experts that have testified for both sides have said particles are what's important, correct?

MR. BLACKWELL: Objection, Your Honor, lack of foundation.

THE COURT: Sustained.

Q Would it surprise you that the other experts in this case have talked about particles with that being the thing we're looking at?

MR. BLACKWELL: Same objection, Your Honor.

THE COURT: Sustained.

Q Have you seen any expert reports in this case from either side that discusses air streams?

A The only expert report that I have read was Elghobashi's that I recall. I mean I looked at air because air carries particles. So – well let me take a step back. My CFD looked at air.

Q Do you have a question that is pending?

A Yeah, you were asking about other expert reports that have discussed particles.

Q Right. Other experts, not yours. I mean other expert reports that talk about air streams was the question.

A No, I don't believe I have.

Q You have testified that particles do not follow streamlines, correct?

A They do not always follow streamlines.

Q Because particles have weight?

A That's correct.

Q And gravity affects them?

A Yes.

Q And you understand that this case is about particles that carry bacteria can reach the sterile field? You understand that, right?

A That is not me understanding.

Q You have testified that you understand there's two different methods that the plaintiffs have posed about why the Bair Hugger increases the sterile - or contaminates the sterile field, you understand that, right?

A Well I haven't been here for the whole trial so I don't know all of the positions that the plaintiffs have taken, but I will tell you that my CFD model air because air is a worst-case scenario. I mean in a certain sense I modeled particles that were the size of air molecules.

And if air doesn't get to a surgical site then particles won't. So that's my - that was my use of the CFD. My experiment did use particles.

Q Your experiment used particles. So you are testifying about particles in this case, correct?

A To the extent that in my experiments I did not notice any change in airflow in the operating room and I use particles to show that, then yes.

Q So your experiment, your validation is actually different than your CFD, correct?

A Not really. I mean I disagree with that. My experiment and my CFD both were intended to show airflow

patterns in an OR.

Q If we're looking at particles, you agree or at least you won't disagree with 3M that every single study shows an increase of particles when the Bair Hugger's on, correct?

A Well I would stick by what I said in my deposition. I mean I would like to see the evidence but I'll stick with what I said in my deposition.

Q We'll look at some of the evidence. Plaintiff's 94 is the Legg article that you cite in your report, correct?

A Yes, that's correct.

MR. FARRAR: Your Honor, may I publish 94?

MR. BLACKWELL: Can we clarify that it's actually in?

THE COURT: I don't have any note of 94 having been used.

Q Dr. Abraham, you said that you cite this Legg report in your report in this case?

A I believe I do. I can't confirm it but I believe I do.

MR. FARRAR: Your Honor, we'd like to publish please.

MR. BLACKWELL: For demonstrative purposed, no objection.

THE COURT: 94 can be used for demonstrative purposes and published.

Q And this was published in the Journal of Bone and Joint Surgery, correct?

A That is correct.

Q Do you see in the summary it says, "Forced-Air warming resulted in a significant mean of increase in the temperature and the number particles over the surgical site when compared with radiant warming." That will be something like a Hotdog, correct?

A Yes, that's what the statement that you highlighted says.

Q "Which raises concern as bacteria are known to require particles for transportation," correct or transport?

A That's what the highlighted portion says.

Q If you look at page 3, the highlighted portion says, Forced-Air warming significantly increased the number of airborne particles over the surgical site compared to the radiant warming or control, both of which showed similar results" meaning no warming at all versus conductive showed similar results, correct?

A I apologize. I wasn't following you because I was reading a portion of this paper. And I want to point out for the record that this is a very different set up.

Q Dr. Abraham, I didn't ask you that question. The question I asked you is does this say forced-air warming significantly increased the number of airborne particles over

the surgical site compared to the radiant warming or the control?

A That's what the sentence says.

Q It says, "Bacteria requires particles to transport them. And although were unable to confirm if any of the particles were transporting bacteria the significant increase in the number particles that we found in the study at the surgical site is of concern." I read that correctly?

A You did.

Q And so we have shown that in our experimental theater set up, forced-air warming significantly increases the temperature and number particles over the surgical site, correct?

A That's what the sentence says.

Q If it increases the temperature there has to be airflow, correct?

A Not necessarily.

Q You can increase the temperature over the surgical site without having any airflow go there?

A Oh, yes.

Q So for increased particles we're going to go to Legg, fair enough, it says that, correct?

A Yeah, Legg is the first author of this paper.

Q And also just to make sure, Legg was done in a real operating room, true?

A Only partially. It was done in what's called a Howorth enclosure which is very different from an operating room that was used with Ms. O'Haver. But it was done in a real operating room, just a very different kind of operating room.

Q You've never been in Ms. O'Haver's operating room, correct?

A I have not.

Q I want to show you what I've marked as Exhibit 96. This another like Legg paper a couple of years later. Something that was used in your report as well?

A It is.

MR. FARRAR: And this I believe we have shown but I'll just in case ask permission to show 96 for demonstrative purposes.

MR. BLACKWELL: No objection.

THE COURT: 96 is received and may be published.

Q Is this something you read and relied on?

A Yes.

Q And, again, this is published in the Bone and Joint Journal. And in the summary, it says, "The convection currents increase the particle concentration 1,000-fold by drawing potentially contaminated particles from below the operating table into the surgical site." That's with the use of the Bair Hugger, correct?

A That is what this sentence says that you highlighted.
Q Well let me ask you. Is it fair to say that I can put Legg under increases particles?
A It is fair to say that. And, again, this is also in a Howorth operating enclosure.
THE COURT: Counsel, we're going to take a recess until about 3:30.
(THE INSTRUCTION WAS READ.)
(BREAK AT 3:14 PM.)
(RETURN AT 3:37 PM.)
THE COURT: You may be seated.

CONTINUED CROSS EXAMIINATION BY MR. FARRAR
Q Doctor, I'll show you the dates up here. The first Legg study was 2012, the second 2013, is that right?
A Yes, one of them is 2013 and the other one, I don't see a date on the cover page, yes, 2012.
Q Another study I noticed in your report was done by Belani. Do you remember that study?
A Yes, I do.
Q I'm handing you what's been marked as Exhibit 97. Is that something that you relied upon to form your opinions in this case, correct?
A Yes.
MR. FARRAR: Your Honor, I would just ask that 97

be admitted for demonstrative purposes.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: 97 may be used for demonstrative purposes and published to the jury.

Q And, Belani is 2012, correct. Do you see that in the very bottom left corner?

A I see that. Thank you.

Q At the beginning under background it's talking about the benefit of normothermia and it says, "However, these benefits may not fully translate to contamination sensitive surgery i.e. implants because patient warming devices release excess heat that may disrupt the intended ceiling to floor ventilation flows and expose the surgical site to added contamination." I read that correct, right?

A You did.

Q And you know that they used neutrally buoyant bubbles in their test, correct?

A That is correct.

Q And this was done in orthopedic surgeries at a real operating room at the University of Minnesota, correct?

A If you'll just give me a moment to refresh my recollection.

Q I'll help you, Dr. Abraham. Under "Methods" on the second page you can see, "Experiments were performed in a downward displacement ventilation OR used for orthopedic surgery

at the University of Minnesota Hospital." Do you see that?

A That is correct.

Q So does that refresh your recollection this was done in orthopedic surgeries in an OR at the University of Minnesota?

A Thank you for that.

Q Sure. If we look under "Conclusions" it says, "Excess heat from forced-air warming resulted in the disruption of ventilation airflows over the surgical site." Did I read that correctly?

A You did.

Q So it's actually talking about both particles and airflows, correct?

A Well it's saying excess heat from forced-air warming.

Q "Resulted in a disruption of ventilation airflows over the surgical site," right?

A Yes, that's what the sentence says.

Q And there is a graph on page - it's actually not the fourth page but Figure 4. It shows graphically the difference between the top being controlled which is no warming, the middle being conductive fabric which is something like a Hotdog and the third being forced air warming, correct?

A Yes. It's the predicted bubble counts from an adjustment of over dispersion model but that's what it shows.

Q The take away from Belani is the Bair Hugger increases particles over the surgical site, correct?

A That is what they conclude under this setting.
Q You also as part of your work looked at the McGovern study, correct?
A Correct.
Q And you looked at the - not only the epidemiology part of that but also the air bubble flow, correct?
A That is correct.
Q And they also concluded that the Bair Hugger increases the particles over the surgical site, correct?
A The may have. I don't remember the specifics of that study.
Q Do you want to watch the demonstrative that we've seen to see if that confirms that's what they found?
A Do you mean show me the paper?
Q No. I mean show you the demonstrative like you did with the doors, the demonstrative that came with the McGovern study? You've seen it, right?
A I don't know if I - I many have seen it, I may not have.
Q We'll see if we can refresh your recollection. Your Honor, can I play 2204?
MR. BLACKWELL: Your Honor, I object. May I approach.
THE COURT: Sure.
(BENCH CONFERENCE.)

MR. BLACKWELL: First off, with respect to this video, there's been no foundation for this witness. He never recalls even seeing it. And Mr. Farrar just wants to put it up here again. He said he doesn't recall seeing it.

And second, he's asked him all these questions about particles and Mr. Farrar knows that in his deposition he asked him if he was giving opinions about particles and he says no, I'm not giving opinions about particles, that's not his area of expertise. That's all he's talked to him about. But as to this specific issue, there's no foundation for putting up a video from McGovern that he has never seen.

MR. FARRAR: He said he has reviewed McGovern and he did think he saw it. Then he equivocally said I'm not sure. I said let's refresh your recollection to see if this is it.

THE COURT: I don't believe the correct foundation has been laid. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Abraham, yes or no? You've seen the video from McGovern?

A I don't recall. I don't believe so but I just don't recall.

Q Well would it be fair for me to write McGovern up here for increase particles?

A I would like to see the study, the article first.
Q You've reviewed and relied on it, correct?
A That's correct.
Q Well come back to McGovern. I'm asking this because I don't know the answer. Do you know if Dr. David testified that the Bair Hugger increases particles over the surgical field?
A Is it a testimony in this trial?
Q Deposition, report and testimony at trial?
A No.
Q Do you know that Dr. Bowling did?
A No.
Q Do you know that Dr. Borak did, 3M's expert?
A No.
Q Based upon your CFD and your research you have not concluded that the Bair Hugger does not increase particles over the sterile field, true?
A I'm not offering that conclusion.
Q You know that bacteria carried - I'm sorry, that particles can carry bacteria, correct?
A Yes, some particles can carry bacteria, I agree.
Q So as to the issue of whether or not the Bair Hugger can carry particles that may have bacteria into the sterile field, you just don't have an opinion on that one way or the other, fair?
A Well my opinion is that the Bair Hugger does not

disrupt downward airflow in an operating room. I've visualized from my own experiments that I have observed no particles over the sterile field through the operation of a Bair Hugger but I'm not offering opinions about particles.

Q You have not concluded that the Bair Hugger does not increase particles over the sterile field, correct?

A That is not an opinion I'm providing.

Q Right. So you're not going to say that the Bair Hugger does not increase particles over the sterile field, right?

A Correct.

Q And do you know that some particles carry bacteria, correct?

A I know that it is possible for particles to carry bacteria.

Q So you do not have the opinion that the Bair Hugger does not increase particles that carry - could carry bacteria over the sterile field, correct?

A I'm not offering that opinion.

Q So on this issue up here of increased particles or decrease, that's not you? I apologize. I don't mean to be rude, but just initials because I'm a little bit out of space. I'm going to put J.A. for Jonathan Abraham, correct?

A I don't quite know what you're doing here so could you maybe explain it?

Q Sure. I'm saying these folks and we can put McGovern but we'll come back to it, have all said that there's an increase of particles with the Bair Hugger over the surgical field. You understand that, right?

A Under the scenarios that they're describing, that's how they report it.

Q And you read in Al Van Duren's deposition that they agree. So I can put 3M ...

MR. BLACKWELL: Objection, Your Honor, lack of foundation and Counsel's testifying.

THE COURT: Sustained.

Q You've read Al Van Duren's deposition, correct?

A I've read portions of Al Van Duren's deposition.

Q Right cause 3M only gave you certain pages, right?

A 3M only provided part of it and I read part of it.

Q The part you read was shown to you in your deposition. You saw the part where Al Van Duren said "Every single study shows an increase of particles over the sterile field," correct?

A I've got to say I don't remember that as an exhibit. In my deposition it's possible it was. I just don't remember.

Q It was played via video in your deposition. Does that help refresh your recollection?

A I don't think it was.

Q I'll find it.

A I mean if it was then my apology. I don't recall

seeing a video of Al Van Duren's deposition during my deposition.

Q As to the issue that we've just discussed, whether or not the Bair Hugger increases particles which can carry bacteria over the sterile field, you do not have an opinion on that, correct?

A I am not offering an opinion on that.

Q So maybe a question mark is not the right thing. Not applicable, would that be better?

A I don't think that that would be better.

Q Question mark better?

A I mean. I don't want to quibble. I don't know what not applicable means in this context. I'm not trying to be combative. I'm just a little confused by what is intended.

Q You are not offering your CFD as evidence of what happens in Ms. O'Haver's OR, correct?

A Correct.

Q You have seen no evidence that the Bair Hugger in Ms. O'Haver's surgery did not disrupt airflow, correct?

A That's correct.

Q You're not opining that the Bair Hugger does not increase particles over the surgery site in Ms. O'Haver's operating room, correct?

A That's correct.

Q You have not calculated the disruption caused by any

sources in Ms. O'Haver surgery, correct?

A I did not calculate.

Q You have no opinion as to how the one door opening disrupted airflow in her surgery, correct?

A I disagree with that.

Q Would you look at your book at Tab 4, page 279, lines 17 through 21. "Question: Do you have an opinion with a reasonable degree of professional certainty of how much, how much disruption of airflow in the O'Haver operating room was cause by the door opening and closing?" And your answer was "No." Correct?

A I apologize. I was on page 280. And my apologies.

Q 279, I'm sorry.

A No, it was my fault.

Q I started reading too fast. I thought you were there. Lines 17 through 21.

A Yes, I'm there.

Q "Question: Do you have an opinion with a reasonable degree of" medical, I'm sorry, "professional certainty of how much, how much disruption of airflow in the O'Haver operating room was caused by the door opening and closing?" And your answer was "No." Correct?

A Yes, that's correct. And what I mean by that is I didn't quantify it but it's my opinion a door opening is a significant disruption.

Q There is nothing in your report on the impact of ...

MR. BLACKWELL: Your Honor, an objection just on the rule of completeness. And I would ask that lines 3 through 6 also be read on page 280.

MR. FARRAR: Can we approach, Your Honor.

THE COURT: Sure.

(BENCH CONFERENCE.)

THE COURT: And you want read ..

MR. BLACKWELL: Just on page 280, lines 3 through 6 where he talks about opening doors and all of them direct, the caveat.

THE COURT: I think that if you're going to talk about his answer it needs to be the complete answer. The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Abraham, we'll keep reading. The next question on 279. "Do you have an opinion with a reasonable degree of" medical certainty, "of professional certainty how much did people coming in and out of the operating room during Ms. O'Haver's disrupt the airflow during the surgery?"

You say, "The answer is no." And you say, "I just want to add a caveat to all these answers. It's my opinion they all disrupted the airflow but no one in this case has quantified how much."

A Yes and can I comment on that?

Q You can whenever Mr. Blackwell asks you further questions.
A Okay.
Q You don't know the size of the lights that were used in Ms. O'Haver's operating room, correct?
A That is correct.
Q You don't position or the power?
A Correct.
Q You're aware of no study that links lights in an operating room with surgical site infections, correct?
A Could you restate your question please?
Q Are you aware of any study that shows an increased risk of surgical site infections based on lights?
A No. I have discussed articles that relate surgical lights to severe disruption of airflow but I don't think any of them quantified how much more likely that makes an infection.
A It came from a research institute in Berlin.
Q It wasn't part of a published article, right?
A I don't know if it was or not.
Q 3M's counsel found it for you, right?
A No.
Q But you don't know where it came from but you found it?
A I found it.
Q The airflow, that disruption shows all above the

sterile field, right?

A Excuse me?

Q The description that was shown in the video was all above the sterile field, right?

A The disruption caused by a light is where the light is so it would be underneath the light. And if the light is in the sterile field then it would be in the sterile field.

Q The lights are up here in an operating room?

A Lights in an operating room are adjustable so they're moved around.

Q Would it make any sense for somebody to put a light underneath the operating room table like this, does that happen in surgeries?

A No, I've never heard of that.

Q Right. The point is the light causes a disruption in the sterile field, not in the dirty field, right?

A Oh, yeah. Let me try to explain it.

Q I don't need an explanation. I need an answer to the question. Does a light cause disruption in the sterile field?

A It causes disruption above the surgical site. But if there are bacteria about the surgical site the light will trap those bacteria and keep them in the surgical area.

Q The idea of the unidirectional flow is to make sure that there's not bacteria in the sterile field, that's the theory idea, correct?

A Correct.
Q So if we're causing turbulence up here, that's not nearly as dangerous as if we have turbulence down here that's bringing things back up into the sterile field, that's a fair statement, right?
A I disagree with that statement.
Q You think it is more dangerous to have disruption up here where there's very few bacteria than it is to have disruption down here where there's a lot of bacteria and bringing it back up to the sterile field?
A Absolutely. And the published literature agrees with me.
Q You're not a medical doctor, correct?
A I am not.
Q And I know there was a slip of the tongue but there was a question asked earlier, are your opinions to a reasonable degree of medical probability and you said yes. That's not true, correct?
A I meant to within a reasonable degree of scientific certainty and apologize if I said that.
Q Sure. You were just answering yes to the questions, right?
A I may not have misheard or I may not have been paying attention and my apologies.
Q You don't have an opinion with a reasonable degree of

professional certainty of how much the lights in the O'Haver operating room disrupted the airflow during her surgery, fair?

A I do not have an ability to quantify it. I know they disrupted the airflow but I have not quantified it.

Q I want to talk a little bit the Bair Hugger set up that you showed the ladies and gentlemen of the jury. One of the things you talked about was the Bair Hugger has obviously holes in it, right?

A That's correct.

Q Do you know how big those holes are?

A I think they're approximately a 16th of an inch.

Q Okay, a lot bigger than say 10 microns, right?

A They are bigger than 10 microns.

Q Not even close, way bigger?

A Well I'd say they're a lot bigger.

Q They're big enough to see, right? You can see the holes?

A Yes, I agree.

Q Can you see bacteria?

A No, you can't.

Q Can you see 10 microns particles?

A I can't.

Q Can anybody without the use of a telescope or microscope?

A Well a telescope is not going to help you but a

microscope might.

Q Without a microscope you can't see it, correct?

A I will say this. I cannot see a 10 micron particle.

Q When somebody has this Bair Hugger on their body and they're in the surgery, you understand that there are drapes and sometimes cotton blankets placed over the top of them, correct?

A Yes.

Q And that's to sort of keep that heat under the person, correct?

A Yeah. It's also meant to keep the blanket connected to the person and adjacent to the person.

Q And one of the things that blanket does is because when the Bair Hugger's on air is being pushed out of this hose into this blanket constantly, correct?

A That's correct.

Q And the air is going nowhere other than out of these holes, correct?

A That's correct.

Q But if you keep pumping air under the body and under those drapes it has to go somewhere, right?

A That's right.

Q And, I think you said and you agree with that one of the places it does is hot air comes from under the drapes, correct?

A I think I said some hot air can get - will get under

the drapes.

Q And then come out from the side from underneath the drapes, correct?

A Well hot air will emerge from under the drapes.

Q That's close to the floor, correct?

A No because the anesthesia drape is high. So the majority of the heat emerges from where the anesthesia drape is. In fact, that's confirmed in the study that you pointed out which is Exhibit 97.

Q The question I was asking maybe you forgot. Does hot air come out from the drapes that's near the ground?

A No. Well the vast majority of the hot air emerges by the head of the patient which is where the anesthesia drape slants upwards and that's because hot air rises. When you heat up air, it wants to rise and it hits that drape and it rises.

Q The boundary conditions you used for your CFD were given to you by a Mr. Chan from 3M, correct?

A No.

Q You used them to confirm your boundary conditions, correct?

A No.

Q We'll come back to that. Let's get through this first. You know who Mr. Chan is, right?

A He was.

Q You know that Mr. Chan did a CFD, correct?

A I haven't seen a CFD. I've heard but I have not seen a CFD by Mr. Chan.

Q You weren't participating in it?

A No.

Q You know a CFD was done internally at 3M?

MR. BLACKWELL: Objection, Your Honor. May we approach.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I object. This is deliberate. We've had a hearing on this whole issue of adverse inference. He is attempting to have the jury draw an adverse inference from the fact that Mr. Chan was part of a CFD done at 3M. We discussed this and he's going there anyway deliberately.

MR. FARRAR: It's directly in Mr. Issa's testimony that's been played to the jury and was read.

THE COURT: I ruled on this, Mr. Farrar. I ruled on this. I said that that was not coming in. Your side made an offer proof and you've just violated that. Whether it's in evidence or not is irrelevant. It would appear to me as though you just blatantly disregarded the Court's ruling by bringing that up. That's what it appears to me. The objection is sustained. Move on.

(RETURN TO OPEN COURT.)

Q The jury was asked to come put their hand under this

and feel the air that comes out. You recall that, right?

A Yes.

Q Now the ambient air in this courtroom is significantly warmer than the ambient air in an operating room, fair?

A It depends on the operating room. The air in this room would be warmer than some operating rooms, I agree.

Q Warmer than an operating room that typically does ultraclean surgeries like orthopedics, correct?

A The temperature in those operating rooms is typically around 60 degrees.

Q To be fair, you're not an expert in operating room design, correct?

A That is correct.

Q You're not an expert in designing HVAC systems for operating rooms, correct?

A That is correct.

Q You're not an expert in medical device warnings?

A Correct.

Q You're not an expert in particles in high-speed flows, correct?

A That is correct.

Q You're not an expert in particles in low-speed flows, correct?

A I don't know if I'd agree with that. I don't think I agree with that.

Q If you look at Tab 1 which is a deposition you gave in 2017, page 246, line 6. The question: "Would you consider yourself an expert in low particles in low-speed flows?"

And your response is "Probably not." That's what you said in 2017?

A Yes, that's correct. I did say that in 2017.

Q You're not expert in infectious disease?

A I'm not.

Q You're not an expert in orthopedics?

A Correct.

Q You're not an expert in filter manufacturing?

A I'm struggling with that because I have designed filters. I wouldn't put myself out as an expert in filter design.

Q You're not expert in medical device design, correct? Not in this case anyway, correct?

A I consider myself an expert in medical device design.

A That is correct.

Q So you said the ambient temperature in an OR is around 60 degrees?

A Yes, yes.

Q So significantly cooler than we're in right now in this courtroom, right?

A I think this courtroom might be about 70 Fahrenheit. I wish I'd brought a thermometer.

Q You're pretty close, Doctor. That says 71, 11 degrees difference.

A Yes.

Q I asked you this question and I just want to make sure I asked it right. If I turn this on every bit of the air that comes out of this hose if connected to a blanket will come of those perforations, correct?

A That's the intent of the blanket.

MR. FARRAR: I'd like the jury to come and feel how much air is coming out of the hose.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: Folks, why don't we just do a repeat. You guys can kind of come down and no commentary during this process, Mr. Farrar. Okay, if everybody has done it, you can go ahead and have a seat. Okay, back row.

Q Thank you. You know, Dr. Abraham, that one of the other things this machine does while sitting on the floor is suck up whatever is blowing, right?

A The air intake is on the bottom of the machine.

Q And the area that the Bair Hugger typically is in is not the sterile field, correct?

A I would agree. I would agree with that.

Q You agree that the pieces of paper that I just showed are significantly bigger than 10 microns, correct?

A The pieces of paper on the bottom of that machine are

larger, significantly larger than 10 microns.

Q They weigh more than a 10-micron squame, correct?

A I agree.

Q I want to talk to you about your CFD. Before we do, you mentioned to the jury we sort of glossed over earlier that your paper was published, correct?

A Correct.

Q And, I asked you the question was it peer-reviewed or the equivalent. And the truth is there was no independent blind peer-reviewer looking at your paper, correct?

A Not correct. I didn't agree with you. I said it was peer-reviewed and I agreed with you that it was not a double-blind review. It was peer-reviewed by a man named Professor Minklewist, correct?

A Correct.

Q You understand that the article that it was published in, I'm sorry, the journal has requirements that for articles they must be peer-reviewed? You understand that, correct?

A That is correct.

Q And they must be peer-reviewed by a double-blind peer-reviewed by expert referees, correct?

A That's how a double-blind review happens. But an editor-in-chief has the prerogative to do an editor review and that's what happened with my paper.

Q I'm showing you what I've marked as Exhibit 456. Do

you recognize this as the instructions for authors for the ASME Journal of Heat Transfer, the journal that your paper was published in, correct?

A That is correct.

Q And you've seen this before and reviewed it, correct?

A I have.

Q And you understand what the peer-review process is, correct?

A Yes, I do.

MR. FARRAR: Your Honor, I would ask to display this for demonstrative only.

MR. BLACKWELL: No objection, Your Honor, for demonstrative purposes.

THE COURT: 456 may be published for demonstrative purposes.

Q And just so we're clear, this the *Numerical Heat Transfer, Part A: Applications.* From the part I just read it says, "Once your paper has been accessed for suitability by the editor," that would be Professor Minklewist, correct?

A Correct.

Q "It will then be double-blind peer-reviewed by expert referees," correct?

A Yes, that's what it says.

Q So that's the standard for the journal?

A That's what it says here. But editors-in-chief have

the prerogative to do the review on their own.

Q Just to be clear, it's says, "Once your paper has been assessed for suitability by the editor." So that part is sort of built in, the next step is the double-blind peer-review, correct?

A For a double-blind peer-review, I agree.

Q You also know that the same journal has - what's the right word, ethical considerations for who gets to review people's papers based on their personal or professional history with each other, correct?

A It may.

Q I'm handing you what I have marked as Exhibit 457. Do you recognize Taylor and Francis as the publisher for the ASME Heat Transfer Journal?

A I do.

Q And you see there's a review of bias and conflict of interest part, correct?

A I see that.

Q And you know that applies to articles that are published in the ASMD Heat Transfer, correct?

A Correct.

MR. FARRAR: Your Honor, we would ask to publish 457 as demonstrative.

MR. BLACKWELL: No objection for demonstrative purposes.

THE COURT: 457 may be published for demonstrative purposes only.

Q Under *Review of Bias, do* you see that?

A Yes.

Q It says, "To ensure a fair review is carried out potential reviewers should be reviewed to identify the possibility of any conflicts of interest which may lead to bias. For example, reviewers authored history in institutions should be observed to discover whether there have been a recent collaborator or work at the same organization as the author. Preferably the reviewer should not have worked with the author in the last three years." Did I read that correctly?

A You did.

Q You have published 20 to 30 articles with Professor Minklewist?

A I have.

Q That would be a bias and a reason that your paper should be peer-reviewed by a double-blind peer-review by people you don't know, fair?

A Well it's a potential bias. But the editor-in-chief, he's an expert in this area and he did an interview himself and it was not a double-blind review.

Q A potential bias that wasn't disclosed, correct?

A Disclose to who?

Q The reader.

A I think when an editor accepts a paper, it's not marked on the paper.

Q The truth is you called in a favored of Professor Minklewist to have your paper published without being peer-reviewed, correct?

A I disagree.

Q You know that your paper was published merely weeks after it was submitted, right?

A I don't recall how long. I believe it was a number of weeks. I don't recall the exact duration.

Q Does a little over three weeks sound about right?

A I don't recall.

Q I'll show you what I've marked as Plaintiff's Exhibit 454. Do you recognize this as a letter from Professor Minklewist to yourself saying that your article is going to be published despite not having been double-blind peer-reviewed, correct?

A Yes, that's right.

Q And the date of that is May 31st of 2017?

A Yes.

Q Flip the page. Do you see the manuscript date details, date received?

A I do.

Q 5/4/17, correct?

A Yes.

Q So we're talking about 27 days from the date it was received to the data it was published, correct?

A Yeah, that sounds right.

Q You testified it was sort of the kind of a long question about whether or not 3M had any influence on the publication or whether it was published or reviewed and all that, correct?

A Correct.

Q And you said no, they had no input on the decision to publish, correct?

A I don't remember the exact line of questions. They definitely had no role editing it or providing content. But I think they agreed to let me publish it but that's the extent of it.

Q You agree that if 3M had any role in editing it, that would be inappropriate?

A I mean it depends. If they found a typographical error or if they found an error that I put in the paper and helped me correct it, that's actually a good thing. If they made me change my opinions, that would be a bad thing.

Q Right, if they made any substantive changes, that would be unreasonable and bad science, correct?

A It would depend on the changes but they did make substantive changes.

Q Back to the question I originally asked you. The

question that you were asked and that you answered affirmatively was "Isn't it true that 3M had no role as to whether or not this paper would be published or not?" Do you recall that?

A I don't recall the exact question. But the only role 3M would've had would - the only role 3M would've had would have been letting me publish it. And that's basically due to any proprietary information that they didn't want to get out.

Q I'm handing you what I've marked as Exhibit 438. Do you recognize this as a research proposal that you drafted for your school St. Thomas University?

A I do.

Q And this is specifically regarding your work that was done that was ultimately published, correct?

A That is correct.

MR. FARRAR: Your Honor, we'd offer 438 into evidence please.

MR. BLACKWELL: No objection, Your Honor.

THE COURT: 438 is received.

Q We're going to zoom out so we see a little bit to review. This is dated October 18, 2015. Do you see that?

A I do.

Q And you signed it at the bottom?

A I did. No, I didn't sign it.

Q You put your name - this is your work, correct?

A Yes, this is my - I prepared this document.

Q You drafted it and submitted to the higherups at the University of St. Thomas, fair enough?

A I believe I drafted this entire document.

Q I want to zoom in and talk a little bit about different parts of this. On Task 5 is the part I want to look at now. You say, "It's optional. Pending approval of 3M submit the findings for publication in a peer-reviewed scientific journal." I read that correctly, right?

A You did.

Q So the optional part is whether or not you were going to publish it, correct?

A Right. The publication was optional. That's a task that I put in every single contract that I write with companies. But you're right, that's an optional task.

Q So 3M is going to have the right to approve or not approve whether or not you will publish that, correct?

A You would have to - pending approval of 3M I could submit a paper. This is boilerplate info that I put on every contract that I sign. But they had no role in editing the document or writing it or providing any analysis.

Q They had role as to whether or not you could publish it though, correct?

A Well I wrote here pending approval of 3M, I would submit my findings to them.

Q So the answer to my question is yes?

A Yes, the answer is yes.

Q So they had a role to decide whether or not you were going to publish it before you published it. And they obviously saw the work before you gave it to them or before you published it, correct?

A No, they didn't.

Q They didn't see the work? It's your position they never saw your work before you published it?

A They did not see this manuscript. They did not see this manuscript before I published it.

Q They didn't see your work before you published it?

A Well they saw the CFD model that I created that was shown but they didn't see other work that was in the paper.

Q You know that work was produced before you ever published it, right?

A What do you mean?

Q We'll come back to it. It's your testimony that - let me ask you a different way. 3M was fully aware of the work that you did and the results before you published the paper, correct?

A They were aware of some of it. They were not aware - I don't believe they saw a copy of the paper. I'm actually looking for the paper. I don't believe they saw a copy of this paper before I submitted it. They did not see all the results before I submitted it. Clearly, the work had to be done before I submitted it but I don't believe they saw any of this work

before I submitted it. In fact, I can confirm that there's results in here they did not see.

Q I want to ask you a couple of other questions. Task 3 you say "Compare the results to flow visualizations experiments performed on October 17, 2015. Also, compare the thermal results to temperatures measured on October 17, 2015."

That October 17, 2015, that work is the work that was sort of your fog study, correct?

A Yes, that's correct.

Q The ones you called the validation, right?

A Correct.

Q This proves you did the validation significantly before you did the actual CFD, correct?

A Well let's see what date this was written. Yes, the experiment was done first and then the calculations were done.

Q The validation was done before the experiment?

A No, you're misunderstanding. The validation is the comparison between the experiments and the simulation. You can do them in either order. I did the experiments first and then I did the CFD.

Q You did the validations before you did the actual thing you were trying to validate, correct?

A No, I think you're misunderstanding. The validation is when you compare an experiment with calculations. The validation is not just an experiment.

Q The jury can decide that. Regardless, the validation was done after the experiments? We know that for fact, correct?

A The validation was done after the experiment. The validation is the comparison of the calculations with the experiment.

Q I'm reading this top paragraph. "The intent of the project is to predict flow patterns." The project being the CFD, correct?

A Yes, that's right.

Q "To predict flow patterns and temperatures within an operating room under a variety of operating conditions and with/without a forced convection warming blanket." I read that correctly, right?

A Yeah, you did.

Q You did not do that, correct? You never actually showed the CFD without the Bair Hugger on?

A I disagree.

Q Turn in your notebook if you would to Tab 3, page 1851, line 24. "Question: You never compared the Bair Hugger off to the Bair Hugger on, correct?"

Response: In this expert report, I did not." I read that correctly, right?

A Can you just remind me what line you're on? You're at page 1851.

Q Line 24.

A Line 24. "You never compared the Bair Hugger off to the Bair Hugger on, correct?

In this expert report, I did not." But I did in this paper. So in this journal paper I actually looked at on and off.

Q You showed the CFD to the jury a minute ago, right, before lunch?

A Yeah, that's right.

Q You never showed what the effect of the Bair Hugger off was, correct?

A That's correct. In that video the Bair Hugger was on.

Q If we want to determine the effect of the Bair Hugger on whether it heats particles or air we have to know what it's doing when it's on when it's off, correct?

A If we want to compare a Bair Hugger on versus a Bair Hugger off we would have to do Bair Hugger on and Bair Hugger off as was done in this paper.

Q You're not quite answering my question. If we want to know the effect of the Bair Hugger on either air or particles in the operating room, one of the things we'd have to do is test it with the Bair Hugger on versus the Bair Hugger off, correct?

A If you want to compare the effect of the Bair Hugger versus on versus off then you'd want to compare two cases. I agree with that.

Q All right. So if I'm trying to figure out if the Bair Hugger could possibly cause a surgical site infection for

instance, I would want to test the Bair Hugger on versus the Bair Hugger off, correct?

A No, that's not correct. So first of all, the experiments were done with the Bair Hugger on and off and that is a comparison. In the CFD that was shown I was asking a very different question. The question I was asking was can the Bair Hugger interrupt downward laminar airflow?

A So for my expert report for this case I think we need to simulate the Bair Hugger off. I did the Bair Hugger off in this journal paper but this wasn't submitted in my expert report.

Q Right. It's not something you're prepared to talk to the jury about here today? It's not in your report?

A Well it's cited in my report. I mean, I guess I'll answer any questions you have.

Q Your CFD is not a predictive calculation, correct?

A No CFD is a predictive calculation.

Q Well it's predictive if you can have the difference between one on and one off like Dr. Elghobashi did, correct?

A Well Dr. Elghobashi's CFD is not predictive of what could happen in an OR.

Q Does Dr. Elghobashi's CFD show what happened with the squames when the Bair Hugger is on versus when the Bair Hugger is off?

A For his set up, he does.

Q And you've seen that, correct?
A Is it something you've relied on and looked at to from the opinions you've given in this case, correct?
A Yeah, that's correct.
MR. FARRAR: And, Your Honor, I want to play both the Bair Hugger on and off in Dr. Elghobashi's CFD in 1443 and 1444.
MR. BLACKWELL: No objection, Your Honor.
THE COURT: You may proceed.
(EXHIBITS 1443 AND 1444 WERE PLAYED.)
Q The left is off and the right side the Bair Hugger is on. So you understand what Dr. Elghobashi did was he compared the Bair Hugger on versus the Bair Hugger off in is expert report, correct?
A Yes.
Q The paper that you talked about that you wrote, you had two other authors, correct?
A Correct.
Q And, I'm not going to - you told me, how do you say the first name, Plourde?
A Plourde.
Q Plourde and Vallez. They were undergrad students?
A Brian Plourde was not. I believe he at that time had completed his master's degree. He might've still been getting it. And Lauren Vallez was at the time an undergraduate student.

Q You understand that the co-authors in Dr. Elghobashi's study were either already had their PhD or were obtaining their PhD, correct?

A That is my understanding.

Q St. Thomas does not have a PhD degree program, correct?

A Correct.

Q So nobody in St. Thomas can get a PhD. You're not teaching PhD level students, correct?

A Not at St. Thomas.

Q How many professors at St. Thomas are there?

A This is going to be sort of a guess or an estimate, maybe 30.

Q Thirty full-time professors in the engineering department?

A Well it's a little complicated because we have an undergraduate program and a graduate program. We also have data science which is under engineering. And we also have a lot of adjuncts. So to be honest with you, I don't know how many professors we have.

Q About a dozen, correct?

A In maybe mechanical and electrical combined it might be a dozen, but I think we have significantly more than that in our graduate program.

Q Your CFD you said took about 40 days on the computer

you used, correct?

A That's correct.

Q You understand Dr. Elghobashi's was about 2 million computer hours, correct?

A That's my understanding.

Q And you have access to a supercomputer, right?

A Yes.

Q You've seen the Stampede supercomputer that Dr. Elghobashi used, correct? You've seen pictures of it?

A No, I haven't.

Q Maybe you don't recognize it but do you recognize this as a Stampede supercomputer that Dr. Elghobashi used?

A It might be. I take your word for it.

Q But you understand it takes up full rooms, correct?

A Yes, supercomputers can occupy a full room.

Q It can take like a hundred million dollars just to cool a year, correct?

A A hundred million dollars to cool. That sounds a bit high.

Q I want to talk to you about your CFD. We sort of started and then got sidetracked. There's five things I want to talk about. Boundary conditions, particles, deleting files, simulation time and errors.

So we'll start with boundary conditions. I asked you earlier did you get the boundary conditions from 3M and I want

to look back at Exhibit 438.

In the paragraph that begins with – it says, "In order to complete these tasks," do you see that? Is says, "In order to complete these tasks we will require a correctly dimentioned CAD geometry of the operating room and temperature flow rate conditions of Bair Hugger forced-air warming system," correct?

A That is correct.

Q You got that information from Mr. Chan, correct?

A I got a CAD file from 3M. I don't know who that was from. And I actually had – I was able to determine the temperature and flow rate conditions of the Bair Hugger device myself.

Q I'm going to hand you what I've marked s Exhibit 1669. It's already into evidence. This is a memo from Mr. Chan and others regarding boundary conditions for a CFD, correct?

A Can I ask you to show me where you're focused on?

Q Really the whole document and we're going to sort of go through it part by part. Let me ask you this question instead. 3M gave you this memo for you to use to set your boundary conditions, correct?

A I do not – I don't recall this memo. I don't recall using this for my boundary conditions.

Q Let me ask you a better question. Did you use this to confirm your understanding of the air flow going through the Bair Hugger?

A Well I knew the air flow going through the Bair Hugger because I worked on it. And it turns out the values that I see highlighted here are very close. They're not exactly the same as what I used but they're close to what I used.

Q Would you agree with me that that document is something that you used to confirm your understanding of the boundary conditions of the Bair Hugger?

A I don't recall confirming my understanding with this document.

Q Could you go to your notebook please, Tab 1, page 303 starting at line 15. The question is "Okay. And this is the document where in which you obtained your initial boundary conditions with respect to the fast flow.?"

Your response: "Initial and boundary conditions don't go together.

Question: I'm sorry, your boundary conditions."

And the answer: "This is a document which confirmed my understanding of the boundary condition for the Bair Hugger. So I would say it confirmed my boundary conditions."

Did I read that correctly?

A Yes, you did.

Q Does that refresh your recollection that this exhibit is what you used to confirm your boundary conditions for your test?

A Well my memory is that this and this is discussed

elsewhere in this deposition. I knew the boundary conditions. And this document had similar, not exactly the same but similar boundary conditions. So in that sense it confirmed the values that I used.

Q So the point being is you clearly received this document whenever you were doing your work on your CFD, correct?

A I don't believe that's the case.

Q How could you use it to confirm your boundary conditions without getting it?

A Well I could have received this after I did my CFD. I don't recall when I received this document.

Q You did receive the document?

A Well I clearly was discussing it at this deposition so I definitely saw it at the deposition.

Q You'd reviewed it before the deposition, correct?

A I may have. I just don't recall. What year was this? Five years ago? I don't recall when I received this document.

Q Page 303, same page if you would, line 8. Exhibit 9 is a document titled with the Bates number Wagner zero basically 13. That's the document you have in your hand, correct?

A Yes.

Q All right. "Have you received this document before?"

A What line are you on?

Q Eight through 11.

A Yeah, yes, that is what I said. So that confirms my

recollection or that refreshes my recollection.

Q Right. You weren't trying to confirm it. You were just trying to say you weren't sure. But now sitting here you know you actually received this document from 3M when you were doing your CFD work, correct?

A No, what it says is have I received this document before and I agreed yes. I just don't remember when.

Q You testified, sir, that it confirmed your understanding of the boundary conditions of the Bair Hugger, right?

A That is correct.

Q Would you have confirmed your conditions of the the boundary conditions of the Bair Hugger years after you did your work?

A Well this wasn't years after I did my work. I mean here's what I'll say. I may have – I don't remember when I first received this document. I may have received it. I just don't remember when I received the document.

Q At some point in time after the document was created and before your deposition in 2017 somebody at 3M gave you that document, is that fair?

A I don't remember when I first saw this document.

Q That wasn't my question. My question was sometime after the document was drafted before your deposition in 2017, somebody at 3M gave you that document, correct?

A They may have and they may not have. I just don't remember. I mean this is a document from 2015. I just don't recall.

Q You know Andrew Chan, correct?

A I do.

Q He's was actually in the trial studies. He was actually in them, correct?

MR. BLACKWELL: Your Honor, I'd object to this. It's just repetitive.

THE COURT: Overruled at this point.

Q You agree that if the boundary conditions are incorrect and your model is wrong?

A Yes.

Q You used the term trash in, trash out, correct?

A I think I said garbage in, garbage out but that's the same meaning.

Q And one of the boundary conditions is where the waste heat from Bair Hugger goes, correct?

A I agree.

Q You had 100 percent of the waste from the Bair Hugger going out the head and neck are of the patient, correct?

A That is correct.

Q So you had zero, not a single part of heat going down the drapes and outside from underneath the drapes, correct?

A That's correct but let me clarify. Drapes go to the

floor. It is my view from my experience with bouyant flow that hot air rises. And if there's warm air under the table it leaks out from the sides. Hot air does not go down and then turn around and come back up. That's my opinion.

Q We turned this hose on earlier today and just kept pushing air and I asked you, when this is on, air is coming out of there, correct?

A That's correct.

Q And air has to go somewhere, correct?

A Correct.

Q And what you told the jury then was hot air comes from under the drapes, correct?

A Correct.

Q So if this thing is on and it's just constantly blowing hot air, that hot air has is to go somewhere, right?

A Correct.

Q And it can be pushed down or it can be pushed up depending on the geometry of the room and what's holding it together?

A No, I disagree.

Q You don't think that this could be pushed down, right?

A When the hot air comes out of that blanket it is bouyant. It's like a hot air balloon and it will rise. Hot air does not go down on its own. Heat rises. It's an adage that is true. Heat rises.

Q If I turned this on with hot air, I don't put a blanket on it and I put it down there, heat's going to go down, right?

A In this case with the hose pointed towards the ground, the air will go down through the hose.

Q Right. So somebody's drape - the air can't go up and it's going to get pushed down, correct?

A But that's not how the device is used. You don't have a hose that points to the ground so I'm a little confused.

Q Take the hose out of this. If you have drapes that are covering the person and they're going all the way down to close to the floor and you keep pumping hot air in, that hot air is going to get pushed down the drapes, correct?

A Absolutely not. What happens is by the patient's head there's what's called an anesthesia drape which goes up at an angle. And the hot air rises underneath that anesthesia drape into the room and that's confirmed by the study that you've provided me here.

MR. BLACKWELL: Your Honor, may we approach.

THE COURT: Yes.

(BENCH CONFERENCE.)

MR. BLACKWELL: Judge, I'm a little concerned about the timing. My concern is that Mr. Farrar is going to run the clock so I won't have to time to do my redirect at all but that's the goal that we hoped to get this

witness off.

THE COURT: Unfortunately, I think this witness has to come back tomorrow because you had 120 minutes on your direct and we're at 94 minutes and we have less than 15 minutes left. So Counsel is going to have some additional time tomorrow. He's going to have to come back tomorrow regardless.

MR. BLACKWELL: All right.

(RETURN TO OPEN COURT.)

Q Professor, I'm handing you what I've been marked as 2252. Do you recognize this at least as a clip of a still from your CFD?

A It appears to be so.

MR. FARRAR: Your Honor, can I publish this for the jury and move for demonstrative.

MR. BLACKWELL: No objection.

THE COURT: 2252 is admitted for demonstrative purposes.

MR. FARRAR: It's 2252.

THE COURT: You may.

Q And the reason I'm putting this up, Dr. Abraham, is I want the jury to understand. You're showing in your boundary condition where you put in every single bit of heat coming out of the head behind the patient, correct?

A That's correct.

Q Not a single - not a single bit of heat coming down the drapes, correct?

A That's correct.

Q The drape that you have is a significantly shorter than what a real drape would be in a surgery, correct?

A Well just to be clear, I consider the anesthesia drape part of the drapes so I do have air under the drape. But I have the heat coming out by the head of the patient because that's where the heat comes out.

Q You know, sir, that is inconsistent with the memo that was provided to you by Mr. Chan, correct?

A I don't know that.

Q If you would go to the second page, the last paragraph. "For the upper body Model 522 with one side rolled up a mass flow rate of .0237 kilograms per second was calculated and used as an inlet condition." To be clear, what an inlet condition means is actually blowing out of the Bair Hugger, correct?

A That's correct.

Q "An inlet condition for the area around the arms in the OR CFD model," correct?

A Correct.

Q And that's what you had, right? So you had one side rolled up, that's the patient on the side with their arms like this, correct?

A Correct.

Q So Dr. Chan was showing an airflow rate around the arms in the OR, correct?

A That's correct.

Q That's what he determined is the correct way to do it, correct?

A Well I think you're mixing apples and oranges. That's where the air comes out of the blanket. Remember, the blanket is sitting on the body. So you have this - the body is bathed in warm air. How does that air get from your body to the way it oozes upwards because it has to go up? Hot air rises. So I think that you're just mixing apples and oranges.

Q It says, "In the OR CFD model," correct?

A That's right.

Q So he's saying in his OR CFD model he's showed air coming out of the arms?

A Where does he show that?

Q In the paragraph I just read.

A No, I think you're misinterpreting it. What he is saying is he has an inlet condition that is around the arms which would be in this area. And what I'm saying is hot air that's here will then want to rise.

MR. FARRAR: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: Your Honor, I want to be able to show him Mr. Chan's deposition where he testifies the air comes out of the arms, not at the head neck. And he says 100 percent out of the arms, none at the head and neck. It doesn't have anything to do with a privilege or anything like that.

The boundary condition that he used are just completely different than what folks who manufactured the product used. So I think that's fair game to be able to impeach him with.

MR. BLACKWELL: It's really not fair game in the sense that is not part of his reliance materials. He pulls out a deposition of Andy Chan and I have to stop to read the entire thing to make sure it's being quoted accurately, that it's in context and the witness would have to do the same thing. He wouldn't be able to get a pair of scissors and quote what he wants and we'd have no way of being able to address it.

THE COURT: I don't think that this witness has indicated that he has read Andrew Chan's testimony, is that correct?

MR. FARRAR: We just took it about two weeks ago, Your Honor so --

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q Dr. Abraham, would you defer to what Andrew Chan says where he believes the air comes out of the Bair Hugger?

A No. I know a lot about Bair Huggers and a lot about CFD. I would refer to my own judgment but I don't see a disagreement in this document and what I did.

Q You don't think that Mr. Chan in this document shows air is coming out of the arms?

A The air is not coming out of the arms.

Q You know what Schleieren Photography is, correct?

A I do.

Q Would you turn to page 7 of 17? Do you see Figure 8?

A Yes.

Q Schleieren is a way to determine airflow, correct?

A Schleieren can be used to determine airflow patterns. I don't know if it can be used to measure airflow but it can show patterns.

Q Figure 8 says Schleieren Photography and right below that it says, "The air emitted out of the end of a rolled-up blanket simulates when the blanket is wrapped around the arm of a patient tied to the arm bar. This shows that the air rises upward upon exiting the end of the rolled-up blanket. Typically, this end is draped off." I read that correctly, right?

A That is correct.

Q So if the end is draped off and more air keeps getting

pushed in there, that air is going to go down the drape, correct?

A No, hot air rises. Heat rises. So the hot air - if I had some hot air in my hand that air wants to rise. And if there's a barrier above it, it will hit the barrier and go along the barrier. Hot air does not on its own - pretend that this is an incense stick. The smoke from the incense goes up. The smoke from the incense doesn't go down to the floor and then turn around. So I think you're misinterpreting what this document says.

Q It is if it's forced down just as if I turned this on and put the hose down, that hot air is going to go down first until it has a way to get out, correct?

A If you force air down in a tube to the floor it will go down in the tube to the floor. I agree.

Q Forced air down around drapes it will also go down until it has a way to escape and then it's going to do what? Go right back up.

A I disagree.

Q If hot air comes out of the drape near the ground - if it does it is going to pick up particles and bacteria and bring them right back up, right?

A I disagree.

Q That's what all the studies show. That's what every single study ever studied shows, correct, other than yours?

A I disagree.

Q What other studies - I'm not - you know that 3M said every single study shows it, right?

MR. BLACKWELL: Objection, Your Honor. Misstates his testimony.

THE COURT: Sustained.

MR. FARRAR: Your Honor, can we play Clip 66 which is part of the Al Van Duren deposition?

MR. BLACKWELL: May I approach, Your Honor.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Judge, he hasn't established any foundation that this is a part of Al Van Duren's deposition he actually read. He said he saw parts. He didn't see it all. And he's just going to stick it up there and represent that he read it but he hasn't established a foundation with this witness. He hasn't read everything Al Van Duren has said.

THE COURT: Which exhibit number was it?

MR. FARRAR: Clip Number 66. Your Honor, I object that a defendant can - that a company can just piecemeal 36 portions of a deposition. Therefore, you can't play the stuff that harms the company to its experts is preposterous.

The issue is really if he doesn't know these things,

that's really telling. That's evidence in and of itself that 3M hasn't produced that.

THE COURT: Have you established that he seen this deposition clip. My memory is he said that he didn't remember having the deposition played to him during his deposition. So you haven't established that he's - what one position he has made with this.

MR. FARRAR: The fact he hasn't seen Al Van Duren's deposition testimony directly him as an expert is evidence.

THE COURT: I don't know that you've established that. I don't think that's been established.

MR. FARRAR: That he hasn't seen it? I didn't understand you.

THE COURT: Yes. The objection is sustained. Counsel, could you come back up. I will just tell you you're talking superfast when you're asking these questions. If you want a good record I'd suggest that you slow down.

MR. FARRAR: Thank you. I appreciate that.

(RETURN TO OPEN COURT.)

Q Have you or have you not seen the deposition testimony where Al Van Duren says as a company spokesman in his deposition that every study that's ever looked at the issue has shown that the Bair Hugger increases particles over the surgical site?

A No, I have not seen that.
Q Would that be something as a company that would be important to you to see?
MR. BLACKWELL: Objection, Your Honor. This is improper questioning for an expert.
THE COURT: Sustained.
Q Is that something that you're here testifying about that issue, correct?
A I don't know what the question is right now.
Q You're testifying about whether or not the Bair Hugger can cause particles and air streams over the surgical field, right?
A I've got an opinion about whether the Bair Hugger can disrupt airflow but I'm not testifying about particles or I have not yet offered an opinion about particles.
Q Is it fair to say that nobody at 3M told you that all the air comes out of the head and neck area?
A It is fair to say no one told me that. I know that because of my experience with the Bair Hugger.
Q You assume that, correct?
A Well, if I assume it it's based on a lot of experience with the Bair Hugger.
Q Turn to page 148 of Tab 1 please. Do you see line 17?
A I do.
Q "Question: And you assumed that all the air comes out

at the head and neck, correct?"

And your response is "That is correct."

A Yes. Well hold on. Did you read the next question? You asked me - I'm sorry, you didn't ask me but I was asked why ...

Q Dr. Abraham, your lawyers can read the next question for you.

A Okay. I apologize.

THE COURT: Counsel, can you approach.

(BENCH CONFERENCE.)

THE COURT: They're not his lawyers so I just want you to rephrase that. Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Abraham, I said your lawyers and that isn't accurate. 3M's lawyers can read that part.

A No problem. No problem.

Q If it is accurate, if it's true that some hot air comes out of the drapes down at the floor that's being pushed down, then your CFD would have - you would have great concerns about the calculation, is that fair?

A I would say that if a large part of the air went down to the ground, higher, went down to the ground and then turned around and came up, that I would have questions about my CFD.

Q Great concerns?

A Yes, if it was significant amount of air, yes.

Q You're aware that 3M's expert Dr. Settles criticized your boundary conditions, right?

MR. BLACKWELL: Objection, Your Honor. I'm sorry, Judge. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: There is no 3M Dr. Settles in this case. There's no expert named Dr. Settles in this case.

MR. FARRAR: There is a 3M expert named Dr. Settles. And he's well aware that he's criticized his boundary conditions. He's testified to it.

MR. BLACKWELL: In O'Haver?

MR. FARRAR: I can rephrase.

THE COURT: Here's what I think is the problem. I think - are you aware of what his opinions are regarding your findings instead of loading the answer in the question. Because when you do it that way, you bypass the foundation and you go straight into a different answer. So the objection is sustained.

(RETURN TO OPEN COURT.)

Q Are you aware of what did Dr. Settles said about your boundary conditions?

A No.

Q Would you turn to page 209?

A Of which exhibit?
Q Sorry, Tab 1.
A I'm there.
Q Do you see 9 through 11?
A Yes, I am.
Q You could read it to yourself please.
A Okay.
Q Does that refresh your recollection that Dr. Settles criticized your boundary conditions?
A It does. Thank you for refreshing my recollection.
Q I may have asked you this but I'm not trying to be repetitive. It is a true statement that if air - hot air comes down the inside of the drapes and escapes from underneath the drapes and comes up, your CFD would be wrong, correct?
A Well I think all CFDs are wrong. My opinion is that the air, the majority of the air leaves by the head because hot air rises. If a significant amount of that air went down under the drapes and turned around which I think is impossible then I would have concerns about my CFD.
Q You know Dr. Chan and Dr. Elghobashi both opined that the air comes out from underneath those drapes, correct?
A Dr. Elghobashi has and I've criticized him. I don't know what Mr. Chan or Dr. Chan said.
THE COURT: Counselor, is this a good breaking point?

MR. FARRAR: It is, Your Honor.

THE COURT: All right, guys, we're going to go ahead and recess for the day. I'll ask that you be back tomorrow at 8:30. It is still our anticipation that you guys will receive the case for your deliberation on Thursday.

Just a reminder. During that timeframe your cell phones, Apple watches or Smart watches, iPads, computers, whatever electronics you've brought with you will be collected and kept in my chambers during your deliberations. So that will be the window of time that you won't be able to communicate with work, friends, family, whoever needs to communicate with you. So just another reminder.

(INSTRUCTION WAS READ.)

Have a good night and we'll see you back at 8:30 tomorrow.

(JURY RELEASED AT 4:57 PM.)

THE COURT: Instruction Number 1 is MAI 2.01 as submitted by the plaintiff. Any objection, Mr. Torline?

MR. TORLINE: No, Your Honor.

THE COURT: Instruction Number 2. And I'm just going to say, Mr. Manners, if it's been submitted by the plaintiff I'm not going to ask if there's an objection. Is that okay?

THE COURT: Instruction Number 2 is MAI 2.03 as submitted by the plaintiff. Any objection?

MR. TORLINE: No objection, Your Honor.

THE COURT: Instruction Number 3 MAI 2.03A as submitted by the plaintiff. Any objection?

MR. MANNERS: I don't have a copy of 3 or 4.

MR. TORLINE: I don't have that one either.

THE COURT: You don't have 3 or 4?

MR. TORLINE: It goes straight to 301.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

THE COURT: We're back on the record. Apparently, we had a copier error. So Instruction Number 3 is MAI 2.03A as submitted by the plaintiff. Any objection?

MR. TORLINE: No, Your Honor.

THE COURT: Instruction Number 4 is MAI 2.02 as submitted by the plaintiff. Any objection?

MR. TORLINE: No, Your Honor.

THE COURT: Instruction Number 5 is MAI 3.01 as submitted by the plaintiff. Any objection?

MR. TORLINE: Yes, Your Honor. We don't believe this case is one for which punitives should be submitted. Therefore, we object to the burden of proof concerning punitive damages as is reflected in Instruction Number 5.

THE COURT: Mr. Manners, any response?

MR. MANNERS: Your Honor, of course I haven't been here during the trial but my understanding based on my conversations with co-counsel is if the Court views the evidence in a light most favorable to the plaintiff disregarding any contrary evidence presented by the defendant, giving the plaintiff the benefit of all reasonable inferences from the evidence that a submissible case of punitives has been made. And for that reason, we believe it's appropriate to give 301 in the form that currently it's in.

THE COURT: That is correct. The Court found that is proper for the question of punitive damages to be submitted to the jury. That objection is noted and overruled.

MR. TORLINE: And, Judge, do you want me to tender now or tender at the end?

THE COURT: Why don't we just do that now. So what you are tendering to me - it's okay, I can mark it.

MR. TORLINE: Judge, this is our proposed MAI 3.01.

THE COURT: Okay. And so are you good, Mr. Manners, if we just give you a copy of all of the offered and rejected instructions?

MR. MANNERS: Yes. Will that be A?

THE COURT: It will be A. Okay. So the Court

will receive the MAI 301 as proposed and submitted by the defendant as Instruction Number 1. It will be marked as offered and rejected.

MR. MANNERS: You said Number 1. Did you mean A?

THE COURT: Yes, the letter A. Anything else for the record as it relates to 301, Mr. Torline?

MR. TORLINE: No, Your Honor.

THE COURT: All right. Instruction Number 6 is a verdict director for strict liability product defect. It's MAI 25.04 modified by MAI 19.01 as submitted by the plaintiff. Any objection, Mr. Torline?

MR. TORLINE: Yes, Your Honor. We'd object first of all, for all of these on the verdict directors and the verdict form, I'd incorporate our brief that we filed on these issues.

And just briefly, we believe that there's been no evidence and certainly not the theory of this case that the Bair Hugger combined with or contributed with another cause such that it was the 19.01 modification should be made.

With this case is most like is the *Whalen* case 861 S.W.2d 710 where the decedant hit his head and ultimately suffered a stroke. And in the attempt by the widow to prosecute and to include or use the 19.01 modifier, the Court of Appeals rejected that and said that "Appellants assert that Whalen's pre-existing atherosclerosis condition

made him more susceptible to a stroke constituting a cause of damage within the meaning of 19.01. Such argument is without merit and susceptibility is not causation."

We believe that's our case here. Mrs. O'Haver had obesity. She had diabetes. She smoked for 40 years. There's no claim that we made any of those conditions worse. Those are all conditions that make her potentially more susceptible to infection and we believe susceptibility is not a cause such that 19.01 should be modified in the verdict directors. And that applies for 25.04, 25.05 and 25.09.

THE COURT: Mr. Manners, your response?

MR. MANNERS: Yes, Your Honor. The many comments on MAI 19.01 refer the Court and the reader to *Callahan against Cardinal Glennon Hospital* which is a Missouri Supreme Court case unlike the *Whalen* case cited by counsel which discusses the example of the plaintiff who has pre-existing conditions that predisposes him to particular problems if he is subject to a traumatic experience.

There's another case I didn't talk about in our informal conference yesterday but I think the language is particular persuasive in this case. It's a criminal case, *State vs. Minner.* The citation is 311 S.W3d 313 at page 324 Western District Missouri Court of Appeals case where the Court held the unlawful act may not be the immediate

cause of death. It's enough that it could be a contributing approximate cause.

"A person approximately causes the death of another and hence is criminally culpable where the deceased was ill but died from the combined effects of the injury and of his disease or the injury accelerated the death from the disease although the injury alone would not have been fatal."

Under the circumstances of this case as I understand, there were pre-existing conditions. There was also the fact that there was a surgery on the pre-existing condition, a bad knee. All of those things combined with the negligence and the faulty condition of the product combined to contribute to the injury suffered by Mrs. O'Haver or Ms. O'Haver. For that reason, I believe the 19.01 modification is correct.

THE COURT: Based upon the evidence that's been presented before the Court and before the jury, the Court finds that the modification by 19.01 is proper. That decision will be consistent through all the verdict directors and your objection will be noted and obviously make whatever objection for whatever you believe is proper. Mr. Torline?

MR. TORLINE: Yes, Your Honor. And just briefly. I think the *Callahan* case and frankly all of those that

deal with pre-existing conditions, what they're dealing with are exacerbations of a pre-existing condition. That's we think different than the susceptibility issue is our issue here with Ms. O'Haver. But in any event, Judge, I would tender our version of 25.04, I guess it's Exhibit B.

THE COURT: B. It will be Instruction B. So the Court will receive the defendant's 25.04 as submitted by the defendant. It will be marked as Instruction B and noted as offered and rejected.

Okay. Instruction Number 7 is MAI 25.05 the verdict director for strict liablity failure to warn. It was again modified - or it too is modified by 19.01. Number 7 as submitted by the plaintiff. Mr. Torline, your objection?

MR. TORLINE: Same objections as the last one, Judge.

THE COURT: Okay. Same response, Mr. Manners?

MR. MANNERS: Yes, Your Honor.

THE COURT: Do you have a proposed verdict director on this one?

MR. TORLINE: I do. We would submit the proposed instruction 25.05 as Exhibit C.

MR. MANNERS: Instruction C.

THE COURT: That will be noted and offered and refused. 25.05 as submitted by the defendant will be Instruction C.

Okay, Instruction Number 8 is the verdict director for product liability negligent manufacturer designer failure to warn. It's MAI 25.05 modified by MAI 11.10 Subsection 2 and modified by 19.01. Your objection, Mr. Torline?

MR. TORLINE: Yes, Your Honor. Same basis as before as it relates to the modification for multiple causes. But we also in addition to that we believe that the hazard as it was to be defined in paragraph second is improper. It talks about the proposed instruction by the plaintiff. It deals with "The Bair Hugger was defective because it's design permitted airborne contamination of the sterile field when used during surgery."

The evidence is that there is already airborne contamination within the sterile field. And the issue is not the particles that exist. It's whether bacteria can made it down into the wound during surgery. So we have some alternative instruction language-wise that we would propose but I'll let Mr. Manners speak first.

MR. MANNERS: Of course, I'm old now and my hearing may be going bad on me but I thought you said 25.05 when I think you intended to say 25.09.

THE COURT: I may have. 25.09 is Instruction Number 8, that's correct.

MR. MANNERS: I believe that all that is required with the precise language of the instruction is not present

here. And instruction-wise the description of the hazard in 25.09 is language that is free of argument and that is simple and short. I believe all those things are true of the language that we have tendered in Instruction Number 8.

It is not argumentative. To the extent there is a concern about, it allows a verdict on the basis of contamination doesn't have bacteria. Of course, that's taking care of by paragraph 4th which says, "Such failure directly caused or directly contributed to cause plaintiff to sustain damage." The defendant remains free to argue that whatever the contamination was had nothing to do with the injury that was suffered by Ms. O'Haver. For that reason I believe it's a proper statement of law.

THE COURT: The Court believes that the language as submitted by the plaintiff is appropriate both in its wording as well as based upon the evidence that's been presented to the jury. And so the objection will be overruled. Mr. Torline, do you have a proposed verdict director for this one?

MR. TORLINE: Yes, Your Honor. We have three that have the alternative language that we discussed. Exhibit D, our proposed second would read "The Bair Hugger system causes deep joint infections in orthopedic joint replacement surgeries."

In our proposed Instruction E the language would be

"Second, the Bair Hugger system design caused bacteria to be deposited onto plaintiff's surgical site while she was undergoing left knee replacement surgery on November 29, 2016 which caused the periprosthetic joint infection."

And our proposed E would read, "Second, the Bair Hugger was defective because it's design permitted airborne bacterial contamination of the sterile field when used during surgery." And on each of these - these instructions are not modified by 19.01.

THE COURT: The Court will receive those in order as D, E and F and mark those as offered and received.

Instruction Number 9 is MAI 4.01 modified by *Carlson versus Kmart Corporation.* The cite is 979 S.W.2d 145 as submitted by the plaintiff. Any objection, Mr. Torline?

MR. TORLINE: Yes, Your Honor. We believe that like earlier the 4.01 should not be modified by the language in *Carlson vs. Kmart.* I don't have a proposed exhibit. I can bring that tomorrow and we can mark it as F.

THE COURT: We're at G now.

MR. TORLINE: H, is that right?

THE COURT: No, G comes after F.

MR. TORLINE: What I would like to do, Judge, if it's okay is I'll bring a G tomorrow that is unmodified by

19.01.

THE COURT: Any objection to that, Mr. Manners?

MR. MANNERS: I won't be here but I'll incorporate any of the arguments I would've made as to H as the same as I have with G.

THE COURT: Okay. Those will be noted and we will include that proposed instruction as G and mark it as offered and refused.

Instruction Number 10 is the MAI 10.06 as submitted by the defendant modified MAI 35.19. The blanks will be filled in with 8, 8, 6, 7, 6, 7 and 9 respectively. Any objection from the plaintiff?

MR. TORLINE: Yes, Your Honor and I'll ... sorry.

MR. MANNERS: You're not the plaintiff.

MR. TORLINE: I know, sorry.

MR. MANNERS: No.

THE COURT: Any objection?

MR. TORLINE: Yes, Your Honor. As it relates to the submission of punitive damages, I would just incorporate my argument on that.

THE COURT: Okay. Your objection as it relates to punitive damages is noted. The Court's ruling will remain the same. And the instruction will be submitted as indicated.

Instruction Number 11 is MAI 2.04 as submitted by the plaintiff. Any objection, Mr. Torline?

MR. TORLINE: Yes, Your Honor. As we discussed, we believe that it should be a general verdict. The plaintiff should not get three ...

THE COURT: You jumped on.

MR. TORLINE: Oh, on 11. No objections on that one.

THE COURT: Okay, got it. So now we're on the verdict form which is MAI 36.11 actual and punitive damages as submitted by the plaintiff. And a citation will be added to that. Mr. Manners, can you read that into the record now?

MR. MANNERS: Your Honor, the case is *Mathes* M-A-T-H-E-S *versus Share Express LLC* 200 S.W.3d page 97 Missouri Court of Appeals Western District 2006. The specific part of the opinion that we rely on is found at page - commencing at page 106 through I believe 108.

THE COURT: Mr. Torline, your response?

MR. TORLINE: Yeah, Judge. We object as we voted yesterday. We think it's a general verdict and that plaintiff should not get three opportunities for three different questions to be asked. It should be a binary opportunity, yes or no as it relates to the three counts.

The *Mathes* case we think is distinguishable. In the

Mathes case there were two defendants for which there were different claims. Therefore, there was a need to have separate questions asked in the verdict form.

We also object to the submission of punitive damage – the question concerning punitive damages is I discussed before.

THE COURT: The Court believes that it's proper for there to be a finding as to each verdict director so that the verdict of the jury is clear regarding their intent. So the Court finds that this verdict form is proper as modified. And, additionally, do you have the verdict form that you would like to submit to the Court?

MR. TORLINE: Yes, Your Honor. I've got one that has one question and there's no submissions for punitive damages.

THE COURT: Okay. That will be marked as H and admitted as offered and refused.

Okay. Any further record as it relates to instructions from the plaintiff?

MR. MANNERS: Your Honor, if you would indulge me, I'd like to make an additional record on the propriety of the verdict form that you intend to give in this case simply because I think it may go up on appeal if we're successful God willing. And I would like it to be crystal clear why we are suggesting this.

Mr. Torline has suggested that there were different defendants and that made the difference in the *Mathes* case. In fact, that's not quite correct. There were different defendants, but what happened in that case is the Court submitted three verdict directing instructions.

The first was against Ford Motor Company on the theory of strict liability. The second was on the theory of negligence against Ford Motor Company. The third was against Share Express, the company that operated the tractor-trailer that was involved in the accident.

Two out of the three submissions were as to Ford Motor Company. And so we have the analogy if you take out Share Express, the jury answered two questions.

Should Ford be held liable on the question of strict liability and the second, should they be liable on the question of negligence? There were not two bites of the apple. The two bites of the apple came in the fact that there were two different verdict directing instructions either of which would support a verdict in favor of the plaintiff.

In our case we've got three different verdict directing instructions. If the jury finds in favor of our client on any one of those three verdict directing instructions, it will support the award that the jury returns in this case and the verdict in favor of plaintiff

on liability.

The only problem that is posed by this is under existing law if there's a disjunctive submission and the Court finds on appeal that one of the disjunctive submissions did not have evidentiary support then the case has to be remanded back for a new trial on all issues.

In this case if, for example, the jury finds in favor of the plaintiff on all three submissions and the Court of Appeals says that there was evidence to submit two of the three submissions or one of the three submissions under those circumstances it will not be reversible error because there's evidentiary support for the verdict of the jury. he said "Regardless of whether or not Rule 70.02 applies to a verdict form, Mathes proposed form accurately posited the issues to be determined by the jury on each theory of liability."

The same thing is true of the verdict form that we've tendered to the Court. "And was therefore properly utilized by the trial court."

But the next sentence is the money quote of this opinion. "The verdict form used would also have the potentially salutary purpose of avoiding a retrial in the event that some error or insufficiency of evidence was found in only one of the verdict directing theories."

The same thing is true of the form that we've tendered

to the Court. I believe the Court is acting appropriately in tendering that to the jury. Thank you.

THE COURT: I agree. I think submitting the verdict form in this manner makes the jury's findings much clearer and less subject to interpretation by whoever it is later on.

Okay. Any further record from defendant regarding instructions?

MR. TORLINE: Judge, just to remind me. What was G?

THE COURT: G was the ...

MR. MANNERS: Your last 25.09. You said you had another 25.09.

THE COURT: Let's go off the record.

(COURT IS IN RECESS AT 5:35 PM.)

PROCEEDINGS

October 12, 2022

THE COURT: We're outside of the presence of the jury. We made a record last night regarding instructions. At that time the defendant wanted to tender an instruction. I think it was the 4.0, is that right? The 4.0 that I indicated that I would mark as G. Do you have that?

MR. TORLINE: I do, Your Honor. It's 4.01 and the defendant would submit that.

THE COURT: I've marked that as G and offered and refused. And then there was another instruction, Mr. Torline, that defendant had submitted in their original packet that just a record was not made on yesterday.

MR. TORLINE: That's right. We'd submit this as I think H.

THE COURT: H I think is your verdict form so I'll mark this as I. And that is the non-MAI 1B Federal procedure form. I don't know how they necessarily cite it but it's *Roy vs. Employers Mutual Casualty Company* 368 F22D 902. The Court will mark that as offered and refused. Any further record from the defendant as it relates to instructions?

MR. TORLINE: No, Your Honor.

THE COURT: From the plaintiffs?

MR. EMISON: No, Your Honor.

THE COURT: Does plaintiff have any record that they want to make before we resume the presentation of evidence?

MR. FARRAR: Quickly, Your Honor. I just want to make offers of proof. *State v. Brooks* which is 960 S.W.2d 479 stands for the proposition of an expert to be impeached with information that they have not reviewed. It says "The prosecution may not exceed the scope of cross-examination in asking Dr. Ingram about whether he had been provided this information in making his determination and whether his opinions would different if he knew about it.

The State had a right to rely on appellate's prison records in cross-examining Dr. Ingram regardless of the records admissibility."

Yesterday there was two things I was unable to cross-examine Dr. Abraham about. One was the deposition of Andrew Chan regarding the boundary conditions of the CFD. of your study as well as Schleieren the Bair Hugger goes across the arms, correct?

Answer: Yes.

Not the neck or feet?

Yes."

He was later asked, "In a model based on your experiments in your report you chose that the Bair Hugger inlet would be around the arms in the OR CDF model,

correct?"

He says, "Yes."

He was asked "If you the wrong position of the air inlet of the Bair Hugger, that would make the CFD model unreliable, correct?"

He said "Yes."

Dr. Abraham yesterday testified that this inlet was the head and neck only. And he looked at the report that Dr. Chan is referring to and said, "Yes, that's stating the same thing I am." But Dr. Chan testified quite the opposite, in fact, quite the opposite of Dr. Abraham.

I just wanted to make a record that that's the cross-examination I would've used.

The second thing, Your Honor, this is on the Memarzadeh study. I just wanted to tender this as a court exhibit which is Defendant's Exhibit 3253. And it's an email from Russell Homested to Mr. Memarzadeh. And then later it ends up at 3M through Gary Hansen where Mr. Homested is asking Mr. Memarzadeh to do the CFD. Mr. Memarzadeh's responds and he said he did most of the work on the airplane. He goes, "I think we should publish this as a note to editor. I can present the particle deposition on patient, not the content of particles. Your thoughts."

Meaning he's going to highlight the things that are beneficial to 3M and bury the things that are detrimental.

I think that goes directly to the credibility of the witness and was relied upon on in Dr. Memarzadeh's study. I would offer Defense Exhibit 3253 which is also Plaintiff's Exhibit 2251.

THE COURT: Any further record regarding this, Mr. Blackwell?

MR. BLACKWELL: Your Honor, just a couple of points. Obviously, here the defense hasn't had any opportunity to review the case that Mr. Farrar cited. They didn't send it to us. But as far as this case is concerned what he's raised has been true for both parties. We had all sorts of things we wanted to ask Dr. Jarvis and Elgobashi but they hadn't reviewed it and so we weren't allowed to question them on it and we respect and abided by the Court's ruling.

In terms of what Mr. Farrar has claimed was said by Dr. Abraham, that essentially that Dr. Abraham and the 3M Andrew Chan was saying the same thing, that's not what he asked him and that's not what it was.

I'll let the record reflect that it was Counsel asking him repeatedly whether he used Mr. Chan's data to confirm his and he said no. He said the data confirms mine but I didn't use it for that purpose. So the factual record will speak for itself but I wanted to clarify that.

And what was just said about Dr. Memarzadeh is simply

a characterization from plaintiff's counsel and we don't agree with it.

I'm not sure what court exhibit is that he just tendered. I've never heard of that.

THE COURT: I don't know what that is either frankly. But 3253, was that the number, Mr. Farrar?

MR. FARRAR: Defense Exhibit 3253, Plaintiff's Exhibit 2251. I need something in the record. I know it's not coming into evidence so the jury can see it but I think it's something that I need something for the appellate court.

THE COURT: 3253 was used during David's testimony. So I think that there's a recording what 3253 is. So it's either plaintiff's exhibits or defendant's exhibits. And so the Court will note that you want to use Defendant's Exhibit 3253 in your cross-examination of Dr. Abraham. The Court's ruling as to both exhibits will remain the same. Any further record from the plaintiff?

MR. FARRAR: No.

THE COURT: Record from the defendant?

MR. TORLINE: Just to clarify, Judge. I have 3253 referred to in Dr. David's testimony but not admitted.

THE COURT: Correct. It was offered - according to my notes. Let me look again but I believe it was offered and then that offer was withdrawn. That's

right. My notes indicate that it was used during David's testimony and offered but then that offer of admission was withdrawn.

THE COURT: Any further record from the defendant?

MR. TORLINE: No, Your Honor.

THE COURT: So the Court can take up 3M's combined Motion for Instruction to Correct the Record or in the Alternative Defendant 3M to Correct the Record. I would at this point since we have all the jurors and frankly I have a hearing from noon to 1:00 today. So we're going to have to break from noon to 1:00 in order for me to have that hearing. So I can either take this up now or we can take it up at the morning recess or at the afternoon recess. What would be the request of the defendant?

MS. PRUITT: The request would be either now or at the morning recess, Judge.

THE COURT: Why don't we just go ahead and take it up now. So the Court is in receipt of Defendant 3M's Motion to Correct the Record as it relates to Dr. Mont's testimony. I have reviewed the motion and I will hear brief argument from defendant if they want to make it.

MS. PRUITT: Yes, Your Honor. Thank you so much. I'll be brief. If the Court's reviewed the brief, you understand. We all know what happened with Dr. Mont. We

all know that it was clear that he wasn't available any other time. I'm not suggesting anybody did anything intentional but the clock ran out.

I'm also not suggesting that Ms. Zimmerman did anything intentionally. But the truth of the matter is it was a correction just as Dr. Mont was trying to say. In fact, the correction article which does show his work for 3M we've marked as Defense Trial Exhibit 3349.

So the relief we are asking for, Judge, is either that you instruct the jury that that was corrected and leave it at that or we be allowed to ask one of our witnesses today just - we're not going to make a big to do about it, but just to correct the record so it's not misleading showing the journal article and then go to the end where it shows Dr. Mont's interest in the fact that 3M is on there. Because if we aren't allowed to correct it, then it's just a fact out there that seems to be not because anybody was doing anything intentional, but it seems to be a little misleading as it currently stands.

We're simply asking to just get that in the record so it's complete and not belabor it or the Court in just one sentence tell the jury.

THE COURT: I don't know who from the plaintiff wants to respond. Ms. Zimmerman, since you did the cross.

MS. ZIMMERMAN: Yes. Thank you, Your Honor.

This is the first that I'm hearing this. We heard from Dr. Mont obviously that he submitted an errata and he's testified to that to the jury. We think that an instruction on this would be inappropriate.

Certainly, it's not in dispute that it was submitted and published without the disclaimer that 3M was in fact funding the study at the time. So I guess from the papers that were submitted last night, a few months after it was peer-reviewed and published it was then corrected. I don't dispute that.

The witness said as much to the jury and they can believe that or not believe that. But I think to the extent that the Court comes in and weighs in on that, it suggests that the disclaimer on the potential conflicts and bias was appropriate and accurate at the time. It wasn't.

I didn't know that there was a corrected one. This is the version that we had available to us from the Internet. I guess that's sort of the danger and the reason we need to make sure that conflicts of interest are clearly established and disclosed at the outset particularly with this article where it's not just I'm writing generally speaking and here the number of corporate sponsors because he's got a ton of papers like that.

But this paper in particular is actually on the Bair Hugger. So the idea that Dr. Mont would have neglected or

forgot that at the time that it was published it's really significant. He's an editor on that particular journal, the Journal of Surgical Technology Journal. Also, he's an editor-in-chief as the testimony reflects of the Journal of Arthroplasty. He's well aware of the importance in these sort of conflict disclosures and bias and that was what was offered to the public.

Surely people beyond just me still have copies of this available online from years ago that don't disclaim for 3M. So we think that his testimony in that regard is clear. He said he submitted an errata. And to the extent that the Court would weigh in it, that would be weighing in on the evidence in an inappropriate way in our view.

THE COURT: So you're saying that you were unaware of the ...

MS. ZIMMERMAN: I was absolutely unaware of it.

MS. PRUITT: Your Honor, I would point out just for to complete the record that it was on our exhibit list, this version of the study, Trial Exhibit 3349 was on our exhibit list.

THE COURT: Okay. So the Court's going to take this matter under advisement. And then I will issue a ruling at the morning break. Is the plaintiff ready to go?

MR. FARRAR: Yes, Your Honor.

THE COURT: Defendant?

MR. BLACKWELL: We are. Your Honor, may I inquire on how much time remaining for the cross?

THE COURT: Mr. Farrar, much time do think that you have?

MR. FARRAR: My guess is 20 or 30 minutes.

THE COURT: Okay. And what do you think about your redirect?

MR. BLACKWELL: I've probably got 20 minutes.

THE COURT: Okay. And here's a thought that came up. The jury can't see that iPad, right?

MS. ZIMMERMAN: No.

THE COURT: Okay, all right. That came up yesterday and so I just wanted to make that whatever was on that the jury could not see it.

(JURY IS SEATED AT 8:50 AM.)

THE COURT: You may be seated. Good morning. Welcome back. I hope you guys had a good evening. We'll continue with the testimony of Dr. Abraham. Doctor, I'll remind you that you remain under oath.

A Thank you, Your Honor.

CONTINUED DIRECT EXAMINATION BY MR. FARRAR

Q Good morning.

A Good morning.

Q We finished up yesterday talking about the five issues

with your CFD that I want to discuss. And we finished the boundary conditions, correct? Ultimately, you assumed all the heat would come out of the head and neck, right?

A I assumed the heat and the air from the Bair Hugger emerges into the room by the head and neck of the patient.

Q And that was an assumption on your part, correct?

A Yes, it was. And it was based on my experience with these devices and my knowledge that hot air rises.

Q You testified it was an assumption you said, correct in a sentence, full stop, correct? That's what you testified to? Do you want to look at that again?

A Sure.

Q Tab 1, page 148 lines 17 through 19. "Question: And you assume all that air comes out of the head and neck, correct?

Answer: "That is correct." Is that correct?

A And you didn't read the next statement but yes, that is what I said in my deposition.

Q We touched on particles and this will be relatively easy and quick I believe. Your model does not track particles, correct?

A Correct because it wasn't necessary.

Q And particles do not always follow streamlines, correct?

A That is true of particles because they have to settle out of the air so particles don't often follow streamlines.

Streamlines are a worst-case scenario.

Q You understand the case is about particles and whether or not particles that contain bacteria reach the sterile field, correct?

MR. BLACKWELL: I object, Your Honor to Counsel's characterization about the case being about particles. They said the case was about bacteria.

THE COURT: The objection is overruled.

Q Do you understand that's what the case is about, correct?

A From my understanding the case is about infections.

Q So you testified yesterday that a CFD can only solve the problem that you're asking it to solve, right?

A That is correct.

Q If you ask it to solve the wrong problem, you might get the right answer but it doesn't solve the actual problem you care about, right?

A I would agree.

Q Now I want to talk about deleting files. Your program created 300 - I believe you call them stockpiles or something like that, is that right?

A I don't know.

Q Result files.

A Well the program creates a number of files. The program creates what's called a mesh file. The program creates

what's called a log file. The program creates a result file. So the program creates many, many files.

Q TRN files?

A Yes, TRN files are that one of the files created by the program. And an TRN file contains all of - I call it a master file that contains all the information in the simulation.

Q Your program for your CFD created 300 of them?

A I don't recall how many TRN files were created.

Q If you look at Tab 1, page 51. It would be fair to say that from your paper or your report nobody would know how many TRN files were created, correct? I'll let you read that first. Do you see on there where it says you had 300?

A I'm sorry, I was reading.

Q I know. I know. I'm going to let you read it. Do you see on that page where you testified that you believe there's about 300 TRN files?

A I'll double check. I just haven't read it because I was trying to listen.

Q Understood.

A Now, what I said here is that I provided two master files.

Q That's not the question. I'm asking you how many TRN files did your program create. 300 is the answer, right?

A No and I'm trying to explain. The question was ...

Q If the answer is not 300, say no.

A No.

Q Okay. Do you know how many TRN files your program created?

A I don't recall.

Q Do you know that you only produced one?

A I disagree.

Q If you'd flip to page 234 please. Page 234, line 16. "Question: I have one TRN file ..."

MR. BLACKWELL: Your Honor, objection. If he'd allow the witness to get to the page.

Q I'm sorry. I thought your there. My fault, 234.

A And we're on Exhibit 1?

Q Tab 1.

A Okay, I'm on page 234?

Q Line 16. "Question: I only have one TRN file, you understand that?

"Answer: Yes."

You understand that only one TRN file was provided to the plaintiff, correct?

A I will disagree with that and I'd be happy to explain.

Q You physically went into the computer and deleted the TRN files, correct?

A I maintained the master files and I provided master files to the plaintiffs. And I provided more than one master file to plaintiffs. That master ...

Q Did you understand my question? Did you go into your computer and delete the TRN files?

A I deleted files that were not necessary. I maintained the master files.

Q You deleted files?

A Yes.

Q That you deemed weren't necessary?

A Yes. I kept the master file ...

Q Let's talk about the simulation.

MR. BLACKWELL: Your Honor, I'd object. He will not let the witness complete his answer.

THE COURT: Sustained. Counsel, you need to let the witness finish.

A As I testified in my depositions and I'd be happy to show you my depositions, I produced multiple master files upon request. I deleted files that were unnecessary because the information in the files I deleted was actually within the master file.

Q Do you remember my question?

A Yes, I do.

MR. FARRAR: Objection, I'd move to strike the nonresponsive portion.

THE COURT: That request is denied.

Q Let's talk about simulation time. Your CFD simulated 1.2 seconds, correct?

A Well I produced multiple master files that had different simulation times. So I produced multiple files so you'll have tell me which file you're talking about.

Q Your CFD for that Model 750 that was used in Ms. O'Haver's surgery lasted 1.2 seconds of actual time, correct?

A I believe that's correct.

Q I'm going to use my stopwatch just so we have an idea of how fast it is. Start - stop, a little bit longer than that, right?

A That's right.

Q I'll do it again. Start - stop, that was a little too long?

A I'd say if we average those two numbers.

Q Right on top?

A Yep.

Q You know, do you not, sir, that in 1.2 seconds the air from the vent in the top won't reach the patient, correct?

Q I didn't ask you about that. I asked you ...

THE COURT: Counsel, we can only have one person talking at a time. So I need you to allow the witness ... don't interrupt me. I need you to allow the witness to finish their answer. You may approach. Mr. Blackwell.

(BENCH CONFERENCE.)

MR. FARRAR: Are experts were constantly cut off when they weren't actually answering the actual question

and going into some long explanation. I'm just trying to do the same thing for their experts.

THE COURT: And I'm telling you that we can't have two people talking at the same time - for goodness sake - to make a record. And so I understand that but the problem is you're talking over him. And so if you want to say - have some type of pause or something like that, I don't disagree with that but at the same time we can't have you just blatantly talking over him.

MR. BLACKWELL: And for the record, he's also asking ambiguous questions to the witness. And when he starts to answer and he cuts him off as if the question wasn't clear.

(RETURN TO OPEN COURT.)

Q We looked at Exhibit Plaintiff's 2252 yesterday. Would you agree with this sentence, true or false? "The yellow lines coming down from the top, that's about how far the air would go in 1.2 seconds."

A I don't know. I don't recall - is that my annotation?

Q No, it is not.

A So I don't know who put that annotation on it.

Q And, I understand that. My question is do you think that's a fair representation of how far the air coming out of the vents would go in 1.2 seconds?

A It may or it may not be.

Q You've seen this before, correct?

A I haven't seen that annotation so I don't know what that annotation was added for.

Q Do you recall responding to it at one point?

A I believe we discussed this yesterday. This annotation - the image is from my simulation. The annotation is something that I didn't add.

Q The last point I wanted to make and we talked about this yesterday so I don't think we have to belabor this. When you did your CFD you received errors, correct, error messages, correct?

A What I recall, during the coding of my simulations there was a warning about something called the central differencing method which is a numerical approach to doing these calculations and I do these calculations routinely. And, in fact, I write instructions on how to do these calculations.

And if your elements are sufficient ...

Q What are elements?

A Elements are the warnings in the room that you use to make your calculations. If they are sufficient that warning is something that you watch but you don't necessarily need to act on. And I observed my simulation and that warning had no impact on my calculations.

Q You almost always receive error messages, correct?

A When you're doing a computer program, at least I when

I write the computer programs I most almost always receive some error message at some point.

Q We were talking about particles and I wanted to come back real quickly on the McGovern study. I'm not going to go through the actual study. I just see if you've seen one part. I'll hand you what I've marked as Exhibit 93 which is the McGovern study.

A Thank you, sir.

Q Sure. And you know that there was a neutral bouyancy test done in the McGovern study, right?

A That is correct.

Q I'm looking at the very last page, the back of it.

A Could I just have a moment to refresh my recollection? Thank you so much.

Q Of course. I'm not going to ask you anything substantively about the study but if you want a moment, that's fine.

A Okay.

Q On the very back under "Supplementary Material" there's a line that says, "A video demonstrating forced air warming is available with the electronic version of this article on our website" and it gives the website. Did you ever go to the website or review the video referenced in the McGovern study?

A I don't recall if I did. I mean it was a long time

ago. I have and I may not have.

Q You don't recall sitting here today?

A Correct.

Q You know that that's a study that's sort of similar to yours. It's showing what visually happens to air when the Bair Hugger is on and off, right?

A Well this was a study that used soap bubbles in the air. And the soap bubbles were used in what's called a Howorth enclosure which is so very different from the operation in an American operating room that it actually isn't material to what would happen in a standard OR.

Q So instead of actually looking at the visualization, you just said I'm not going to even look at it because I don't want to considerate it, fair?

A No, I don't think that's fair.

Q You don't remember seeing it though?

A No. This study is so very different because well, it's just a different set up that it's information would not provide guidance as to what would happen in an OR such as Ms. O'Haver's.

Q It was done in an operating room, correct?

A It was done in a - well I'll read it actually. And I'm reading from page 1538 of this paper under the section "Materials and Methods."

It says, "Experiments were carried out in a partial

ultraclean operating theater X490 Howorth in the UK." My understanding of a partial wall enclosure is it's an actual - and I am not an operating room expert so I'm giving you my understanding but I'm not offering expert opinions on how operating rooms are constructed.

Q And, I mean no disrespect, but if you're not an expert, I don't think we need your opinion on that. Is that fair?

A You asked me a question. If you don't want my opinion, that's fine.

Q Well if you're not expert on it we will stick with the things you're an expert on. Is that fair?

A That's fair.

Q All right. We talked about validation yesterday. Is it accurate to say that validation is also just solving the right equations?

A Well that's part of validation.

Q You note that in your report. You say, "Validation has also been described as solving the right equations" and I believe you're quoting from that, is that correct?

A Yes. I mean, that's of part of validation.

Q So you're solving the right equation, that's validating your work?

A No. Validating is when you compare a computer calculation with what's happens in the real world. So it's the

comparison of an experiment through simulation. That is the validation process.

Q What NASA has said and you quote in your report is "Validation has also been described as solving the right equations," correct?

A That's part of validation.

Q One of the things - the studied you talked about yesterday was this 2010 letter to the editor from Memarzadeh, correct?

A Yes, that's right.

Q Nowhere in that one-page letter to the editor does it say anything about validation, correct?

A That's correct. I don't believe it does say anything about validation.

Q In fact, you know it was run on RANS, correct?

A I do believe that was a RANS calculation.

Q And you said that the weather is often run on RANS, correct?

A No, I did not say that.

Q When you're predicting weather is it run on RANS?

A Well weather models use what's called an Eddy Viscosity Model which if were interpreting RANS is being - let me back up. RANS, R-A-N-S stands for Reynolds-Average Navier-Stokes.

Weather models do use averaging but they do it in a

slightly different way than the CFD that was used in this situation.

Q And, I'm sorry if I missed your answer in there. Weather predictions are usually run on RANS?

A Weather prediction models run on a type of RANS model but it's a little different. So I'm not trying to say - I don't want to give a false impression that they're the same thing.

Q Okay. That's why our weather predictions are usually wrong?

A No. The reason why weather predictions are never right is because of chaos. There's a famous line, "If a butterfly flaps its wings in Chicago, it changes the weather in Beijing." And that's because of chaos in the atmosphere.

Weather predictions and CFD predictions are never exactly correct because you can't capture the chaos in the air.

Q Would you agree with me that in terms of a hierarchy of CFD's, RANS is the lowest quality, LES is middle and DNS is top?

A No. I would say that the models have strengths and weaknesses and they're used in different contexts. But there's some cases when RANS is the best. There's some cases when LES is the best and there are some cases where DNS is the best.

Q You've never use DNS, correct?

A I have not.

Q Do you know who wrote the code for DNS?

A There's multiple codes that have been written for DNS.
Q Do you know that Dr. Elghobashi wrote some of the codes for DNS?
A I do believe that's the case.
Q Did you write any codes for any of these?
A I definitely wrote some RANS. And then there is another type of model in between LES and RANS that I helped write the code for. So I have written some of my own CFD codes.
Q Is it fair to say that since 2017 you haven't conducted any further research on whether or not there's any evidence that the Bair Hugger may cause surgical site infections?
A I'd say it's 2017, maybe 2018 - let me ask - can I ask a question? Actually, can you restate the question.
Q How about we look at Tab 4, page 145. And I'm looking at line 11. Tell me when you are there.
A I'm there.
Q So the question is "Okay, so my question is since 2017 you haven't conducted any further research on whether or not there's any evidence that the Bair Hugger may cause surgical site infections, correct?"
Your answer is "That is correct."
A Yes, that's correct.
Q Is that still accurate?
A Yes.

Q So, for instance, if there was a study published by Lange and Reed in 2019 that directly refutes your work, you haven't seen that?

A I'd be happy to look at it now.

Q You just came and talked to the jury without doing any actual research since 2017 on the issues that you're talking about, fair?

A I have - I did my study in 2017. I'll look at anything you have now.

Q Professor Abraham, you've had years to prepare to come talk to these folks and you didn't to do any further research? You didn't do a Google search to see if there's a literature that's pertinent to what you're testifying about here today, correct?

A No. My opinions were pretty well-founded. And I've not heard any evidence that would alter my opinion. There's been no new evidence presented to me that would have me rethink my opinion.

Q You're the expert, Dr. Abraham. Evidence doesn't have to be presented to you. It's your job to go find the evidence, right?

A I agree. But, remember, I did do experiments and calculations and a full literature review and I thought that was pretty thorough.

Q In 2017?

A Yes.

Q And you relied on a letter to the editor of a CFD with no drapes, run on RANS and no validation and no calculations put in it at all. That's something you relied on, correct?

A Well the letter referenced calculations but the calculations were not in the letter. I agree.

Q Validation was not in the letter?

A I don't recall any validations in that letter to the editor.

Q The back ground on how that CFD ever even came about was not in the letter?

A I don't believe it was. I mean the calculations that were done were not contained in the letter.

Q Let's go to a different topic. Let's talk about doors. You showed a video yesterday of chaos when a door opens, correct? Do you remember that from the Saarinem article?

A I do.

Q There's an article in your report that is from – this is Plaintiff's Exhibit 1499. It is cite 28 in your report. You're familiar with this article, correct?

A I am.

Q This is the title. *Door Openings in an Operating Room Are Associated with Increased Environmental Contamination*. Did I read that correctly?

A You did.

Q This is something that you used and relied upon to form your opinions in this case, correct?

A I'm just taking some time to review my expert report to see.

Q It's 28.

A Thank you so much for that. Yes, it was 28. Yes, this is cited in my report.

MR. FARRAR: Your Hoor, we would offer 1499 as a demonstrative and ask to publish please.

MR. BLACKWELL: No objection.

THE COURT: 1499 is received for demonstrative purposes and may be published.

Q I'm looking at this graph on the 3rd page, do you see that?

A I do.

Q And what this graph shows is the amount of colony forming units per door opening and it's delineated between two different areas in the operating room. One is where the laminar flow is and the other is sort of off to the side, correct?

A Well I would say one is inside the laminar flow area and one is outside the laminar flow area.

Q And it's this blue line right here that is inside the laminar flow area, correct?

A That's correct.

Q And with 120 door openings we have basically the same

amount of colony forming units as we do with 20 door openings, correct?

A Well for some of them. But do you see those high points? This is very hard to see. I'm going to use my own clicker. So there is a line here - so here's a line of number of colony forming units which are bacteria and with the number of door openings. And you can see that in some cases there's two or three CFUs. In some cases there is zero and in some cases there's 12.

So what this just shows is when you have door opening you can actually - it actually can defeat the laminar airflow. And that's the point of this article.

Q Let's see what the actual authors have to say about it. Right here. "Within laminar airflow there is no relationship between door openings and colony forming units." That's what the authors of the paper said, correct?

A That's correct but you're misinterpreting ...

Q I'm reading what the author said. That's what the author said, correct?

A Yes but you are misinterpreting the analysis and I'd be happy to explain.

Q This is not something that was in your report that you shared with the jury yesterday, correct?

A Yes, that's right.

Q What you did instead was shared with the jury a paper

done on an isolation room, correct?

A Yes, that's correct.

Q Can you tell me - let me ask you this. And isolation room is where patients go that have severe communicable diseases like Ebola, right?

A Isolation rooms might be used for Ebola patients but that's not my area of expertise. I am not an Ebola expert.

Q Do you have the Saarinem paper with you? I think I've got another copy if you don't.

A I do but thanks for offering.

Q If you look at the introduction it talks about the use of isolation rooms on page 2.

A If you'd just give me a moment to refresh my recollection.

Q You tell me when you're ready.

A Okay, I'm ready.

Q An isolation room is a room that is used for patients that have severe dangerous diseases like Ebola or SARS, right?

A Is that mentioned somewhere?

Q It is in the introduction, page 2.

A Oh, I'm sorry. I was looking at the abstract. Yes, you're right.

Q Do you don't know what an isolation room is, fair?

A No, I do.

Q Isolation rooms are negative pressure, correct?

A They often are negative pressure.

Q So and I want to talk a little bit about positive and negative pressure. I think we all know that if I'm in an airplane flying at 30,000 feet and the door opens I'm going to get sucked out of that thing, right?

A Yes.

Q And the reason is is there's positive pressure in that airplane, correct?

A Well there's a pressure difference between the inside and the outside. So what matters is the pressure difference.

Q Sure. Pressure difference matters which way it goes, right?

A Yes, I agree. Well let me put it this way. Pressure can't affect flow.

Q So pressure wants to equalize, correct?

A Yes.

Q So if there's a positive pressure inside that airplane when the door opens it wants to equalize so it's going to suck everything out of the airplane until it's equal?

A Yes.

Q And the exact opposite would happen in negative pressure. If you took a submarine and went to the bottom of the ocean, that's negative pressure in that submarine, correct?

A The pressure in the submarine is less than the pressure in the water outside the submarine.

Q So if you open a door that water is going to come gushing in as fast as it can, right?

A Yeah. And I just want to make sure it's clear that it's the pressure difference that matters. So if you go down in a submarine, it isn't negative. It's just less than the water pressure.

Q You know operating rooms are positive pressure, right?

A Operating rooms are sometimes positive pressure.

Q You know Ms. O'Haver's operating room was positive pressure?

A Yes.

Q And the idea is the reason that they're positive pressure you understand is if a door opens you want to make sure that any of the contaminants that the laminar flow, the unidirectional flow has done is pushing out so it doesn't get in the open wound of the patient, correct?

A That's part of the reason. But as I state in my report and I would be happy to show you the citations, there's at least four citations in this report. If you open the door to a positive pressure room, you defeat the positive pressure. And that would be four independent studies in this report.

Q Well that's just like the airplane. If you open the door of an airplane things are gonna go out and at some point, it's going to neutralize, right?

A I agree. If you open the door whether it's in an

airplane or an isolation room or hospital room, it will cause chaos, I agree.

Q Well but if you open the door in an airplane at 30,000 feet, no birds are coming in, right? Everything's going out?

A Yeah, that's correct.

Q Right? And if I open the door in a submarine down at the bottom of the ocean, fish are coming in and people aren't going out, right?

A I agree.

Q So in a positive pressure room like an OR - this is a room. We have operating table right here and we have vents up here, right? And this air is coming down like this. The idea is when a door is opened like this, this all comes out to get the contaminants and the bacteria away from the patient, right?

A No. The positive pressure is intended to cause more air to leave the room than to come in. But as I pointed out, there are four studies that I cited that show once you open a door you have flow both ways and the positive pressure of the OR is defeated.

Q And in a negative pressure room, this person is not having surgery, right?

A That's correct.

Q A negative pressure isolation room is not an OR, correct?

A I agree.

Q The idea is whenever this door opens, this comes in. There's a door here. It's coming in to not allow the germs from this patient to spread across the entire hospital. That's the goal and the idea of an isolation room, correct?

A It is but you made a critical error and I would like to explain it.

Q You can explain whenever 3M's lawyers come back on and redirect if you like.

A Okay. Well then I'll just say your drawing is incorrect and your explanation is incorrect.

Q Is the idea of a negative isolation room to have the air - we'll come back to it.

Let me ask you this. The Saarinem article first of all is done on a CFD, right?

A Saarinem was done with CFD and with experiments. So we saw side-by-side video of the smoke that would go through the room when the door was open.

Q So definitely it's wrong according to you?

A No, no. No, I didn't say it was wrong. I think they did it right. They did a CFD and experiments and they compared the two and they validated them. So I actually don't think it's wrong.

Q Is it fair to say that you have no understanding of what exists in an isolation room?

A I do not know what exists in an isolation room.

Q Do you know that the Saarinem article and the videos you showed up there were done in an isolation room, correct?

A The Saarinem article was done with two rooms. So in the videos that you saw yesterday a person walked from a negative pressure room into a positive pressure room. So they actually were in the isolation room and walked out and you saw the gas go out. And so even though it was an isolation room you still had flow leave.

I mean, look, when you open a door, flow goes both ways even if you have a pressure difference. And that's I think a pretty compelling finding.

MR. FARRAR: Your Honor, I can't recall if Defense Exhibit 2899 was published yesterday.

THE COURT: It was.

Q Dr. Abraham, do you see this underlined right here? "This basic test case was performed in an isothermal environment without ventilation," correct?

A Yes, that is correct.

Q So the idea of this laminar flow or unidirectional flow in an operating room was cut out of this article, correct?

A Well they used a room that didn't have a ceiling vent.

Q That's not something that you shared with the jury yesterday, right?

A No. I mean it's not relevant. The point was when you open a door whatever your pressures are you will get a big air

flow. That was the point that I was trying to make.

Q The question I asked you, sir, is that's not something you shared with the jury yesterday, correct?

A No, I did not tell the jury about ventilation in the isolation room.

MR. BLACKWELL: Your Honor, may I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, I'm just raising an issue of the timing. At this point he's now exceeded by a good bit of time on the direct and he's still going.

THE COURT: How much longer?

MR. FARRAR: I've got like 5 or 10 minutes.

THE COURT: You've been going for 34. So get it wrapped up in 10 minutes.

MR. FARRAR: Yes, Your Honor.

(RETURN TO OPEN COURT.)

Q Dr, Abraham you've seen no literature that used data from an isolation room and applied it to an operating room, fair?

A I'm sorry, I didn't catch the question.

Q You have seen no literature that used data from an isolation room and applied it to an operating room, correct?

A I don't recall any such data.

Q Isolation rooms serve a very different purpose than an

operating room?

A I agree with that.

Q You don't know if there's a sterile field in an isolation room?

A I agree with that.

Q There are no operations in isolation rooms?

A I don't believe there are but I'm not an isolation - I'm not a surgeon so I'm not aware if operations are done.

Q I showed you Exhibit 4448 yesterday. This is a calculation that was done by Dr. Elghobashi, correct? You've seen that before?

A Yes.

MR. FARRAR: Your Honor, I would offer and ask permission to publish 4448.

MR. BLACKWELL: Your Honor, no objection.

THE COURT: 4448 may be used for demonstrative purposes and published to the jury.

Q Dr. Abraham, I'm not going to go through this but I just want to show, these are the calculations that Dr. Elghobashi both did and provided, correct?

A This is a document that Dr. Elghobashi provided.

Q And it is you would agree multiple pages of calculations?

A I would agree there's calculations on this page.

Q And on this page?

A Yes, I would agree.
Q And some he did by hand, correct?
A These look like Navier-Stokes equations.
Q You're not a member of the National Academy of Engineers, correct?
A I am not.
Q You know that one of their requirements to become a member is that you're to uphold the industry, do you understand?
A I don't know what the requirements are.
Q You understand that Dr. Elghobashi's study was published and it was actually peer-reviewed, double-blind peer-reviewed, correct?
A Yes, that's my understanding.
Q And his co-authors have PhD's, correct?
A I don't know.
Q Do you understand there's a map named after Dr. Elgobashi called the Elgobashi Map, correct?
A Yes.
Q You know that the government called Dr. Elghobashi for Star Wars and whenever they had to defend the company from Russian and things like that?
A I don't know what the government if the government called Dr. Elghobashi or when.
Q You understand that NASA calls him whenever they laid a rover on Mars?

MR. BLACKWELL: Objection, Your Honor, irrelevant and it's assuming facts not in evidence. Counsel is testifying.

THE COURT: Sustained.

Q A couple of things you said that I want to finish on. CFD is never right but sometimes useful, correct?

A That's correct.

Q And that if anybody said your CFD showed the Bair Hugger was safe, that would be a stretch, correct?

A I would have to know more about the context. I'd have to know about what they're saying.

Q You testified yesterday and I could show it to you in your deposition. If anybody used your CFD to say the Bair Hugger was safe, that would be a stretch. Do you agree with that now?

A I think what you asked yesterday was if someone said using my CFD the Bair Hugger is safe in all operating rooms, that really wasn't the intent of my CFD. I mean, my CFD certainly shows that the Bair Hugger doesn't disrupt the downward airflow but I think my experiments are more compelling.

Q Go to 254, Tab 4. If you'd read 19 through 26. Now when you say your question was ...

A I'm going to stop you but I'm reading the lines before that so I could have context. Okay, I'm ready.

Q You said in line 19, the question was "Do you think

it's a stretch to say that my model shows the Bair Hugger is safe for all surgeries?"

And you said "I think that's a stretch." That's what you said, correct?

A Yeah and I agree with that.

MR. BLACKWELL: Your Honor, I'd object on the rule of completeness and ask that Counsel read the entire exchange from lines 10 down to line 25. I can show Your Honor.

MR. FARRAR: I'll read it if you want.

Q "Question: Okay, do you think it's fair to 3M to say that your model which is not a predictive model would indicate that the Bair Hugger is safe for all surgeries?"

Your answer: "If it was just my model alone that I - I mean I would use the experiments that I performed. I don't know what 3M has said about my model.

Question: Do you remember my question?"

Answer: Your answer was do you think it's a stretch to say that my model shows the Bair Hugger is safe for all surgeries?"

Your answer: And I think it's a stretch. I'm sorry, "I think that's a stretch." That's you speaking.

"Question: Would that be an accurate statement if 3M said that?

Answer: No, I'd have to investigate it some more."

I read that correctly, right?

A Yes. And the issue was ...

Q I'm just asked if I read it correctly?

A Okay.

Q So in summary your CFD is wrong. It may or may not be useful. And it would be a stretch for anybody to say that your work shows the Bair Hugger is safe in all surgeries, fair enough?

A I would say my investigation and including me - well, I don't even - I don't know the landscape of all surgeries in the world so I don't like to use the word all. I think my investigation which includes my CFD, my experiments and then I reviewed independent researchers who agreed with me. And with that totality I think the Bair Hugger is safe for the types of surgeries that Ms. O'Haver had.

MR. FARRAR: Thank you. No further questions.

MR. BLACKWELL: Yes, Your Honor.

REDIRECT EXAMINATION BY MR. BLACKWELL

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

Q Now I would like to start with one of the drawings over here. You were trying to explain to the jury that the drawing and the assumption were incorrect to the jury. Do you remember discussing that with Mr. Farrar?

A Yes.

Q Was it this one?

A Yes.

Q Would you please explain your answer to the jury why it is that this drawing and the assumption are both incorrect?

A Well there's really two reasons. First of all - I'm sorry, there's three reasons. I discussed in my report and I cite four different independent research papers that looked at the effect of pressure in an OR when a door is opened. And four independent studies say that once you open the door you get rid of the positive pressure. In addition, when you open a door the airflow goes both ways regardless of the pressure.

We actually had the camera, the camera from the video that was shown yesterday side-by-side video of the smoke. We had the camera on the outside of this room. So even though it was an isolation room intended to keep air in, when you open the door air leaves. But, finally, the Saarinem paper didn't even use a negative pressure isolation room.

Q To be clear, so to the extent you're talking about positive pressure, negative pressure and the Saarinem study are you telling the jury it didn't even involve a negative pressure room?

A That's right. They did not use a negative pressure isolation room.

Q And how do you know that?

A Because it says it in the paper and I would be happy to show you.

Q One moment. This is Exhibit 1498 and that's --

A Exhibit 2899.

Q What page are you looking at?

A I'm looking at page 3 of 19.

Q Okay. So it's the same exhibit as our 1498 from yesterday. If we may, I've highlighted a section here. Is that what you are referring to?

A Yes, it is.

Q Let's get the jurors a chance to see what we've highlighted. And then explain why this is significant. "Addition of other factors such as ventilation, temperature differences between the rooms or negative room pressure, that is unbalanced ventilation would be a relatively simple next step." What does that tell us?

A That tells us that they didn't even look at a negative pressure isolation room. So they're telling us that they could investigate different pressures in a future study.

Q So when Mr. Farrar is asking you all those questions about positive versus negative pressure rooms, this is not a point he brought out, was it?

A Correct, he did not bring this out.

Q Let me go back to the Bair Hugger demonstration for a moment. Then I'm going to come back and talk about some of the

other studies. Do you remember standing here yesterday and we turned on the Bair Hugger with the hose attached actually to the blanket?

A Correct, I remember that.

Q And the jurors were able to pass by?

A I remember that.

Q And were in the courtroom when Mr. Farrar asked the jurors to do the same thing but took the hose off of the blanket?

A Yes.

Q Did you review the warnings and instructions for use of the Bair Hugger?

A Yes.

Q And you told us about that yesterday?

A Yes.

Q I want to ask you about something that it says. I'll read it to you from the product itself and then I want to ask you a question. "Do not warm patients with the temperature management unit hose alone. Thermal injury may result. Always connect the hose to the 3M Bair Hugger blanket or 3M Bair Paws before providing therapy. The Bair Hugger temperature management unit has been designed to operate safely ONLY with 3M patient warming disposable components." Is the blanket that this is to be attached to such a disposable component?

A Yes.

Q Would you tell the ladies and gentlemen of the jury if you know when is it ever appropriate in an operating room to use the Bair Hugger without the blanket attached?

A Never.

Q Do you know of any evidence in this case at all that the Bair Hugger was used in Ms. O'Haver's surgery with the blanket off?

A There's been no evidence that that happened.

Q Are you aware from the studies that Mr. Farrar discussed with you where anybody was properly using the Bair Hugger patient warming system and took the hose off the blanket and stuck it down toward the floor to blow hot air at the floor?

A I've never heard of that.

Q Any idea why Mr. Farrar might want to do that as a demonstration for the jury?

MR. FARRAR: Objection, speculation.

THE COURT: Sustained.

Q But at any rate, you saw that's what happened yesterday?

A I did see that's what happened yesterday.

Q But always meant to be used with the blanket?

A It is always meant to be used with the blanket.

Q Now this is a case because the claim that the Bair Hugger patient warming unit caused an infection. Do you understand that?

A I do.

Q Now he had you look at the studies and he asked you all about particles. But did you see any study where anybody ever was able to get any particles out of the Bair Hugger patient warming blanket used like it's supposed to? Were they ever able to culture bacteria from those particles?

A No.

MR. FARRAR: May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: The bacteria in the machine coming out of the machine is outside the scope of his expert report. It's outside the scope of my cross-examination. He's here to talk about airflow, not - disruption of the laminar flow, not the culture of bacteria.

MR. BLACKWELL: Well, Judge, it was Mr. Farrar who in Dr. Abraham's deposition established that he had no opinion about particles. And then he spent half the day yesterday asking him about particles anyway. He opened up this door. It was not a proper the way he did and I'm just following up on what he raised knowing that wasn't a part of his opinions or in his report but he went there yesterday.

THE COURT: The objection will be overruled at this point. But I don't think that there's a basis to ask

a great deal of questions regarding bacteria and particles with this witness.

MR. BLACKWELL: All right. I'm sorry, Your Honor. Mr. Farrar did show him a certain number of particles studies. I wanted to go back through the particles that Mr. Farrar showed.

THE COURT: If Mr. Farrar asked about him the studies then I think that's fair game.

MR. BLACKWELL: Thank you, Judge.

(RETURN TO OPEN COURT.)

Q You answered a number of questions yesterday for Mr. Farrar about particles.

A I did.

Q We'll talk about those particle studies in just a moment. I wanted to turn your attention to one other thing. If you could pull up - and we showed this yesterday, Your Honor, Exhibit 2252?

THE COURT: So I have 2252 as a clip from Abraham's CFD. Is that what you're referring to?

MR. BLACKWELL: It's a still, Your Honor, that he just showed him.

THE COURT: This morning?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: You may.

Q Let me ask it this way. Do you recall discussing with

Mr. Farrar a certain image that he had from Dr. Elghobashi's CFD that had the 1.2 seconds written on it?

A Yes.

Q Now it was actually your CFD?

A Yes, my CFD.

Q But it is 2252. Do you remember discussing this with the jury yesterday?

A Yes.

Q Now yesterday when we discussed it do you recall anything on here that included a 1.2 second length when we discussed it yesterday?

A I don't remember discussing this.

Q But the 1.2 second length wasn't something you ever put in your report, is that correct?

A That's correct, yes.

Q So somebody put it there, right?

A Correct.

Q Now you wanted to talk about this 1.2 seconds and the way that Mr. Farrar came up here and turned on the stopwatch on his phone and went through that a couple of times, do you remember that?

A I do.

Q He was standing right here, wasn't he?

A Yes.

Q And did you feel that was fair when he was trying to

characterize your CFD model?

A I didn't feel it was fair and I wasn't able to complete my answer.

Q Would you please explain to us now why that wasn't fair and then complete your answer.

A So my CFD allowed me to follow the trajectory or the pathway of air for I think well over 60 seconds. So to say that I could only follow air for 1.2 seconds is incorrect.

Q Now let me talk about a few of the particles studies that he showed you. And there are just a few points I want to bring out to show the jury. I want to start with what's marked as Plaintiff's Exhibit 0097 if you have that in front of you. This is the Belani study.

A I do.

Q And this one was entitled "Patient Warming Excess Heat the Effects on Orthopedic Operating Rooms Ventilation Performance." And you see Mr. Belani's name there, do you?

A I do.

Q And do you see I highlighted another name next to that. Do you see that name?

A Yes, I do.

Q Albrecht?

A Yes.

Q Do you know who that is?

A I believe he is an employee of a competing company.

Q An employee of a competing company as a company that makes the Hotdog?

A Yes, I know. And I know of the Hotdog. The Hotdog is an alternative device for warming patients.

Q A competitor?

A It's a competitor.

Q And so one of the persons authoring this study is somebody who works for a competitor who is doing a study on the Bair Hugger finding that it increases particles?

A Correct.

Q Now there is a disclosure in the back and the jury has seen a whole lot of disclosures but here's another one. Let's see what it says. Do you see Mark Albrecht?

A I do.

Q With various letters and things behind his name. And it says, "Contribution: This author helped design the study, conduct the study, analyze the data, and write the manuscript. Attestation: Mark Albrecht has seen the original study data, reviewed the analysis of the data, approved the final manuscript, and is the author responsible for archiving the study files."

And then it says, "He's received paid support, a salary from Augustine Temperature Management." Now who's Augustine Temperature Management?

A Augustine Temperature Management is a competing

company.

Q And so this is a competing company that makes the Hotdog doing a study to find fault with the Bair Hugger?

A That's correct.

Q And so let's see what they actually say in here. I'm going to bring out a of couple things that weren't brought up for the jury yesterday. First of all, you've heard a lot of talk about both bacteria and particles?

A Yes.

Q So for the jury what was his study looking at over the surgical site? Was it particles or bacteria or what? You can see it right.

A It was bubbles.

Q Bubbles. You understand this case to about bubbles over the surgical site?

A That's not my understanding. This is not a case about bubbles.

Q And there's a large increase in the number of bubbles, wasn't there?

A That's right. And these are detergent bubbles. They're soap bubbles.

Q Now he talked with you quite a bit about what the study found in terms of bubble counts. But I wanted to point out another thing in this study that relates to the observed disruption in the airflow. If you'd turn to page 5.

A I'm there.

Q In the paragraph that begins "It is worth mentioning."

A Yes.

Q It says that to the extent he's talking about these differences looking at what happened with the Bair Hugger on or off, "It is worth mentioning, however, that the observed disruption was dependent on our exact set up; that is the arrangement of the draping, lights and personnel which did not include the presence of instrument trays and a working surgical team. Thus, we are unsure of the exact degree of ventilation disruption that might occur in a working operating room during orthopedic surgery." What does that mean?

A It means that the setup matters and they're unsure about what would really happen.

Q So would it be a fair in this study that it stands for the proposition that turning the Bair Hugger on is going to be disrupting ventilation in a working operating room during orthopedic surgery?

A The study does not show that.

Q In fact, it says just the opposite; that you cannot conclude that?

A Correct.

Q Now you were asked quite a few questions about studies involving surgical lights causing disruptions in the ventilation?

A Yes.

Q And whether you have seen any such studies?

A Yes.

Q Now I want to show you where in this study that was discussed too. If you'd look down toward the end of the paragraph. We'll read it together. Lastly, it was necessary to turn surgical lights off during the experiment to allow for consistent bubble counts in the intersecting light plane. Given that lighting heat sources tend to adversely affect ventilation performance, our results should be considered conservative. What's that tell you about the influence of lighting on ventilation?

A Lights matter. Lights interrupt ventilation.

Q Is that what you said?

A That is what I said.

Q So I'm going to put aside this study that has Augustine and Mr. Albrecht behind it, the representatives of the Hotdog. And I want to talk to you about the Legg study that you talked about. This is Exhibit 96 and I want to bring out in it certain things that weren't brought out in the exam also.

"Forced air patient warming blankets disrupt unidirectional flow." Did you know that the same Mark Albrecht that was working for Hotdog was behind this study too?

A No, I didn't know that.

Q If he is, his name doesn't appear, does it?

A I don't see his name on this paper.

Q Do you know whether or not Augustine and his company actually provided the equipment for this study?

A I don't know that.

MR. FARRAR: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: He's just asking questions and doesn't have evidence. Did you know that Augustine -

MR. BLACKWELL: Albrecht testified to it yesterday. He was behind one of the Legg studies. I was asking him if he was aware of it. It's in his testimony.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q I want you to turn your attention in this study to first help the ladies and gentlemen understand where this study even involved people. We've heard a lot about the power in studies. If you look there at page 1 under "Materials and Methods," was there even a person involved in the study?

A There was a mannequin involved in the study.

Q A mannequin. How many mannequins?

A Well it just says a mannequin.

Q A mannequin. So this study talking about underpowered involved a mannequin meaning one, right?

A Correct.

Q And a mannequin was placed supine which meets on his back?

A That is correct.

Q "On an operating table and a single knee replacement nonporous exclusion drape was hung vertically from the power enclosure." So this was a study of one mannequin?

A Correct.

Q I'll ask you about this because under the study conditions because this was a study that was addressed with you to show that the Bair Hugger increases particles when it's turned on?

A Yes.

Q Let's see what it says. "To see if particle entrainment occurred from a potentially contaminated area, a continuous flow of 0.3 microns glycerol tracer particles created by a Rocket PS 23 Smoke Machine was introduced through a one meter long fenestrated tube secured below the table at the level of the surgeon's knee."

That says a lot, right?

A Yes.

Q First of all, is this telling us that in order to do this test they are essentially flooding the chamber with particles 0.3 microns?

A Yes.

Q Is that a natural normal condition?

A No.
Q Is it a natural normal condition to flood the test chamber with 0.3 microns sized particles dumped under the table?
A No.
Q Are 0.3-micron sized particles that they flooded the chamber with even big enough to carry bacteria?
A No.
Q Why would you do that in a study to determine how the Bair Hugger works for simulating real-world conditions?
A I have no idea.
Q But it's not natural?
A Correct.
Q If we - here's another. In terms of the airflow visualization. "The airflow was visualized using neutral buoyancy helium soap bubbles produced by a bubble generator." So they're using bubbles again?
A That's correct.
Q Bubbles and a mannequin and 0.3 microns test particles not even big enough to carry bacteria?
A That is right, soap bubbles.
Q Do you remember discussing any of this with Mr. Farrar?
A No.
Q Now does this study at all tell us anything about whether a forced air warming device like the Bair Hugger

increases the risk of an infection?

A No, it does not.

Q Let's look at the last paragraph to see what it says. "This study does not show where forced air warming increases the risk of infection. Only that in certain types of theater setup it can significantly disrupt unidirectional airflow and draw particles from the potentially contaminated air below the sterile surgical field. This is a concern." This is about the particles that the study deliberately dumped under the table?

A That's correct.

Q Does not show that forced air warming increased the risk of infection in the OR?

A Correct.

Q I want to show you the other Legg study which was Exhibit 94. Do you remember discussing this one also?

A I do.

Q And, again, we have Legg, Cannon and Hamer. And if any person associated with the Hotdog are behind this study there no names here, do you recognize that?

A Correct.

Q Now do you remember us just talking about flooding the chamber with 0.3-micron sized particles?

A Yes.

Q I want you to turn to the table on the third page. And is it surprising that you see all of these counts with 0.3

microns sized particles?

A That surprises me.

Q Because they put them there?

A Well because they put them there and it's my understanding bacteria are not on particles of that size.

Q So 0.3-micron sized particles, a bunch of those not even big enough to carry bacteria?

A Correct.

Q So all particles aren't created equal, are they?

A That is right. All particles are not equal. nature of our experiment we are unable to conclude that the use of forced air warming device, which produced a change in temperature and an increase in the number of particles over the surgical site would actually lead to an increased risk of surgical site infection. The results do suggest that downward flow of air is disruptive as the warming device was lower than at the surgical site." That's what it says?

A That's what it says.

Q Again, not brought up or discussed?

A It was not brought up yesterday.

Q Did the authors of the study actually call for further work in the last paragraph?

A They do.

Q Let's see what work that is. "Further work is required to confirm that unidirectional airflow is disrupted by

forced air patient warming devices under our specific experimental theater set up and future studies are needed to visualize the airflow over the surgical site? Who did a study like that, Dr. Abraham?

A I'm sorry, your question again?

Q Who did a study to visualize the airflow?

A I'm sorry, I did a study like that.

Q And so does this study that was showed by Mr. Farrar just now, does it stand for the proposition by the author's own words that the Bair Hugger disrupts the airflow over the surgical site?

A It does not.

Q It needs gets studied still?

A Yes.

THE COURT: Counsel, can you please approach.

(BENCH CONFERENCE.)

THE COURT: Be mindful of time. You've gone 24 minutes on your redirect. How much additional time do you think you need?

MR. BLACKWELL: Five.

THE COURT: Thank you.

(RETURN TO OPEN COURT.)

Q Now I want to show you one more study that he showed you this morning. "The openings in the operating room are associated with decreased environmental contamination."

Trial Exhibit 1499. Do you remember discussing this?

A I do.

Q You wanted to point out a part of the discussion that was not flagged for the jury. Is that LAF so laminar airflow?

A It is.

Q "Conditions: Only the number of staff was associated with higher CFU, colony forming units. The relationship between increased staff and increased CFU within laminar airflow may be due to a large amount of bacteria shedding from healthcare workers." Was that pointed out in your discussions with Mr. Farrar this morning?

A It was not.

Q Do you agree with that?

A I do agree with that.

Q Now they mention certain limitations of the study if you read down toward the bottom of the page. "Limitations of the study include the possibility of the Hawthorne effect as the procedures being studied were not blinded." Dr. Abraham, what's the Hawthorne effect?

A I think the Hawthorne effect is when you don't have blanket results so there's a bias.

Q Because the people know they're in study and it's being studied?

A Correct.

Q And that can affect your outcomes?

A Yes.
Q But it's mentioned as a limitation of the study?
A Yes.
Q Was that brought up?
A No.
Q Now you were asked quite a few questions comparing your CFD to Dr Elghobashi's. Was the objective of your CFD the same as his?
A Well the objective of my CFD was to answer a very specific question, whether the Bair Hugger could have enough flow to disrupt the flow out of the ceiling. I believe he purports his CFD to show predictively whether an infection would occur so different goals.
Q And we talked about, for example, the 13 or so issues with the inputs of his. And I won't put it up here again in the interest of time. But do you remember discussing everything from no bacteria shed from the people including surgeons, incorrect venting all the way down to it incorrect draping?
A Correct.
Q And, I think the point Counsel was making was that well the same can be said of yours.
A That's correct.
Q And how is yours different then?
A Well my - I was just very honest about what a CFD could do. A CFD is meant to answer very specific questions

limited to the actual calculation. It's my view that CFDs whether it's mine or his are not predictable especially if you have those errors.

Q Last question. He was asking you questions about Dr. Elghobashi's calculations of heat and temperature from his CFD. Do you remember that?

A Yes.

Q And, I guess the point of the validation in the real world is to make sure your math comports with the reality?

A Well the point of validation is to make sure that your calculations match what really happens.

Q And did in the real-world validation did Dr. Elghobashi in fact take any temperatures from the exhaust heat from the Bair Hugger coming from under the drape or the velocity of the air in the real-world?

A He took zero measurements.

MR. BLACKWELL: Thank you, Doctor.

THE COURT: Re-cross.

RECROSS EXAMINATION BY MR. FARRAR

Q He took zero measurements but he did calculations to be clear, right?

A He did some simple calculations.

Q He took no measurements, the simple ones that we showed up on the screen, those are simple?

A Yes, I'd be happy to explain.
Q Fair enough. 0097 please. You understand that Dr. Belani is a professor of anesthesiology at the University of Minnesota?
A No, I don't know where he works.
Q Do you know that Dr. Nachtsheim is a professor of statistics at the University of Minnesota?
A I do not know where he works.
Q Did you know that 3M offered a job to Mark Albrecht?
MR. BLACKWELL: Objection, Your Honor, lack of foundation.
THE COURT: Sustained.
Q Is it your position that if the paper discloses a bias that means you should disregard that paper?
A Not necessarily.
Q Your paper discloses a bias, should we throw that away?
A Can you explain more? What do you mean?
Q Well Mr. Blackwell just walked through a couple of papers and said, did you know that Mr. Albrecht was involved and he worked for somebody else? That was all disclosed in the paper, right, and that's how people knew that?
A In some cases their connection with the competitor was disclosed.
Q If it's not, then that is a real problem, right?

A It can be.
Q Like in the Memarzadeh, for instance, that would be a real problem?
A I don't know if that's true. Memarzadeh, did he work for - he works at the NIH.
Q Yeah, I understand. Because there's a conflict doesn't mean you disregard the paper, correct?
A Not necessarily.
Q If so, we'd just disregard your paper if every time there was a conflict with your paper, right?
A Well you've got to look at the study on its face and you want to consider if there are biases, you want to consider those.
Q Sure. That's why you disclose them?
A Yes.
Q And when there's conflicts that are not disclosed, if you find out later that there's conflicts and they weren't disclosed, that becomes a real problem, right?
A It may or it may not be.
Q You're not an expert on particles, right?
A I am not an expert on particles.
Q You're not an expert in particles in high-speed flow and you're not an expert in particles in low-speed flow, correct?
A Yeah. Low-speed flow that we were talking about

during that deposition, I believe it was called creeping flow which is extremely low-speed flow. But like in this room I'm an expert in particles flowing in a room like this.

Q Well you testified that you're not an expert in low-speed flow yesterday and in your deposition, you didn't have that comment, correct?

A It might've been discussed in the deposition but that's what low-speed flow means in the thermal sciences.

Q Okay. So you're saying you're an expert in regular speed flow or just somewhere in between?

A I'm an expert in I would say normal speed flow, particles in normal speed flows.

Q I want to talk about sort of a Goldilocks particles like not too fast, not too slow. Is that your claim?

A I don't know if I'd use the term Goldilocks cause it's not very exact.

Q Can we go to page 2 please. And under results can you highlight that. We'll talk about validations. I will read this. "Unidirectional airflow was significantly disrupted when forced-air warming was used. Convective currents were set up within seconds of the forced-air warming system starting up ..."

A I hate to interrupt you. I didn't get the exhibit number.

Q 96, I apologize.

A Okay. Thank you so much. I apologize for being slow.

Q Take your time. Page 2. I don't have many questions for you so we have the time.

A Oh, okay.

Q Sorry I didn't say that very well. "Unidirectional airflow was significantly disrupted when forced-air warming was used. Convection currents were set up within seconds of the forced-air warming system starting up. The bubbles rose approximately one meter above the operating site, moved away from the drape and fell directly onto the surgical site before rising again to start the next cycle." Did I read that correctly?

A Correct, you did read that correctly.

Q That is what Dr. Elghobashi's CFD shows as well, correct?

A I don't know if that's the case. But you gotta remember this was in a Howorth enclosure so this is such a different study. But I don't recall Dr. Elghobashi testifying about what he thinks - first of all, Dr. Elghobashi didn't do bubbles. But I don't recall in his report talking about the one meter.

Q You saw the visualization yesterday. You saw the particles going significantly above the surgeons and the operating room table, correct? It wasn't measured but it's up higher.

A Yeah, I don't remember. Wasn't it a top view. It was

hard for me to get a depth perception so I can't comment about the distance.

Q If we're going to talk about depth perception, Dr. Elgobashi's was in 3D and your CFD was in 2D, correct?

A I disagree.

Q But what you showed the jury was in 2D? The visualization was in 2D?

A The visualization showed was in 2D but my calculations were definitely three-dimensional.

Q A couple of quick points on Legg. At the end of it and we don't have to go to it. But it said, "This doesn't prove -" well let's just go to it. I don't want to misquote it. Can you go to the last page, “Results.” It says something about it doesn't demonstrate that it causes infection, something along that?

A Yeah. It's this last paragraph. It says, "It does not show forced air warming increases the risk of infection."

Q All right. So this is a mannequin, right?

A There's a what?

Q There's a mannequin as a patient?

A This did use a mannequin.

Q Do mannequins get infections?

A No, mannequins don't get infections.

Q There was also a part of that where it talked about that the drapes were nonporous. Do you remember that part?

A Yes.
Q That's pretty common, nonporous drapes?
A Yes.
Q Which means that air can go through them, right?
A Correct.
Q So whenever a patient is draped the air coming out of the Bair Hugger can't seep through that drape. It has to go wherever it's being forced to go, correct?
A Well could you direct my attention where in this paper we're talking about nonporous drapes?
Q To have it handy in front of me cause I don't have a copy. But let me just ask you, regardless of that paper, Dr. Abraham, a nonporous drape means air can't go through it, correct?
A Yes, I agree.
Q You talked about 94. I don't need to put it up but it's the other Legg study. And it says, "Further work was required."
A I have the study.
Q All right. And somewhere towards the end it says, "Further work is required," correct?
A Yes, it does.
Q And, Mr. Blackwell pointed out that you yourself have done that further work, correct?
A Well I have done the work that they're talking about.

Q To be clear, you did it because of litigation not because 3M called you and said, we really need to study our device, right?

A I did the work as part of the litigation.

MR. FARRAR: Thank you, Dr. Abraham.

THE COURT: May this witness be excused by the defendant?

MR. BLACKWELL: Yes, Your Honor.

THE COURT: By the plaintiff?

MR. FARRAR: Yes, Your Honor.

THE COURT: Thank you, sir. You may step down. Folks, we're going to go ahead and take our morning recess. We're going to break today from noon to one for lunch. I have a hearing during that time and so we're going to go a little earlier than we have been. We'll go ahead and do our morning recess. We'll get started at 10:30.

(THE INSTRUCTION WAS READ.)

(BREAK AT 10:13 AM.)

THE COURT: We're outside the presence of the jury. The Court has considered the Defendant 3M's Motion for the Instruction to Correct the Record or Permit 3M to Correct the Record. That motion will be denied.

I will say this though. I will caution plaintiff in terms of their representations of Dr. Mont's testimony in closing arguments. In the event that I feel as though that

his testimony is being unfairly summarized in closing argument and there's an objection, the Court will consider some type of curative instruction at that time. that.

That Motion to Admit Evidence of 7,000 Claims will be denied. The Court does not believe that the evidence that's been presented by the defendants in such a manner to allow evidence of those claims. Any further record in regard to either one of those from the plaintiff?

MR. FARRAR: I guess the only thing I'd add, Your Honor, is in closing if there's more representations about how many were sold per day or how many hospitals they are in use and the infection rates going around deep joint infections, we would object to them opening the door. Obviously, we would approach first.

THE COURT: Sure, if you want to renew your motion the Court will consider it at that time. Any further record from the defendant?

MS. PRUITT: No.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(RETURN AT 10:34 AM.)

THE COURT: You may be seated. We'll continue with the presentation defendant's evidence.

MR. TORLINE: Our next witness will be the video

deposition of Scott Augustine.

THE COURT: Is my understanding this runs about an hour and 15 minutes in length.

MR. TORLINE: That's right.

(VIDEOTAPED DEPOSITION OF SCOTT AUGUSTINE WAS PLAYED.)

THE COURT: Can counsel approach.

(BENCH CONFERENCE.)

THE COURT: Do you want to move for admission of exhibits now?

MR. TORLINE: We can.

THE COURT: Is there an agreement or is there going to be argument?

MR. EMISON: There's going to be argument.

THE COURT: Okay. We'll take it up after my hearing.

(RETURN TO OPEN COURT.)

THE COURT: All right, folks, we're going to go ahead and recess for lunch. We'll get started at 1:15.

(THE INSTRUCTION WAS READ TO THE JURY.)

Have a good lunch. We'll see you at 1:15.

(LUNCH BREAK AT 11:54 AM.)

THE COURT: We'll go ahead and make a record on exhibits. We're outside the presence of the jury. There were objections that were spoken about at least during Augustine's deposition. It's my understanding that the

defendant is moving to admit some of those at this time.

MR. TORLINE: Yes, Your Honor. We'd start with Exhibit 4170 which is the combined Augustine deposition designations.

THE COURT: Okay. Any objection to the Court incorporating that into its record?

MR. EMISON: No objection.

THE COURT: 4170 is received for that purpose.

MR. TORLINE: Your Honor, we'd offer Exhibit 4160 which is the Medwash report that was referenced in Dr. Augustine's deposition.

THE COURT: Any objection?

MR. EMISON: Yeah, Your Honor. This is hearsay. This is a document that Dr. Augustine says that he wrote. He didn't sign. Someone else submitted it. There's no indication that's a business record. There's been no exception to the hearsay rule and it's not an admission of any party opponent and should be excluded.

THE COURT: Mr. Torline.

MR. TORLINE: Your Honor, I think it is a business record. He authored it as part of Augustine Medical.

THE COURT: The objection is sustained. The Court will not receive 4160 into evidence.

MR. TORLINE: Your Honor, we'd offer Exhibit 4161

for demonstrative purposes which is the Zink article on convective warming.

MR. EMISON: Again, this is hearsay Your Honor. This witness is not an expert witness. He was not designated to be an expert witness. And as a fact witness he is not allowed the same prerogative as an expert witness to rely on hearsay documents.

THE COURT: This is 4161?

MR. TORLINE: Yes, Your Honor.

THE COURT: What are we calling this?

MR. TORLINE: It's the Zink article.

THE COURT: Consistent with the other articles, I'll receive it for demonstrative purposes but I'm not gonna receive it just into evidence.

MR. EMISON: 4162 is the Avidan article.

THE COURT: Same objection.

MR. EMISON: Yeah, Your Honor. The difference is the other studies were received for demonstrative purposes because they were shown to an expert who can rely on hearsay and testify about it. But Dr. Augustine is not an expert and does not have that same ability.

MR. TORLINE: Your Honor, he was asked a lot of opinions in that clip about warnings and the design and everything else about the Bair Hugger. We're offering this for demonstrative purposes.

THE COURT: 4162 will be received for demonstrative purposes.

MR. TORLINE: We would offer 4163 which is a letter from Mr. Augustine to the CEO of Arizant.

THE COURT: Mr. Emison.

MR. EMISON: Again, Your Honor, this is hearsay, not authenticated, no foundation was laid that this was a business record, that it was a fair and accurate copy. It's not an admission of the party opponent and no exclusion to hearsay has been identified.

THE COURT: Mr. Torline.

MR. TORLINE: Your Honor, he wrote it. He signed it. He acknowledged that. We think it is a business record.

THE COURT: So the Court will receive - it looks like there's pages 1 and 2 are written by Mr. Augustine. Pages - I'm sorry, 1 and 3 are written by Augustine. Two and 4 are not. So the Court will receive 1 and 3 into evidence from 4163.

MR. TORLINE: Exhibit 4164 which is he pre-market - 510 Pre-Market Summary.

THE COURT: Mr. Emison, any objection?

MR. EMISON: Again, Your Honor, it's hearsay. There was no foundation laid with this witness and the designated testimony about what this was; whether it was a

true and accurate copy; whether it was kept and maintained in the ordinary course of business. It's not an admission of a party opponent and it's about a separate device, not about the Bair Hugger. It's hearsay. There's been no exception identified.

THE COURT: Mr. Torline.

MR. TORLINE: Your Honor, he identified it. He said it was for the purposes of FDA approval. We believe it's a public record.

THE COURT: The objection will be sustained. The Court will not allow 4165 in.

MR. TORLINE: 4164.

THE COURT: Yeah, 4164, sorry.

MR. TORLINE: Your Honor, we would offer 4165, Mr. Albrecht, the exhibit - report that he did at the surgery center in Regina.

MR. EMISON: This is again hearsay, Your Honor. It's not been identified as a business record. It's not been authenticated as a fair and accurate copy of the document. And if my memory serves this was rejected on similar grounds when it was offered with respect to Mr. Albrecht's testimony yesterday.

THE COURT: Mr. Torline.

MR. TORLINE: We believe it is a business record, Your Honor. It was written by Mr. Albrecht as an employee

of Augustine Medical.

THE COURT: The objection is sustained. 4165 will not be received.

MR. TORLINE: 4166 is the other report prepared by Mr. Albrecht.

THE COURT: Same objection?

MR. EMISON: Yes.

THE COURT: Same response?

MR. TORLINE: Yes, Your Honor.

THE COURT: The objection will be sustained. The Albrecht report 4408 will not be received in evidence.

MR. TORLINE: The final one, Your Honor, is 4167.

THE COURT: Any objection to 4167?

MR. EMISON: Yes, Your Honor. This is hearsay emails and I don't even think this includes Dr. Augustine as a recipient much less an author. And even if he was there's been no identification of this as a business record. It's not an admission of a party opponent and it's not subject to any hearsay exception and should be excluded.

THE COURT: Mr. Torline.

MR. TORLINE: Dr. Augustine was a recipient of the emails and we believe it is a business record. It was I believe sent to his Augustine Medical email address.

THE COURT: The objection will be sustained.

Despite being a recipient, the Court finds the exhibit contains hearsay and no exception applies. 4167 will not be received into evidence. Okay, Mr. Emison.

MR. EMISON: Your Honor, I would like to offer the exhibits that we discussed in our designated portions for demonstrative purposes only.

THE COURT: Okay. Do you know if any of them are already in?

MR. EMISON: I don't think they are. These were all new ones. The first one is 2146 which was the 1987 510K document.

THE COURT: Any objection to receiving 2146 for demonstrative purposes?

MR. TORLINE: Your Honor, not if it's for the entire exhibit for demonstrative purposes only.

THE COURT: Okay. Demonstrative only it will be received.

MR. EMISON: 2147 for demonstrative purposes.

MR. TORLINE: We'll object, Your Honor. I think it's included and contained within 2146.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 2148 for demonstrative purposes.

MR. TORLINE: Same objection, Your Honor.

THE COURT: 2148 will be received for

demonstrative purposes only.

MR. EMISON: 2156 for demonstrative purposes.

THE COURT: Any objection?

MR. TORLINE: Not if it's for demonstrative.

THE COURT: For demonstrative purposes only 2156 will be received.

MR. EMISON: 2159 for demonstrative purposes.

THE COURT: Any objection?

MR. TORLINE: Your Honor, we'd object because it's contained within 2156.

THE COURT: The objection is noted and overruled. 2159 will be received for demonstrative purposes only.

MR. EMISON: 2164 which would be Exhibit 104.

MR. TORLINE: Same objections.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 2165 for demonstrative purposes.

MR. TORLINE: Same objections, Your Honor.

THE COURT: 2165 will be received for demonstrative purposes only.

MR. EMISON: 2167 for demonstrative purposes only.

MR. TORLINE: Same objections.

THE COURT: 2167 will be received for

demonstrative purposes only.

MR. EMISON: 2168.

MR. TORLINE: Same objections.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 2171.

THE COURT: Same objection?

MR. TORLINE: Same objection.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 2175.

THE COURT: Same objections?

MR. TORLINE: Yes, Your Honor.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 1842.

MR. TORLINE: Same objections.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 1844.

MR. TORLINE: Same objections, Your Honor.

THE COURT: It will be received for demonstrative purposes only.

MR. EMISON: 1845.

MR. TORLINE: Same objections.

THE COURT: It will be received for demonstrative purposes only.

THE COURT: How many more do you have to go?

MR. EMISON: I'm only going to do one more, 2117.

MR. TORLINE: No objection for demonstrative purposes.

THE COURT: 2117 will be received for demonstrative only. Is that it?

MR. EMISON: That's it.

THE COURT: Any further record we need to make before we bring the jury out?

MR. EMISON: One quick thing, Your Honor.

MS. ZIMMERMAN: Sort of housekeeping as we were tidying up the witness stand, there were just some handwritten notes with were certainly not Mr. Blackwell's or Mr. Farrar's. He's off the stand now. I guess we'd appreciate sort of representation that no witness goes up with handwritten notes to testify again.

THE COURT: I don't know what those are.

MS. ZIMMERMAN: I assume they're from Dr. Abraham.

THE COURT: Have you seen them before? So I think it would be appropriate for you to show it to opposing counsel so that they can know exactly what you're talking about. So are you wanting this on the record cause you're kind of talking so I just want to make sure that

we're clear whether you want your statements on the record or not.

MS. ZIMMERMAN: They don't need to be on the record as long as we have a representation.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD.)

THE COURT: Okay, if everyone could just instruct their witnesses not to bring any handwritten notes up with them. Anything that they refer to will be presented to them as a marked exhibit. An agreement from plaintiff?

MS. ZIMMERMAN: Yes.

MS. PRUITT: We're in agreement, Your Honor, but from past experience witnesses take their own notes to the stand all the time and the Counsel can say, do you have any notes? Let me take a look at them.

THE COURT: Given that it's been a request, I'll go ahead and grant that request and that will be the instruction of the court. Let's go off the record.

(OFF THE RECORD.)

(JURY RETURNS AT 1:25 PM.)

THE COURT: You may be seated. Ladies and gentlemen, we're working to continue with the presentation of the defendant's evidence. Defendant, you may call your next witness. Sorry, guys. I apologize, Mr. Torline. I

should have announced that there's a stipulation that you've entered into. Mr. Torline is going to read a stipulation between plaintiff and defendant that is an agreed fact for your consideration. Mr. Torline.

MR. TORLINE: Thank you, Your Honor. 3M Company a successor to the liabilities if any of Arizant Healthcare LLC and Arizant Healthcare LLC's predecessor companies the plaintiff Katherine O'Haver arising out of the use of the Bair Hugger system in her November 29th, 2016 knee replacement surgery.

THE COURT: Thank you, Counsel. Now you may call your next witness.

MS. PRUITT: Your Honor, 3M calls Dr. Dev Anderson to the stand.

THE COURT: Sir, if you could step up to the witness stand please.

DEVERICK ANDERSON,

having been first duly sworn upon his oath by the Court, testified as follows:

DIRECT EXAMINATION BY MS. PRUITT

Q I was going to say good morning but good afternoon, Dr. Anderson. Can you introduce yourself to the jury please?

A Sure. My name is Deverick Anderson. I'm an

infectious disease doctor at Duke University.

Q And when you say you're an infectious disease doctor, tell the jury a little bit about what is encompassed in that area of practice?

A Sure. So for infectious disease it's a part of internal medicine. After you go through internal medicine residency you do another 2 to 3 years of additional training on infectious diseases.

Within that I focused specifically on infection prevention. People have heard of things like superbugs, for example, and preventing infections that happen in hospitals.

Q And I think you mentioned in your first answer but where do you work?

A Duke University.

Q As is today your first time testifying in a trial?

A No.

Q When was the last time that you testified?

A The last time was probably 2 to 3 years ago before the pandemic.

Q And is testifying in court a big percentage of your work?

A Definitely not, no.

Q Have you drafted some expert reports in other cases?

A Yes.

Q But have you done that for plaintiffs and defense?

A Yes.
Q Are you married, Dr. Anderson?
A I am.
Q Do you have kids?
A I have three.
Q Tell us a little about them. Are they boys, girls?
A I have three boys, a 14-year-old, a nine-year-old and a seven-year-old. It's a lively household.
Q I bet. Mr. - I'm going to call him Brett. We heard Mr. Blackwell call him Eltese but he pronounces it better than I do. So I'm going to say, Brett, will you pull up Slide 1. I want to talk to you for just a minute and let you tell the jury about your education, sir. Where did you go to college?
MR. ASSAAD: Can I get a copy of that?
MS. PRUITT: Sure, absolutely.
THE COURT: Counsel is there a number associated with this?
MS. PRUITT: These are for demonstrative purposes only, Judge. I don't know that there's an exhibit number associated but I will get one.
THE COURT: How about I don't have 4168 yet.
MS. PRUITT: 4168.
THE COURT: Mr. Assaad, any objection to this for demonstrative purposes only?
MR. ASSAAD: No objection.

THE COURT: Thank you, sir. 4168 will be received for demonstrative purposes.

Q So where did you go to college, sir?

A I went to University of North Carolina at Chapel Hill.

Q And tell the jury what degree you got at the University of North Carolina at Chapel Hill?

A Sure. I majored in biology and I got a Bachelor of Science in Biology.

Q And is that indicated on the slide at the bottom?

A That is at the bottom, yes.

Q And then after you got your Bachelor of Science in Biology, where did you were to go to school?

A I went king of across the street to Durham where I enrolled Duke University School of Medicine.

Q And how long was that?

A Four years.

Q And then after you graduated from Duke University School of Medicine what did you to do next?

A At that point after medical school you go to internship and then residency. And so for the next three years I was intern in medicine at the Duke University Department of Medicine.

Q Okay. And so all of those years together, how long did all that take?

A It took a while. Four years of medical school, three

years of internal medicine and then another three years, two and a half years of infectious disease fellowship.

Q And, I'm not trying to embarrass you but you look mighty young. Could you tell the jury how old you are and how long you've been doing this?

A I'm 48 and I graduated from medical school in 2001. I've been on the faculty at Duke since 2006 and so I've been at my current position for 16 years.

Q And have you gotten other degrees other than just your medical degree or MD degree that might be informative about what you did in this case?

A For sure. During my fellowship I actually went and enrolled back at UNC in their School of Global Public Health and I got a master of public health and epidemiology.

Q How long did it take you to get your masters in epidemiology?

A That's a two-year program.

Q So if we could put up the next slide.

MS. PRUITT: Your Honor, if we can. It's Defense Exhibit 4160?

MR. ASSAAD: No objection, Your Honor.

THE COURT: You may.

Q So tell the ladies and gentlemen of the jury what you do currently at Duke University School of Medicine.

A Sure. So I'm a Professor of Medicine on faculty. I

spend most of my time working in what we call the Duke Center for Antimicrobial Stewardship and Infection Prevention. That's a second one that you have on your slide. I run that center at Duke.

Within that we have multiple programs. One of those, in particular, I'm the medical director of and it's called DICON the Duke Infection Control. Essentially, there are many programs within the center, about 50 different people all working on topics related to improving patient safety, decreasing infections, improving the way we use antibiotics and trying to increase harm in the hospital.

Q Okay. And is that then what you spent all of your career since you got all of your degrees doing was infection prevention?

A That's right.

Q And you've been a faculty member for 15 years?

A That's right. I joined in 2006.

Q And let's talk for a moment about slide three please, Brett. About some of the organizations that you are a member of that might be involved in this area of infection control and prevention. Can you tell the jury what these organizations are?

A Sure. So IDSA is the Infectious Disease Society of America. It's the society that most general infectious disease physicians become members of. It helps advocate for different parts of its infectious disease careers.

And then there's also a sub society called Society for Healthcare and Epidemiology of America called SHEA for short. So in my field of infection prevention another big term they use is called Hospital for Healthcare Epidemiology. That's where this society is. So it's a smaller group. Those that participate are all interested in improving this exact same field.

Q And have you authored yourself articles and research manuscripts relating to infections?

A Yes.

Q And have you authored papers and manuscripts that have to do with surgical site infections?

A Yes. It is one of the topics that I'm most interested in.

Q And have you received funding from the Centers for Disease Control to perform research related to infection prevention?

A Yes.

Q Tell us a little bit about that.

A So we have had what we call the Duke UNC partnership, Prevention Epicenters Program. And that's a program funded by the CDC. We're at year 12 of 15 straight years of funding. It's important because it's one of the best ways to do research in this specific area. There are only 11 institutions in the country that are part of this program. So it's been a way to

have a seat at the table of the CDC where they tell us they're interested and we tell them things that we see in the hospital then develop different research strategies trying to improve upon those.

Q The members of the jury might be sitting there thinking what is the CDC? I remember about this. Did you have anything to do with the COVID issues and debate?

A Well not with the CDC specifically. Certainly, plenty of activity at home and in our networks but not regarding the CDC.

Q Let's take a look at Slide 4 if we could, Brett. Is this an example - tell the jury what this journal is.

a So the society I just mentioned SHEA, most societies have what they call their flagship journals. So there a lot of research in that specific area where things are being published. For SHEA that journal is called Detection Controlled Hospital Epidemic. It's called DCHE for short.

Q And have you been an editor in this journal?

A I've been on the editorial board.

Q And you've published articles that have published in this publication?

A Yes.

Q Pull up Slide 5 please. Tell the jury a little bit about this allied task force.

A So this task force has existed since essentially

2006/2007. This is a task force that has tried now to publish two times but a third is on the way, each time trying to essentially write guidelines for the best strategies for preventing infections that happened in the hospitals.

There are many topics out there. The one that I've had the most involvement with as a part of this task force is "Strategies to Prevent Surgical Site Infections in Acute Care Hospitals." I served as the author on both the 2008 and the 2014 versions of that document.

Q So this document "Strategies to Prevent Surgical Site Infections in Acute Care Hospitals" has been published twice by this organization, correct?

A That's right. It's probably worth explaining that when we say this task force has is because there's representation from numerous stakeholders in this area. So we have representatives from SHEA, IDSA, from joint commission, the CDC and other organizations like that all participate.

Q And did you participate in drafting parts of this in 2008 and 2014?

A Both times. As the first author that's one of your primary responsibilities.

Q And was the area within this publication that you focused on preventing surgical site infections?

A Yes.

Q I think you said that there's one coming out pretty

soon, some revision. When is that supposed to come out?

A That is supposed to be published either December of this year or January of next year would be the next updated version of this document.

Q And what has been your role in this updated version that's going to be coming out?

A It's been very similar. I would be what' called a code first author. I won't be in the number one position because we try to let junior faculty fill those roles. But I'll still be one the three lead authors of the paper.

Q And does that paper - is there a plan for that paper also to have articles concerning the prevention of surgical site infections?

A It's entirely about what our best practices are to prevent surgical site infections.

MS. PRUITT: Your Honor, may I approach.

THE COURT: You may.

Q Dr. Anderson, I'm handing you a document here and I want you to tell me if you recognize it.

A I do.

Q What is it, sir?

A This is my CV.

Q And does this include the things we've been talking about with regards to your education and experience?

A Yes.

Q Does it also include all of your publications?
A It does.
Q Does it include your lectures that you gave on this subject?
A Yes.
Q And does it also include your teaching responsibilities?
A It does.
Q Let's briefly tell the jury about what teaching responsibilities that you have?
A At an academic hospital like Duke there are lectures that we'll give from time to time that are part of a specific course. And then in the hospital that's when we'll train and provide education for our med students and residents.
Different than that which all my other colleagues also do, I also give lectures at many of our community hospitals that are part of the networks I mentioned like DICOM where we have access to a lot of community hospitals where we provide lectures to the constituents.

MS. PRUITT: Your Honor, we'd move Defense Trial Exhibit 2593 into evidence please.

MR. ASSAAD: No objection, Your Honor.

THE COURT: 2593 is received.

Q Now I want to talk to you for just a moment about something else that's kind of interesting. But first let me go

back to this publication "Strategies to Prevent Surgical Site Infections." Who is the audience for this publication?

A Well the audience is essentially hospital leaders and physicians that are working in the hospital. And its primary goal is for hospitalized patients. So we're trying to help educate and inform those that are making the policy and treatment decisions in the hospital settings when it comes to our best practices for preventing harm and infection in hospitals.

Q To this task force that have published these two publications and is about to do a third, do they consider different sources of information?

A I think so. I'm not sure I'm completely following the question.

Q When you are writing or putting together the paper that has to do with surgical site infections, how do you gather all the information together to write the paper and publish it?

A Almost all of it is drawn from published literature and so other research papers that have been written. For example, in our most recent round we literately reviewed over 2,100 different articles that have been published since 2014. So we wanted to see how if anything the literature or evidence had changed during that amount of time.

We luckily get some help with software and librarians to help us in that process. But in the end it's the review of

published research literature.

Q Does this guide that is being published on his strategies, does it give definitive suggestions in certain areas?

A Yes, it does. In fact, we have what we call basic practices where all hospitals should follow. We have some additional categories where if additional practices may be required. We also have some that we call unresolved as well because certainly we accomplished it, not every question or issue that is around has a definitive answer.

Q Does this particular guide that published in 2012, does this guide have recommendations regarding normothermia being maintained during surgery?

A So both the 2008 and the 2013 says those are one of our basic practices, that is the highest level of evidence are in those documents. And I can tell you that in our next version it will be the same. It will also say basic practices, basic practice at hospitals should push and strive for normothermia with all surgical patients.

Q And that includes patients undergoing orthopedic surgery, correct?

A Yes.

Q Now I want to talk for just a minute real briefly. I think it's Slide, Brett, at the bottom note there. Tell the jury about your experience with infection control for major

sports.

A I'll try and be brief and I could talk about this for awhile. We have a relationship with the NFL even before COVID. You've probably heard various football players having had MRSA infections. They were seeking to develop strategies to decrease the risk that their players may have to those type of infections and other communicable illnesses.

As COVID emerged that put us in a very good position so that would be at the table with any of the others for professional sports as well. So, ultimately, we were able to develop a relationship not only with NFL but most of the other professional sports leagues alike.

Q And so as part of that ...

MR. ASSAAD: I just need a copy for my records please. I have no objection to it, Your Honor. If I could get a copy.

Q So just a question. Have you been to the Chief's Stadium Arrowhead and given them advice on things?

A I actually have, yes.

Q And how did they do?

A Well from an infection perspective they've done well. This was - my visit to them was preceding COVID but yes, it was a way to try to get help and improve best practices in their training setting in their stadium.

Q And that's what you do for these other national

leagues and sports arenas?

A That's right.

Q Now let's shift gears for just a minute, Dr. Anderson. Can you tell the jury why you're here today? What is it that you want to tell them?

A Yeah, I was asked to review Ms. O'Haver's case. And was specifically asked to review related to whether or not the Bair Hugger was a source of her infection.

Q And have you done that, sir?

A I have.

Q Tell the ladies and gentlemen of the jury what materials you reviewed in arriving at your opinion?

A Well without the complete list in front of me, in a nutshell, essentially her medical records and any of the discovery documents, a handful of depositions. But mostly my opinion has been driven by my experience, by my review of the literature and then even in some cases a re-review of the literature as well.

Q So I would like to talk to you and put up on the board what these opinions are that you're going to be discussing with the jury today. And I would like for you to help me write them and see if I'm a better writer than some others. What's your first opinion that you want to talk to the jury about today?

A So my first opinion is that I believe that normothermia is a standard of care for all surgical patients.

Q Is it okay if I abbreviate standard of care with SOC?
A Fine by me.
Q So the jury has been hearing evidence for two weeks now. And they understand what normothermia is but when you and are discussing it what does that mean?
A So normothermia is again it's the top level which just means maintaining a normal temperature. We use various definitions to try and say exactly what that means and acknowledge there's actually some debate about what that exact definition should be.
But in some way, you could consider temperature, it's a continuous line, right? We know about the fever. When you go to one side of the line and hypothermia is the other side of the line when our temperature goes below it's the normal range that it tries to keep itself within.
Q And what is the second thing that we're going to be discussing here today?
A So the second opinion is that I believe the state of science does not support the idea that the Bair Hugger increases risk of surgical site infection.
Q Let's talk about what your third one is.
A And the third point is that I don't believe that Ms. O'Haver surgical site infection was caused by the Bair Hugger.
Q And when I say surgical site infection, can I also put periprosthetic joint infection?

A Sure.
Q Is that a fair representation of your opinion?
A It is.
Q Now before we get into talking to the jury about these three specific opinions, I just want to ask you, do you recall about when you got involved in this case?
A For this case I guess that would've been about the beginning of the year so approximately January of 2022.
Q Dr. Anderson, do you know anyone that works for 3M?
A I don't.
Q Have you done any other work for 3M about this issue?
A No, I have not.
Q Has 3M funded any of your research?
A They have not.
Q Now are you charging 3M for your time?
A I am.
Q How much and at what rate?
A I charge $750 per hour and then for trial testimony up to $4,000 for a half-day.
Q And you've done that in this case, right?
A Yes.
Q And, I think I have notes that you charged for about 45 hours so far?
A That's right.
Q In forming your opinions in this case I think you told

the jury you looked at her medical records. And we'll get to DICON committee in just a moment. But did you also take what you learned as a result of being - you're the medical director of the DICON committee, right?

A Yes. The DICON is a program within our center, that's right.

Q And so did you take the information that you learned as medical director of DICON too as part of your experience and learning?

A Sure. As part of my experience of learning and understanding what is happening with our DICON network and the rates of infections and in that setting some of the devices that were being used in that setting was certainly a part of my - helped shape the opinion that I arrived at.

Q Was your approach, Dr. Anderson, similar to how you would deal with an infection prediction situation in your everyday job?

A Well, sure. I mean we all just want to make sure that we investigated all of the different ways that an event may occur. And then make sure that if there any deficiencies identified that we tried and first determine what they are and then again see on the infection prevention side much more about actually prevent that from happening again. But this notion of certainly bringing together lots of different information and trying to emphasize it into a clear opinion as to what sequence

of events was to be very similar.

Q And have you in your career also treated patients as an infectious disease doctor?

A Yes, definitely.

Q And you've also consulted surgeons who have had patients that unfortunately have gotten an infection. You've consulted on their cases as an infectious disease doctor, is that right?

A Right. I'd say, in fact, most of my clinical work these days is hospitalized patients. We are consulted on and I would say more than half of those are from surgeries.

Q Are the opinions that I have up here on the screen, are all three of these held by you to a reasonable degree of medical certainty?

A They are.

Q And as you and I were talking, if something is not held to a reasonable degree of medical certainty would you please tell me that?

A I will.

Q Now let's talk for a minute about maintaining normothermia during surgery as the standard of care. I'm going to cover up if I can the other two cause we're going to take them one at a time. So tell the ladies and gentlemen of the jury a little bit about - they've heard the term standard of care. Can you tell them from an infectious disease perspective

what standard of care means?

A Well we often start with the definition of what would most physicians do in a specific setting. For me when you look towards the idea of how we might define standard of care ...

MR. ASSAAD: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: There's no allegation that any doctor violated the standard of care. So this is a case of what reasonable physicians would do or not do. It's irrelevant to the case.

MS. PRUITT: This is part and parcel of his opinion, Your Honor. What's he's reported on is that maintaining normothermia is the standard of care. This has been a known opinion since his report. The jury needs to know what the terms mean.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So will you describe for the jury from an infectious disease perspective what the standard of care is?

A I think from an infectious disease perspective, in one of these samples an example that comes up is should we treat infection with what type of antibiotic? A lot of that is actually driven by specific guidelines as provided in the guidelines from various organizations.

And so we'll use a lot of that information when we're trying to decide. If we treat strep throat we're talking about what we might use for a community acquired illness. Those come typically from guidelines written by professional organizations.

Q And in the infectious disease field do the physicians that practice there know generally what the standard of care is with regard to certain types of illnesses and certain types of treatments for illnesses?

A We hope that they do. That's been my experience and the so the answer to that would be yes.

Q And is it typical based on your experience when you see the standard of care developing in its form, does the standard of care in treating a patient generally involve something that provides no benefit to the patient?

A No. We provide standard of care because we think it will actually benefit the patients.

Q And tell the ladies and gentlemen of the jury what hypothermia is. I'm specifically interested in the core temperature because we're just thinking about putting that thing across your forehead or whatever. What is core body temperature and describe what that means in the context of normothermia?

A Right. So the distinction that being made based on what you said, we will check the temperature to see if somebody has a fever. We're only checking our superficial temperature that our bodies maintain. And it's intended to be a reflection

of what really true core temperature within the word itself within the middle of your body really represents.

And in the setting of a surgical site infection, again, you can use various definitions. Certainly, we would say the colder you are the worst hypothermia temperature would be in our guidelines because of the randomized trials that are published where we use 35.5 degrees Celsius which is about 96 degrees Farenheit when we're measuring whether or not somebody develops hypothermia.

Q And are there other organizations that - is there a range that organizations look out when they're looking at whether somebody's hypothermic or not?

A There are other organizations that have put forward other definitions. For example, Centers for Medicare or Medicaid Services use 36 degrees as their cut off.

Q I would like for you to describe to the jury when a patient goes in to have any kind of an operation that involves general anesthesia, will you describe medically for the jury what general anesthesia can do to the body temperature?

A Right. So and OR setting poses several challenges really for patients when they are undergoing a surgical procedure. The ambient temperature itself, we don't have a just a single gown on. But when you get various anesthesia medications as well, it's kind of a combination of these different insults almost if you would have a tendency to drive

people's temperatures down.

And so when that happens, that's when we have some of the adverse events occur related to hypothermia.

Q And what is vasoconstriction?

A Vasoconstriction is when the blood vessels essentially clench up and as a result the same amount of blood flow you might like to be occurring is stopped from occurring. That is, in fact, one of the issues with hypothermia. It increases blood flow so you don't have as much oxygen delivered to tissues and it impacts the cells really at their core and they become acidotic and they don't function quite as well. And it actually makes it harder to get rid of things like anesthesia so it's almost like a snowball effect.

You keep going down and you start to run into issues related to the way your blood clots and the platelet function as well. So the immune system and the white blood cells and the way they react, all three of these different areas are impacted by hypothermia.

Q Does hypothermia infect - is hypothermia related to the potential risk for infection for a patient?

A It is. I believe it's a risk factor. And, in fact, that's why we have it in our guidelines. Our guidelines much like the CDC and WHO are guidelines to prevent surgical site infections. We believe that normal hypothermia prevents surgical site infections.

Q And so just to summarize what you just told the jury, in your opinion what benefits, medical benefits does a patient receive when they are warmed during a surgical procedure?

A There are several actually and you can find these well summarized in some of those documents that I just mentioned. Obviously, my focus is on infection so that's where my mind first goes. We believe it decreases the risk of infection when we maintain normothermia. It also decreases cardiac events and bleeding episodes as well.

Q Are there different ways, Dr. Anderson, to use active warming to maintain normothermia during a surgical procedure?

A There are.

Q And is forced air warming one of the options that doctors have available to them to warm patients during the surgery?

A Yes.

Q And is the Bair Hugger device a forced air warming device?

A It is.

Q To your understanding and based on your review of the records was the Bair Hugger used in Ms. O'Haver's knee replacement surgery in 2016?

A It was. I recall seeing the documents.

MS. PRUITT: May I approach, Your Honor.

THE COURT: You may.

Q Can you identify those as medical records for Ms. O'Haver?

A Yes, I can.

Q Can you turn to page 40 please, sir. Does this include the temperatures and the monitoring of the temperatures of Ms. O'Haver during her surgery?

A It does. It's a very busy spreadsheet that down in this bottom it has a document showing the temperatures from the procedure.

MS. PRUITT: Your Honor, we would to move to admit Defendant's 2638, page 40 please.

THE COURT: Any objection, Counsel?

MR. ASSAAD: No objection.

MS. PRUITT: May I publish it?

THE COURT: You may. 2638, page 40 is received and may be published.

Q So this is the record that we're referring to here, right?

A Yes.

Q And so for the record, when the jury does get back into the deliberation room if they want to look at it, this page 40 this block that I'm circling with my fingers and pointing to with the pointer are the temperatures, right?

A That's correct. The second to last row it says "temp."

Q And who in the surgical suite is monitoring those temperatures based on your knowledge, sir?

A It's typically by the anesthesiologist.

Q When somebody goes into surgery they're required to - some of the doctors and nurses and anesthetists are required to check that and keep a record of it ever so many minutes or ever so many - over periods of time, right?

A Yes, that would be a very standard type of documentation you would see in a procedure like this.

Q Dr. Anderson, you explained to the jury that there's a range of cut off for defining hypothermia. Does that mean that you recommend waiting until a patient gets hypothermic before using a warming device to warm them up?

MR. ASSAAD: Your Honor, objection. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: He isn't an infectious disease expert. He hasn't been offered as an expert in anesthesiology and when to use the Bair Hugger. He's never used a Bair Hugger ever in his life. So as to whether to use the Bair Hugger for warming, he's not offered, he's not qualified. There's been no foundation to offer the testimony.

MS. PRUITT: He's just testified about

hypothermia. He deals with it in his infectious disease practice. My question was simply, in your opinion does that mean you recommend waiting until the patient gets hypothermia before you warm them. He does this all the time. And he's already about what hypothermia means and the context of his testimony is with infectious disease doctors.

MR. ASSAAD: He's not an anesthesiologist. He's never used a Bair Hugger ever.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q My question was Doctor, you explained to the jury that there's a range of cut off for defining hypothermia. In your opinion, does that mean that you would recommend waiting until a patient gets hypothermia before using a warming device to keep them warm?

A No, we promote the active use of the forced air warmer or similar devices to try and give the patient the best chance of not getting hypothermia. These devices when you first turn them on they don't immediately make someone normothermic. It does take some time and so you're already behind the eight ball if you wait.

Q Based on your experience in the prevention of infections and infection control, what is your opinion about what can happen if a doctor or hospital does not follow the

standard of care in treating their patients?

A Well I think part of the main concern is that the patients can be harmed. Again, that's really why we want to push the issue of what we consider to be best practices and standard of care. It's not that bad things can't happen but we want to give the patient every chance to prevent those types of things from happening.

Q Do you know whether there are any doctors that disagree with you, Dr. Anderson, that maintaining normothermia during surgery with some type active warming is the standard of care?

MR. ASSAAD: Objection, Your Honor.

THE COURT: Overruled. You may answer.

A Could you repeat the question?

Q Sure. Do you know, Doctor, whether there are any doctors who disagree with you about your opinion that maintaining normothermia during surgery with some type of active warming is the standard of care?

A There may be some. I don't know any personally. It's certainly my belief that the vast majority believe that they need to maintain and promote the use of normothermia. And it's most typically done with forced air warming devices.

Q And that was the base case back in 2004 when you unpublished that publication to guide practitioners?

A 2008, yes.

Q 2008. And then it was the same in 2014, right?
A That's correct.
Q And is it going to be any different in the publication that's coming out in 2023?
A After reviewing the 2,000+ articles that we reviewed, it will be largely the same. There will some additional emphasis on the importance of also prewarming. But the intraoperative warming recommendation is still a part of our top-level guidance.
Q And that recommendation is?
A That is that we recommend promoting normothermia for all surgical patients.
Q Do studies support your view, Dr. Anderson, on maintaining normothermia during surgical procedures?
A I believe they do. And that's why they are then a part of the guidelines that are published, not only by a group SHEA but also CDC and WHO. All three of those organizations have summarized the literature which includes two randomized controlled trials that demonstrate a decrease in adverse events with the use of warming.
Q And, I want to get you back to the definitions in this case. I think the jurors got them. The CDC is Center for Disease Control, right?
A Yes.
Q And then the WHO is the World Health Organization,

right?

A Correct.

Q And they have guidelines?

A Right.

MS. PRUITT: May I approach.

THE COURT: You may.

Q Dr. Anderson, do you recognize this paper?

A I do.

Q And can you tell the jury what it is?

A This is a paper written by Amada and colleagues. It is investigating the association between normothermia in surgery and then postoperative complications following orthopedic surgery.

MS. PRUITT: Your Honor, we would like to move in Defendant's Trial Exhibit 4100 for demonstrative purposes only.

MR. ASSAAD: No objection, Your Honor.

THE COURT: May I have a title for this, Ms. Pruitt?

MS. PRUITT: *Association Between Normothermia in Surgery and Postoperative Complications*.

THE COURT: Do you have anything shorter?

MS. PRUITT: Association Between Normothermia in Surgery and Complications.

THE COURT: Got it. Thank you. 4100 is

received and may be - for demonstrative purposes and may be published.

MS. PRUITT: Thank you, Your Honor.

Q I'm not going to spend a ton of time going through highlights and everything like that, Dr. Anderson. I think the jury has heard about studied out. But the point I want to make is that this article - can you just tell the jury in your words why this article supports your opinion about normothermia?

A Well is it an article that focuses on patients undergoing surgery. And in their particular analysis this is what they call a prospective cohort essentially where it wasn't a randomized trial necessarily. They said we're going to try to warm patients. As we know, there are sometimes where even when we try and warm patients they don't necessarily maintain normothermia. That's just some variation of how people react. that did not maintain.

And they looked at several different outcomes as we often do for these types of studies. And I though this one was noteworthy because it was one of the only ones that I've seen that actually showed a mortality difference between the two sides of that study.

Q And what year was that study, sir?

A This was published in 2020.

Q And are there also - we just discussed the CDC guidelines. Was is the last version that you're aware of the

CDC guidelines?

A The CDC guidelines were last published in I think 2017.

MS. PRUITT: May I approach, Your Honor.

THE COURT: You may.

Q Dr. Anderson, will you take a look at that and tell the jury what it is?

A Sure. This is a copy of the main recommendation that was published by the CDC *Guidelines for the Prevention of Surgical Site Infections.*

A Yes.

MS. PRUITT: And, Your Honor, we would move to admit Trial Exhibit 4137 for demonstrative purposes only.

MR. ASSAAD: May we approach, Your Honor.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: I could be wrong but I don't see this anywhere in his report. If she showed it to me I would have no objection but I did not recognize his argument or see it in his expert report.

MS. PRUITT: In his export report he refers to the CDC guidelines, Your Honor, and it's also been discussed with him in his deposition testimony and he relies on these guidelines in his everyday practice.

MR. ASSAAD: I don't see an article in the expert

report.

THE COURT: Can I see his report?

MS. PRUITT: Sure.

MR. ASSAAD: It's not even from the CDC the website.

MS. PRUITT: In his report, "Normothermia is currently recommended by all major surgical site infection prevention guidelines including four separate guidelines published by the CDC, the World Health Organization, IDSA, SHEA and the American College of Surgeons. And he gives the websites to all of them in his report.

MR. ASSAAD: It's not this website. It's not linked to the website.

THE COURT: Here's what I will just say. If you can - I mean given that this is about the Centers for Disease Control and prevention guidelines, if you're able to lay additional foundation for reliance on that, at this point the objection will overruled.

MR. ASSAAD: He didn't read this article to prepare for his deposition. It is not even in his report.

THE COURT: Just a second. Was this discussed in his deposition?

MS. PRUITT: The CDC guidelines were discussed. This is an article about the CDC guidelines.

THE COURT: Was this article discussed in his

deposition?

MS. PRUITT: I'll have to ask for sure.

THE COURT: If the article was discussed in his deposition, the objection is overruled. If the article was not discussed in his deposition, the objection is sustained. So we could take a break if you need to.

MS. PRUITT: No, I don't think I need to. Your Honor, may I be allowed to talk to him since he's talked about the guidelines in his report, about the guidelines generally?

THE COURT: If you're talking about the guidelines in his report, yes.

MS. PRUITT: Thank you.

(RETURN TO OPEN COURT.)

Q Dr. Anderson, in your report which I'll hand you a copy of did you refer to these guidelines in your report when you were giving your opinion?

A I did.

Q Can you take a look at your report please. I think that's on page 4 and 5 at the bottom of page 4 and at the top of page 5. And you referenced the CDC guidelines?

A That's right.

Q And this article that I just showed you, this publication, is that a reflection of the CDC guidelines that you referenced in your report?

A Yes.
Q And did you rely on this article that I just handed you in giving your opinions concerning normothermia?
A Yes, definitely.
MS. PRUITT: Your Honor, I would like to move in for demonstrative purposes only Defendant's Exhibit 3147.
MR. ASSAAD: Same objection, Your Honor.
THE COURT: Come on up.
(BENCH CONFERENCE.)
THE COURT: So I think maybe I wasn't clear. The CDC guidelines you can talk about but the article itself I'm not going to admit unless it was discussed in his deposition or referred to in his report, okay?
MS. PRUITT: Okay, thank you.
(RETURN TO OPEN COURT.)
Q Could you describe for the jury what the CDC guidelines are, Dr. Anderson, in the area of normothermia?
MR. ASSAAD: Your Honor, when he's talking about CDC guidelines, it thin it was received as demonstrative.
THE COURT: Doctor, if you could not refer to 3147 for your testimony until it has been admitted, I would appreciate it.
Q Doctor, can you summarize the CDC guidelines for the jury?
A The CDC guidelines are consistent with the guidelines

that we put forward in the SHEA guidelines and the guidelines for IDSA. That is that normothermia and the maintenance of normothermia is strongly recommended.

Q Strongly recommended?

A They use various grades in the way that we talk about the strength of evidence.

Q And you mentioned in that answer SHEA and IDSA, didn't you?

A I did.

Q And, I've already forgotten what those organizations are. Can you refresh our recollection as to what SHEA and IDSA are?

A SHEA is the Society of Healthcare and Epidemiology of America and IDSA is the Infectious Disease Society of America. That's a reference to the docket we were just talking that I was the first author on this task force.

Q And you're a member of those organizations, right?

A Yes.

Q And do they also have guidelines where they discuss maintaining normothermia during surgery?

A SHEA and IDSA?

Q Yes.

A Yes, that's a combined guideline.

Q And what is their recommendation with regard to preventing - to maintaining normothermia during surgery?

A It is one of the basic practices. It's recommended.
Q Let's talk for a minute about the American College of Surgeons. Does the American College of Surgeons have a recommendation about intraoperative normothermia?
A They do as well and they also recommend it.
Q They also recommend normothermia?
A Yes.
Q Are you aware of the 2018 International Consensus of Orthopedic Infections?
A I am.
Q Does the International Consensus support all of the guidelines that we just talked about?
A Yes, they also - their group agreed that normothermia should be promoted and maintained.
Q Now the jury has heard -
MS. PRUITT: Your Honor, may I approach.
THE COURT: You may.
Q Dr. Anderson, do you recognize the study I just handed you?
A I do.
Q And is this one of the documents that you read and relied on to give your opinion?
A It was, yes.
Q And we call this - what is it called by a short name?
A The short name is we call it the Protect study?

MS. PRUITT: Your Honor, this has already been used for demonstrative purposes by plaintiffs. I'm not sure what the number is so I would like to move it for demonstrative purposes, Defense Exhibit 2574.

MR. ASSAAD: No objection, Your Honor.

THE COURT: 2574 may be used for demonstrative purposes and published to the jury.

Q Now it's been a while but I think there was some representations in this case to the jury that this study protects a different proposition that there were no benefits to warming during surgery. So I want to ask you do you agree or disagree with that?

A I disagree with that.

Q Tell the jury what your view of what Protect looked at and what it did? What's your view of that?

A My view of this - and it's a nicely done study, a multi-center randomized controlled trial where they were looking at surgical patients. But instead of looking at normothermia versus hypothermia they were looking at two levels of normothermia.

Standard and that's defined as 35.5 to 37 versus aggressive warming trying to get temperatures above 37. So that to me is a very different study design. It's about two levels of warming, not is warming better than not warming. I think they're very different questions.

And that second question is not answered by this. In fact, the authors themselves say keeping core temperature at least 35.5 appears sufficient.

Q In conjunction with what is shown in this study, Brett, can we pull up Slide 8 please. Mr. Farrar, I believe it was him put up a slide that was used in opening and used the Protect study to say it's the proposition that there was no benefits that surgical site infections were not reduced; heart attacks weren't reduced; blood transfusions were not reduced; length of hospital stay was not reduced and postoperative shivering is not reduced.

MR. ASSAAD: Objection --

THE COURT: I'm sorry, what was the objection again?

MR. ASSAAD: Commentary and leading.

THE COURT: Overruled.

Q And my question to you is, Dr. Anderson, in your opinion did the Protect study stand for the proposition that none of these benefits exist when you're warming a patient during surgery?

A I don't think that that's how you interpret this study. It might say that aggressive warming does not improve these outcomes over standard warming.

Q And so these benefits that are reflected on the slide that I just put up on the screen, is it your professional

opinion as an infectious disease doctor that those benefits exist when patients are warmed during surgery?

A Yes, I believe they exist.

Q Thank you. Now let's look at your second opinion here. We're going to move pretty quickly through this, Doctor, because of time issues. Your second opinion is that you do not support that the Bair Hugger increases the risk of surgical site infections.

And what I want to talk to you about in this section is the DICON committee that your medical director of. First of all, I want you to tell the jury how the DICOM committee came about.

A DICON is the Duke Infection Control Outreach Network is a network within our center that has over 60 community hospitals throughout the southeastern US so West Virginia down to Florida. We work with all these hospitals to try and help them improve their infection prevention practices.

As part of that mission we provide a lot of education. We provide a lot of data reviews and answer questions and issues that may come up in an attempt to support the infection prevention programs that are at those local community hospitals.

So one of the things we routinely publish is what we call our monthly newsletter. We try and find topics that are of particular interest. We've been doing this for 17 years now.

And in 2015 as there was this kind of accumulating question about whether or not the Bair Hugger was associated with risks

of PJI, it was something we thought would be reasonable to try and address in our newsletter.

Q Okay. And in 2015, Dr. Anderson, can you just describe for the jury how it came about that you became aware of this "controversial issue about airborne contamination and surgical site infections with forced air warming."

A There were a few ways. There were things like letters being sent to email inboxes that people would receive. But the real way is that our community hospitals were asking. They wanted to know. They wanted to know the answer. We used this - are we going to be causing harm to the patients that we use this on?

So, again, that's part of our mission. We want to help them. If there's a hard no, we don't want to do something like that, so we tried our best to address what we knew at the time and then provide some support and education to those committee hospitals that were asking the questions.

Q And so in the DICON network which is Duke Infection Control Outreach Network, right?

A That's right.

Q And is it funded by a foundation?

A It's a network that has existed for 25 years. And it started through a Duke foundation seat grant.

Q And when it was seated, how many hospitals were in that system?

A Three. And it's important to know these are not within the Duke University Health System. These are hospitals that are outside of our system.

Q And how many community hospitals are part of that network today?

A It's grown to 65.

Q And you're the medical director of this organization?

A That's correct.

Q So these questions that had come up in 2015, as medical director, were you involved in taking a look at the issues?

A Certainly.

Q Tell the jury what DICON did to take a look at this issue and these controversial things that you might be hearing about potential surgical site infections.

A Sure. With a potential clarification. In 2015 I was an associate medical director at that time but the approach was still the same. The leadership group, Dr. Sexton and myself would work with a fellow. It was pretty standard practice we had an infectious disease fellow. It's a way for them to learn through this process as well.

We would work with that fellow to construct a plan on what we needed to review; did we have a good and complete reference list. We don't want to write book chapters here. This is really supposed to be an approximately two-page, kind of short

and sweet to the point and use that strategy for putting materials together for this newsletter.

Q And so what type of materials would you and Dr. Sexton and others have looked at when you were deciding what you were going to say with that?

A Well almost always we're doing a pretty good review of the literature. So I'd say for the most part what we're trying to use to formulate our opinions is published information. We also do, of course, layer in our experience and how things might be potentially different in community hospitals versus what might be published in big tertiary care centers. We're kind of putting these things together. The biggest foundation is published information.

Q It so you mentioned in your answer that another thing that you saw is those emails coming in. Can you better detail and describe for the jury what you mean by that?

A It's been a few years so the details are little bit vague. But to me and again many others - we were actually asked this specific question around this time. We would get what we would call spam mail. I don't know if we called it that at the time but spam emails would just show up in the inbox that were saying the Bair Hugger is unsafe and you should instead use the Hotdog. It was explicitly stated in the emails to us. And that picked up shortly after the McGovern study was published.

Q And so these emails to the best of your memory, they talked about the Bair Hugger having a problem and the Hotdog being the better product to use?

A That's right.

Q And did you explore that and find any other information out about those emails?

A Maybe not very much. Again, we all kind of put our heads today, this is kind of strange. At the same time we're also looking at - I should say certainly it led to this idea that we wanted to try to address this issue on our own because it was in very similar timeframes probably maybe for the same reason. I don't know when this email was coming out but we were just getting a lot of questions from our community hospitals.

Q So the DICON came up with a conclusion or information that you put it a newsletter, right?

A That's right.

Q And you sent it to all these community hospitals in the system, right?

A That's correct.

Q And what did the letter conclude about the Bair Hugger and surgical site infections, sir?

A Our conclusion was that we didn't think that there was sufficient evidence to tie the use of the Bair Hugger to increased risk for surgical site infections.

Q And you put that in a publication to send out to your

68 or 70 community hospitals?

A That's right.

Q Now do you know how long the Bair Hugger had been used for intraoperative patient warming, how widespread?

A I believe it's quite widespread. I would have to use the general thought that it's been used at least for decades but I don't know much more specific than that.

Q Can you explain to the jury what a population level means?

A A population level would be an epidemiological term where we're talking about not within specific individual patients but just an entire group that may be undergoing a single type of procedure.

Q And as a result the being the medical director of DICON, did you have access to statistical data from all of these 68 community hospitals?

A That's right. Again, at that time it would have been a few fewer than that, but yes, part of our routine is on a month-to-month basis we collect data for what we considered to be important outcomes and surgical site infection is one of them. There's a long list of other things as well. But not only do we try to use that to help these hospitals, where should we be improving and help you make your hospital practices better but we trying to turn that into research as well to try to get better information published so that everyone knows what might

be happening in the settings.

So we actually pretty routinely tried to summarize and describe what was happening in surgical site infections in community hospitals.

Q And you do that within the Duke system as well?

A We do.

Q And you are involved in gathering that information and taking a look at it?

A Yes. We have a systematic strategy where it's all essentially automated at this point.

Q And what do you know based on your work with DICON and with the Duke system about the percentage of knee and hip replacement infections?

A Well I think the big picture is that it's going down and it has been for at least the better part of the last 10 to 15 years. We, in fact, published a paper that showed just that. And we're not the only ones to be honest. There is at least one other publication by the CDC as well that essentially showed the same trend over the last 10 to 15 years showing that surgical site infections have been coming down.

Q And within this data that you have personally been able to look at, did you have knowledge that those surgeries both hip and knee replacement surgeries they were using forced air warming to warm patients during those procedures?

A I would say the majority were. For example, I know

with more certainty that the 45 community hospitals that we have in the State of North Carolina all use the Bair Hugger for knees and hips.

Q And the trend you're seeing with regard to infection rates for hip and knee surgeries, how has it looked over the past 10 years for instance?

A We documented a 10 percent decline over time. So, again, these days we would quote that the typical number of infections after hips and knees is about .6 or .7 percent. It used to be we would quote about one percent. So over time it has steadily declined.

Q Dr. Anderson, in your opinion is this what you would expect to see at the population level if the Bair Hugger was causing surgical site infections?

A No. I think we would see rates go up particularly because we know patients that are undergoing these surgical procedures are at increasing risk as well as its related to age and weight and other factors like that.

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: I'll just make a record here that he has also looked at the FDA 2017 letter and he's relying on it in his report. And I know the Court has already ruled and I'm not suggesting it change it's ruling, although as

part of the support for his opinion I would ask the Court to reconsider. But I want to reaffirm our briefing on that issue and mine and your discussion in previous witnesses and Mr. Blackwell's and your discussion with regard to the FDA 2017 letter.

THE COURT: Your objection is noted. The Court's ruling will remain the same.

MR. ASSAAD: A couple of things. He is talking about rates, about how they have not affected the use of the Bair Hugger in the hospital, that the infection rates and the decreased infection rates to say that the Bair Hugger was not used. This opens the door to the lawsuits.

And another issue and I don't even know how to cross-examine him. The purpose of writing the DICON letter that he was discussing further lawsuits, it's in the title of the newsletter. It says, *Bair Hugger and HotDog Lawsuits Were Lying.*

Now she's opened up the letter, he gave false testimony about the reason why he wrote the letter. It's about lawsuits, not about the emails. Now because of the Court's ruling I can show him that letter. I could show the letter to Your Honor.

THE COURT: So the Court does not believe that based upon his testimony that the door has been opened. The Court does not find that the fact that lawsuits that

have been filed to be the same. The Court doesn't think that the testimony as presented has opened the door which would cause the Court to change its ruling regarding the lawsuits.

Do you have much left as it relates to your cross and the DICON? We can take that up at the break because I think I need to look at the letter. And if you're wanting to cross-examine on that, then I need to establish a clear parameter in that regard so that we're all on the same page.

MS. PRUIT: I think we should take a break, Your Honor, because that will open the door to bunch of other stuff. I haven't asked to publish the letter. I didn't ask him to read from the letter. I didn't show him the letter. I just asked him the conclusion of the letter.

MR. ASSAAD: She asked what was purpose of writing the letter. And we know that's - part of the purpose is for lawsuits. It's in the title.

THE COURT: That being in the title doesn't mean - there's not an agreement in that regard so I don't want to rule on it. We'll take it up on a break.

(RETURN TO OPEN COURT.)

Q So Dr. Anderson, in the course of the DICON study of this issue, have you seen studies that have shown that an increase in particle through the Bair Hugger being turned on

increases the risk of surgical site infections?

A No.

Q Now I would like to go to your third opinion and talk to you about Ms. O'Haver's specific situation and her infection if we could, sir. When do surgical site infections typically occur?

A Typically, bacteria are inoculated at the time of surgery. And it takes some time for them to incubate and eventually cause symptoms. So they end up getting diagnosed approximately two to three weeks after the surgical procedure.

Q And, I want to talk to about are there some instances where you just don't know what caused the infection?

A Sure.

Q Where do the majority of bacteria that cause surgical site infections come from, Doctor?

A The majority come from skin. The most common one is what we call staph would be the most common cause of surgical site infections.

Q And how do you know this? What is your basis for telling the jury that the majority of the bacteria that you see with surgical site infections of the hip and knee come from the skin?

A From two different locations. First is we looked at the published data including where we go down thousands of surgical site infections, we summarize it and say which ones are

common or most common. Staph aureus is at the top of the list. It's followed by one of the other staphs that we called coagulates negative staph. And strep is also high up there. nose and the mouth but primarily top to bottom for skin.

Q And we will get to that when we look at Ms. O'Haver's medical records on the culture that they attained in just a moment.

Is there a name or a designation for the bacteria that exists on the skin?

A Well, when we look at them under the microscope, we do different stains to try and see. You get a good guess of what kind of organisms we might be dealing with. And the term gram-positive based on the way that it looks as it's absorbed by a certain kind of dye is the most common. And, again, that most common of gram-positive are called gram-positive cocci balls.

Q Now the jury has heard the term endogenous bacteria. Can you tell them what your definition of it is as an infectious disease expert?

A So endogenous bacteria would be any bacteria that we have living on us and there are many.

Q Could you tell the jury briefly what a microbiome is, sir?

A Sure. This is an area that's really been growing a lot in the last few years. Potentially, we think of we fight off bacteria. Well if you look at the entire population of

bacteria that live in various parts of our body, we then start to get what we call microbiome analyses.

Probably the one that's most common that we've heard about is the gut microbiome. You hear lots of advertising for yogurt that's supposed to improve your gut health. What they're trying to push is that improve your gut, microbiome.

Q And the microbiome, can you tell the jury what's the ratio that make up the skin cells versus bacteria?

MR. ASSAAD: Objection, leading.

THE COURT: Sustained.

Q Do you have an opinion as to what the make up between skin cells and bacteria in a microbiome?

A The estimates that are out there talk about whole body cells and the number of the entire cells we have a body. The initial estimates thought that it was much as 10 to 1 for bacteria to skin cells. But that number has been adjusted of late where we think it's almost one-to-one so we have almost as many bacteria - just more bacterial living on us and within us as we do cells in our body.

Q In your opinion, are infections a risk of all surgical procedures?

A Sure.

Q In your opinion are bacteria around us all the time?

A Definitely.

Q In your opinion, Doctor, based on what you know from

an infectious disease perspective, are human beings in the operating room sterile?

A No.

Q Based on what you know as an infectious disease doctor and working in infection prevention, do you have an opinion as to whether having on a gown, gloves and a mask makes a human being sterile?

A No, I'm not aware of anything that will make a human being sterile for bacteria.

Q Is the operating room in your opinion as an infectious disease doctor, sterile?

A No, there are many designs to try to decrease the numbers bacteria that we may encounter but no. When we talk about sterile environments in the operating room, it's really a misnomer. There's really no such thing as a sterile environment.

Q And from an infectious disease perspective in treating patients who have deep joint infections after a surgery, is it your opinion that it is possible to have a sterile surgery?

A No. We know that there are bacteria present in every surgical wound.

Q In your opinion, Dr. Anderson, to a reasonable degree of medical certainty, where did the bacteria come from that caused Ms. O'Haver's infection?

A I would believe to a medical degree of certainty that

the bacteria that caused her infection came from her skin.

Q And did I ask you to assist me in preparing some demonstratives that would help you explain your opinion in this regard to the jury?

A Yes.

Q And would those demonstratives or pictures help you explain your opinion?

A I believe they would, yes.

MS. PRUITT: Your Honor, may I ask the witness to step down and use the demonstratives that he has helped to prepare.

THE COURT: Mr. Assaad, any objection?

MR. ASSAAD: If I can have a copy of the demonstrative in color, I would not have an objection.

MS. PRUITT: Would the witness be allowed to step down, Your Honor.

MR. ASSAAD: No objection, Your Honor.

THE COURT: You may step down. I'll just ask, Doctor, that you keep your voice up especially as you turn away for both the jury and the court reporter. Thank you.

Q You'll have to speak up, Doctor, so Gail could hear you. Tell the jury what this demonstrates to you about skin, human skin.

A Well like we were just describing, I thought it might be useful to talk a little bit in more detail about the

different parts of the skin as to why we then have bacteria that remain even when we do so many things to try and remove bacteria and eliminate them.

So starting with the normal and healthy skin, at first you see that there are multiple layers of the skin before you get into muscle and bone. So you've heard epidermis. You've heard of dermis and then there's subcutaneous tissue and fat.

Well first off, not only do we have the nice epidermal surface here, there are a lot of what we call skin structures that are a part of this organ. We have sweat glands. We have sebaceous ducts. We have hair follicles. And bacteria live not only all across the surface but in each of these structures as well.

And so, obviously, just to make the point you've got some green items that are on this picture to depict the presence of bacteria. Luckily, they're not that big for us but it's a good way to visually reference it.

Q And so when we're talking about the skin layer here, are there names for the different layers of the skin?

A That's right. So if you see this kind of squiggly line area, that is what we call the epidermis. And that's where the skin cells are very tightly packed together. It's really to protect the plate on the top of all of our skin.

Below that is where you start to get much closer to the blood vessels in what we call the dermis. And that's also where

we start to see really the origin of some of those same skin structures.

Q And so I obviously heard you say that the bacteria lives on the top right here as demonstrated by these?

A That's right.

Q Does the bacteria also live underneath that top layer of skin?

A Yes, it does. So in each of the skin structures basically there's an opening to the top and each one of these structures has that opening and there's bacteria inside that structure.

Q Now does this further demonstrate that the bacteria is down below the epidermis?

A Yes. What this figure is supposed to show is, again, so many of the different things we do to prevent infections are focused on trying to reduce the number of skin organisms that are present when we do our surgical procedures. And there's a pretty good list of them. We use antibiotics right before the surgery. We cleanse the skin with special types of soap in skin preps. We tell people don't shave because that might actually damage some of the skin. And in some instances, we do what we call decolonization where there's a specific type of antibiotic and disinfectant. That is all designed to reduce how much bacteria we're going to have when we have a surgical procedure.

The purpose of this particular figure is that well, again,

like on the previous one there are many many fewer. It's not a complete elimination of the bacteria that are present on top and it doesn't have much of an impact on the bacteria that are below the surface. So we still have sweat glands, sebaceous glands and hair follicles. The structures that are below the surface aren't impacted very much at all by these types of interventions that we put in place.

Q So let's look at what happens, Dr. Anderson when an incision is made through any patient's skin down toward a joint. Can you describe what you wanted to demonstrate to the jury?

A Sure. And so the difference between this and the last one is we are trying to show than an incision has been made, a surgical procedure has been done. We've done all that we think we can do to eliminate the amount of bacteria. Like we said, there's still bacteria in the sebaceous glands and sweat glands and hair follicles.

And inevitably when we make an incision in the skin we go through those structures and therefore encounter the bacteria essentially every time we have an incision that goes through the skin. So this is intended to be depicted by the presence of the squames within the incision as well.

Q And can these bacteria that are located, in your opinion, located in the sweat glands and the sebaceous glands and below the epidermis, can that bacteria go down into the joint?

A Sure. I think once the incision is - once the pathway is there then bacteria that are present in these glands will inevitably be throughout the incision. I think there are studies to support that.

Q Now, Dr. Anderson, in Ms. O'Haver's case was her wound cultured when she was in the hospital when they did the washing out and the debridement? Was a culture taken of her wound?

A It was.

Q And what type of organism was grown or showed up when they took that?

A When they took a culture from the operating site, we typically look at that in a few different ways. The first thing we do is put it under a microscope like I was telling you about to see gram-positive or gram-negative. They did see gram-positive organisms, again, thinking that's primarily a skin source that might those my comfort. It ultimately did not grow however and so we weren't able to say specifically what that organism was.

Q But for the jury's understanding in your opinion, the gram-positive cocci that showed up, that's kind of like - am I right that that's like a family?

A Yes. It is a big family. Multiple different types of bacteria are in that family. The vast majority though live on the skin.

Q And so those bacteria from your perspective as an

infectious disease doctor, that fit under that gram-positive cocci heading, they live on people's skin?

A Yes, primarily.

Q Now before we move on, Dr. Anderson, I just want to hand you what's been marked as Defense Exhibit 2639 and ask you to look at page 108 for me please. Are you there?

A I'm there.

Q And did you read these records in giving your opinion?

A Yes.

Q And you relied on those records, correct?

A I did.

MS. PRUITT: Your Honor, we'd move Defense Exhibit 2639, page 108.

MR. ASSAAD: No objection, Your Honor, as to 108. I think 108 and 107 should be included. 107 is the first page of 108.

MS. PRUITT: Perfectly fine. Pages 107 and 108.

THE COURT: Pages 107 and 108 are received and may be published.

Q And, I want to put it up on that screen so the jury can see. Is this a medical document that shows that this grew out gram-positive, gram stain showed gram-positive cocci? Is that where we see what was in her wound?

A This is a discharge summary where they are summarizing

more of the specific laboratory tests that were sent. There's probably a bit of an error in one of the words. They say "Gram stain group." And I believe it's seen on the microscope because from my memory the culture itself did not ultimately grow a organism. When they looked at it under the microscope there were gram-positive cocci.

Q Now let's look at the first board that you helped me with. What did you want to talk about with regard to your opinion about Ms. O'Haver's objection on this board?

A Right. And so we might look at the prior board and think that the outlook is pretty bleak, the bacteria are always there. In fact, luckily like I was saying before because of all of these different measures that we put in place it's actually less than one percent of the time that that scenario ultimately translates into an infection.

Now that said, the idea behind this last figure here is to show that now we have closed the incision and probably some amount of time has passed. The bacteria that were present in this particular instance were able to then grow and cause inflammation. And that's been what this redness has meant. And as a result, we would call this then a surgical site infection.

Q I want to talk to you next about the bacteria that's in every wound. I'm sorry, it's actually a surgical site incision. But I want to talk to you about the bacteria in the wound. Do we need to continue to stand up here or would you

like to return?

A Either way is fine with me.

Q Are you done with the demonstrative?

A I think I'm done with these.

THE COURT: Counsel, why don't we go ahead and take our afternoon recess. Folks, we're gonna recess until 3:05.

(THE INSTRUCTION WAS READ.)

We'll get started at 3:05.

(BREAK AT 2:50 PM.)

THE COURT: So we're outside the presence of the jury. There was an objection that's related to a letter. Yeah, why don't you step out, Doctor. I appreciate it. Okay so Mr. Assaad, what - do you want to go through your objection again?

MR. ASSAAD: Yes, Your Honor. Dr. Anderson was asked questions about a DICON newsletter which is part of their publication under Infection Prevention News. He offered the reason for writing that letter or writing that newsletter was because of emails and complaints from doctors.

But, in fact, the real reason is cause this came out in 2015 when the litigation began. The title of it is *Hotdogs, Bair Huggers and Lawsuit, Oh, My. The Brief Review of the Controversy Surrounding Perioperative Warming*

Methods.

She didn't even ask the question. She asked the question why did you write the letter. It opens the door as to the real reason why the letter came in. He wrote the letter because of the lawsuits and the controversy. So I believe that the door has been opened I should ask about what are the reasons why you wrote this letter was because of lawsuits against the Bair Hugger.

MS. PRUITT: Your Honor, I'm handing the letter up to you because what it does is it goes through - after the title which is what Mr. Assaad is making an assumption about what the purpose of the letter was. It goes through all the science. It goes through their opinion on maintenance of perioperative normothermia, background and rationale.

It goes through current controversies which he's testified to. There were doctors asking questions, Your Honor.

And so they went in this and they looked at McGovern. They looked at all the studies and they came up with their conclusion. And our take is that the body of evidence describing the link and give sites to reference this and scientific articles and those types of things. And the reason I didn't try to put the letter in was because of the ruling. And that for him to suggest that the purpose of

this letter was related to lawsuits because of the title is just not right when you read the body of the letter and what they did.

THE COURT: You were presuming what his intention is. You're saying it's something else. I mean I think if you want to do an offer proof and you question him about it now, that's the only way. I'm not going to allow that presumption to be the basis of my ruling just by virtue of the title.

MR. ASSAAD: I'd do an offer of proof, Your Honor.

THE COURT: Okay. Can you have the doctor come back in please.

THE COURT: We're outside the presence of the jury and the request has been made for an offer of proof. Mr. Assaad.

OFFER OF PROOF BY MR. ASSAAD

Q Dr. Anderson, good to see you again. I have a question on this DICON article, Volume 10, November 11, 2015. The title of the article is *HotDogs, Bair Huggers and Lawsuits, Oh, My. The Brief Review of the Controversy Surrounding Perioperative Warming Methods.*

Do you recall that article you discussed with Ms. Pruitt?

A Yes.

Q Was one of the reasons why the doctors were asking questions and you wrote the article was because of the Bair Hugger litigation that began in 2013?

A I don't know what their rationale was lawsuits versus any kind of emails. In some ways it felt like it was really a controversy. I don't know that there was any one specific thing.

Q But you were aware of the lawsuit at the time you wrote this?

A Others had written about it, yes.

Q It's in the title, correct?

A Correct.

Q And that's probably one of the reasons why was because of the lawsuits that people were asking questions?

A Again, I don't know why they were asking questions. It's my opinion that they were getting the same types of information that we were getting.

Q Is that one of the reasons you wrote that was because of the lawsuit?

A I don't know that that was one of the reasons that we wrote it. We thought it was a clever title.

MR. ASSAAD: That's all.

THE COURT: Any questions?

MS. PRUITT: Yes.

BY MS. PRUITT

Q When you wrote the letter, Doctor, it goes through all the scientific evaluations that DICON did with regard to the - and you might have a copy it. And it goes through all the evaluation that DICON did in evaluating this issue which you testified earlier there was controversial questions being asked by some of your hospitals, correct?

A Correct.

Q And was the main purpose of writing this letter to try to evaluate the controversy from a scientific perspective and provide DICON's view on whether the Bair Hugger was associated with surgical site infections?

MR. ASSAAD: Objection, leading.

THE COURT: It's an offer of proof. The objection is sustained.

Q In your opinion, doctor, and as the medical director of DICON, was the purpose in this sending this letter scientifically based, based on the review of literature and the science in arriving at this conclusion?

A Yes. That's how we deal with all of our newsletters is to review the science and its present. Like I said, our motivation was because lots of our community hospitals were reaching out of us and our mission is to provide education and answer questions that they ask us.

Q And at the core of that, DICON's job is to help community hospitals understand the best practices for infection prevention, right?

A Absolutely.

Q Is that what you were trying to do when you put this in this letter?

A Well the question that came was about safety and this is something we continue to use, that controversy is this causing harm and infections to the patients. And so there was certainly concern that these messages were being delayed and that we needed to address this issue. Obviously, we would not want to have recommendations related to this that caused harm.

Q And that was the purpose for the investigation and the publication of the letter to community hospitals, correct?

A Right.

MS. PRUITT: Your Honor, that's all I have.

MR. ASSAAD: One question, Your Honor.

Q Why is "Lawsuits" in the title?

A Again, we thought it was a clever title.

Q So it was about lawsuits?

THE COURT: We're plowing the same ground here. Thank you, Doctor. So the Court's ruling, I don't believe that based upon the offer of proof and the questions from the witness that it's appropriate to get into the title of that in your questioning. So the Court's ruling will be -

does that have an exhibit number?

MS. PRUITT: It does, Your Honor. It's Defense Trial Exhibit 3450.

THE COURT: The Court will not allow questions as it relates to lawsuits based upon the evidence before it regarding Defendant's 3540, 3450. Is the defendant ready to bring the jurors back out?

MS. PRUITT: We are.

THE COURT: Mr. Assaad?

MR. ASSAAD: Yes, Your Honor.

(JURY RESEATED AT 3:14 PM.)

THE COURT: You may be seated. We will continue with the direct examination. Doctor, I'll remind you that you remain under oath. Ms. Pruitt.

MS. PRUITT: Thank you, Your Honor.

CONTINUED DIRECT EXAMINATION BY MS. PRUITT

Q We were talking before the break about bacteria in a surgical wound. And I want you to describe for the ladies and gentlemen of the jury how you as an infectious disease doctor and other infectious disease doctors can say that bacteria from the skin ends up in the surgical wound.

A There are several different ways to answer the question. First, we look at pieces that are written by experts in the field. You see ranges from 70 to 95 percent of surgical

site infections that are caused by endogenous bacteria.

Then you look at the types of organisms that cause surgical site infections. As we mentioned, staph aureus and Staphylococcus are the number one cause and those live on the skin. But there are also scientific studies that support this idea as well.

For example, there's one study published by Tamblyn that has results that support that finding.

Q Dr. Anderson, can you identify the study I just handed to you?

A Yes. It's written by Tamblyn and co-authors in the Journal of Hospital Infection. Do you want me to read the title?

Q Sure.

A *The Source and Root of Methicillin Resistant Staphylococcus Epidermis Transmitted in Surgical During Cardiothoracic Surgery. Possibility of Preventing Wound Contamination by Use of Special Scrub Suits*.

Q Did you use that study in forming your opinion?

A I did.

MS. PRUITT: Your Honor, I'd like to move to admit for demonstrative purposes Defense Exhibit 4121.

MR. ASSAAD: No objection.

THE COURT: 4121 may be received for demonstrative. Can I get a title that's much shorter?

MS. PRUITT: Source and Route of Methicillin Resistant Staph.

THE COURT: You may publish it.

Q So he's going to put that up there but I'm not going to do the highlighting at all. But tell the jury how this study demonstrates what you're saying, that we know that bacteria from the skin ends up in the wound?

A This study is interesting because they took cultures from various sources at various times. What I mean by that is 60 or so people that were undergoing cardiothoracic surgery. They took cultures from the patients who were about to have the surgical incision. They took cultures from the air and they took cultures from the surgical staff, the nurses and surgeons all before an incision was made.

They did the skin prep and all the intervention we talked about before. And then at the end of the surgical procedure they took cultures from within the incision itself, from within the wound and tried to see if they could determine first, how often did they find this one specific organism. Again, this would be considered one of the many potential organisms that lives on the skin.

They also provided information on where they thought the most common source for those bacteria were as well.

Q And, what did they find when they cultured the wound?

A So when they cultured the wounds they found that every

single one of them had growth of bacteria, all of the patients that participated. About 40 percent of them had the specific organism that they were looking for when they did this methicillin-resistant staph. When they then looked in their analysis as to where the most likely source was it was when the patient had that already on their skin, on the sternum as the most common - the highest risk factor for having that same exact germ inside the wound.

For a handful of them they also did what we called molecular testing where you get down into the DNA of the organism and they could show that the majority of them were, in fact, confirmed to be the organism from the skin.

Q So when they did that culturing, Doctor, was it before or after they put all the things that surgeons do to make sure to try not to have bacteria in there? When did they do it?

A Importantly, they took the culture and then they did all those things that we talked about. And so you'd think that maybe we could get rid of it all. But no, that in fact was what we were talking about earlier. You don't get rid of all the bacteria. And even in this in this instance before you did skin prep and the antibiotics, we can still have that be the biggest predictor for having that germ in the surgical wounds.

Q Now I want to talk to you for a moment about two different things that surgeons and hospitals do to try to prevent surgical site infections. And I want to direct her

attention to the issue of skin prep and to the issue of antibiotic prophylaxis.

First of all, would you define for the jury what I think they know by now but what is antibiotic prophylaxis?

A So we describe antibiotic prophylaxis as the way you prescribed it, an antibiotic that we inject into someone before they have a surgical procedure. It is chosen based on the types of germs we'd expect to see. Skin is a different procedure. When it involves the gut, for example, there would be additional coverage for gut as well.

Q So in my terms is the antibiotic prophylaxis just means you give them an antibiotic before the surgery to hopefully help prevent an infection?

A Exactly. We give it before the incision. We try to make it at a very specific time. We like to give it within an hour of the surgical incision to really maximize the amount present in the wound. And it is one of several things we do to try and reduce the number of bacteria. But as you have heard me, I don't think we've ever reduced the number to zero. It's how far we can push the number down. That's one of the strategies we use.

Q And are there guidelines that suggest what type of skin preps might be most effective for patients/

A Sure.

Q And have you in the course of your years of doing

infection prevention, are you familiar with all those guidelines? A I am.

Q Can you tell the ladies and gentlemen of the jury what's the preferable way to do a skin prep on a patient?

A The guidelines recommend that we use an alcohol-based skin prep. And that's from the WHO guidelines. That's from the CDC guidelines. That's from SHEA and IDSA as well. They also say you should include an antiseptic agent. There are a handful of those. In this day and age we prefer to use chlorhexidine gluconate as a combination that we add to the alcohol.

So, for example, in our upcoming published guidelines in the next couple of months that's what we'll recommend, the use of chlorhexidine and alcohol.

MR. ASSAAD: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: Again, Your Honor, he doesn't talk about the different types of cleaning and antibiotics and guidelines in his report.

MS. PRUITT: Yes, he does. Thirty-one, page 16, he says, "Povidone-iodine was used as a skin preparation but there is no evidence that alcohol was included. All the major guideline organizations recommend the use of alcohol as the key ingredient in presurgical skin prep." This has documented the skin prep.

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q So I think we were talking about the guidelines and you were saying there was two things recommended to clean the skin. One was chlorhexidine which kills bugs hopefully.

A Sure.

Q And the other is alcohol, correct?

A That's right. And there's consistency across the guidelines is the highest level is alcohol. There's some debate about the specific disinfectant. The reason you add that additional disinfectant is cause alcohol works immediately but then it's gone. Where I think disinfectants have a longer-lasting impact as well.

Q Can we have 2638 please. Plaintiff's counsel and Dr. Anderson already have a copy. Can you find 2638 there, Doctor? If you can't I'll give you another one. If you will, will you turn to page 63 of that document?

MS. PRUITT: Your Honor, while he's looking we would offer into evidence the medical record of Ms. O'Haver Defense Exhibit 2638, page 63.

MR. ASSAAD: No objection, Your Honor.

THE COURT: 2638, page which?

MS. PRUITT: Page 63.

THE COURT: Page 63 is received.

Q I'm going to put it up on the screen here. If you'll

look in the center of that document, sir. Can you tell the jury what this alcohol or alcohol-based prep N means in infectious disease terms?

A Amongst all the surgical case records is this documentation of what we do to a patient. And so it's the documentation of what type of skin prep was used. And it is my interpretation that they did not use an alcohol-based skin prep.

Q And that's what N means?

A That's my interpretation, yes.

Q And on the solution that they used to clean the skin it says, "Povidone-iodine solution scrub," right?

A Correct.

Q That is something different from chlorhexidine, correct?

A It is. The science over the years has changed in that now chlorhexidine is superior to povidone-iodine.

Q What did you say?

A Now they believe chlorhexidine is superior to povidone-iodine.

Q And neither one of those were used in this instance?

MR. ASSAAD: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: In this case pretty much the doctor is trying imply the doctor did something wrong here by

using the wrong antiseptic.

MS. PRUITT: Your Honor, he's just laying out the facts. The jurors are entitled to know the facts about what was used and not used for skin prep in evaluating all the evidence and making their determination. I'm not trying to suggest that - I'm not suggesting that anybody did anything wrong. I'm setting out a medical record and the facts.

THE COURT: He's giving his conclusion is that her own skin was the cause of the infection. The Court is going to allow the inquiry.

MS. PRUITT: I'm moving on.

THE COURT: Okay. The objection is overruled.

(RETURN TO OPEN COURT.)

Q Let's talk for a moment about the antibiotic that's going to be begin prior to and was given in this case prior to Ms. O'Haver's procedure. Can you tell the jury what the preferable antibiotics are to be given prior to surgery?

A For this type of procedure we'd recommend beta-lactamase-based antibiotics. And so that means those are penicillin family.

Q And you've reviewed the medical records on this issue haven't you, Doctor?

A I have.

Q She was unable to get that kind of an antibiotic

because of an allergy, is that right?

A That's right.

Q And so what type of antibiotic did she receive?

A She ended up receiving an antibiotic called Vancomycin.

Q And as an infectious disease doctor, do you have an opinion as to whether Vancomycin is as effective as those other antibiotics you just described?

A We don't think it's as effective. In broad terms it doesn't have the same kind of coverage that the others did. We would call it a second line agent.

Q And did you also note - let's look at Defendant's 2638.

MS. PRUITT: Your Honor, I would move in 2638, page 50.

MR. ASSAAD: Objection to the exhibit, Your Honor, the same objection as we just discussed at the bench.

THE COURT: That objection is noted and overruled. Page 50 is received into evidence.

MS. PRUITT: Your Honor, may I publish page 50.

THE COURT: You may.

Q I'm putting this medical record up here. And does this say "Antibiotic given"?

A Correct. I didn't see anything else documented.

Q Does this record also reflect, Doctor, the dosage that Ms. O'Haver was given?

A I does.

Q Tell the jury what the significance of the dosage is.

A One of the strong recommendations is what we call weight-based dosing. If you can imagine if you were filling up a pool you've got to use a certain amount of water depending on the size of the pool. That's what we call volume of distribution. That is directly related to the antibiotics that we use.

So weight-based dosing means that for patients that are above 120 kilograms we have to adjust antibiotics and increase the dose.

Q And medically speaking, was Ms. O'Haver over 120?

A She was. And I should be clear that 120 kilos as related to use of those beta-lactamase when it comes to medicine like Vancomycin, we use a different equation.

You have to give a certain amount for each kilogram, 15 milligrams per kilogram. Given her documented weight of 260 pounds when you turn that into kilograms her dose should have been higher than what she received.

Q So based on the weight-based calculations it's your opinion that the dosage of the antibiotic should have been higher based on her weight?

A That's correct.

Q Now the jury is probably wondering if I've got bacteria in my wounds all the time, why aren't we all walking around sick all the time. They probably think I am cause I've been coughing and hacking for two weeks. I want to talk to you a minute. What's the host - what's host immunity?

A Host immunity broadly speaking is a system in our body that helps prevent and fight off infection. With all parties' offenders were weak at those infections. We've all heard of examples of how we get those infections but the idea is that we're exposed to these organisms routinely. But luckily, typically those don't always translate to infection because our immune systems can help fight that off.

Q I want to talk about that with regard to Ms. O'Haver specifically. Did she have some risk factors that would cause her to be more susceptible to a bacteria if it invaded?

A Well certainly specific to surgical site infection she did. And there's well published risk factors that increase someone's chances of developing a surgical site infection.

Q And can you tell the jury - they heard some of this. But list for the jury what risk factors that she had.

A Two of the first one that jumped out were the smoking history and her weight. Obesity is a risk factor for risk of surgical site infection. We've seen that play out perhaps why based on the dosage she received. But there are a few others as well.

So, for example, she actually got some immunosuppressive medications for good reasons but unfortunately with the timing after she had her surgical procedure developed a complication with the laryngitis.

Q What you mean when you say immunosuppressive medication?

A Yes, my apologies for that. The idea is that our immune system is essentially kind of knocked down when we use immunosuppressant types of medication. And so the one that I'm referring to here would be in the family of steroids.

Q And based on your review of the medical records, did she receive steroids prior to the surgery?

A She actually did. She had an intra-articular injection about two months before. And there's reasonably published data that say that any injections within three months before a joint replacement also does increase risk of infection.

Q And what does a steroid do to the body that causes it to be more susceptible to infection?

A A few things. Probably most simply it impacts the way that our white blood cells, those infection fighting cells act.

Q In addition to her having steroid injection before surgery, did she have to unfortunately take steroids immediately after her surgery?

A She did.

Q What was the reason she had to take steroids after the

surgery?

A She developed a complication after the surgery that was a type of pharyngitis which again quite reasonably was treated with antibiotics and steroids to try to decrease swelling in the throat and neck.

Q In your opinion, Dr. Anderson, could taking steroids immediately - dexamethasone, right?

A Yes.

Q That's the brand name for the steroids?

A Generic name.

Q Does taking dexamethasone immediately after her surgery, did that increase her risk of developing an infection?

A I think it did because, again, we know the bacteria are there. This is the time period during which we're wanting to optimize the way that the immune system is responding to those. And if there's an unfortunate suppression of that type of immune response then that can on this spectrum that we keep talking about push it you the higher level of risk for infection.

Q The jury has heard testimony about wound dehiscence.

MS. PRUITT: I would like to move into evidence in her medical records, Defense Exhibit 2640, pages 69, 70, Defense Exhibit 2668, pages 48 and 50, Defense Exhibit 2668 pages 51, 53, 54 and 55.

THE COURT: Can you repeat those, Ms. Pruitt.

MS. PRUITT: Defense Exhibit 2640, pages 69 and 70. Defense Exhibit 2668, pages 48 through 50. Defense Exhibit 2668, pages 51, 53, 54 and 55.

THE COURT: So I've got 2640, pages 69 through 70. What was the second exhibit number?

MS. PRUITT: 2668.

THE COURT: Oh, I see. It's 2668 ..

MS. PRUITT: 50, 51, 53, 54 and 55.

THE COURT: Okay, got it. Any objection?

MR. ASSAAD: Yeah, I only have 2638 and no 2639 that's been handed to me.

MR. PRUITT: For the record, Your Honor, these are all medical records that have been stipulated to as far as admissibility.

THE COURT: Any objection?

MR. ASSAAD: No objection, Your Honor.

THE COURT: 2640 pages 69 through 70 and 2668 pages 48 through 51 and 53 and 55 are received.

Q Now the jury heard this issue about the wound dehiscence or the wound opening up. They've heard all about that. They've also been told that Dr. Mont came and gave an opinion that he thinks the bacteria entered the wound at that time. Your opinion is that it probably happened during the surgery, right?

A Right.

Q Whether the bacteria got into the wound during surgery or when the wound opened up with the for five days, in your opinion where did that bacteria come from?

A In my opinion it was more likely than not that it still came from the patient's skin.

Q Now have you reviewed her records in 2022?

A I have read a few, yes.

Q And so you're aware from reviewing the records that she had an aspiration of her knee?

A I did review that.

Q Recently, correct?

A Correct.

Q As an infectious disease doctor ...

MR. ASSAAD: Objection, Your Honor.

THE COURT: Can you come up.

(BENCH CONFERENCE.)

MR. ASSAAD: I don't see this anywhere in the record. I see 2017.

MS. PRUITT: It's not worth wasting time over, Your Honor.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q Doctor, we have to hurry through this quite quickly today. I can't find my sheet where I wrote your opinion. And have you explained to the jury the things that support your

three opinions in this case with regard to Ms. O'Haver?

A I believe I have.

Q Is there - and you hold each of those opinions to a reasonable degree of medical certainty?

A I do.

Q First is that normothermia is the standard of care?

A Yes.

Q Second is that the studies cited do not support that the Bair Hugger increases the risk of surgical site infection?

A Correct.

Q And finally it's your opinion that Ms. O'Haver's surgical site infection, a perioperative joint infection was not caused by the Bair Hugger?

A Correct.

Q And on that last opinion, in your opinion, what is the cause?

A In my opinion it was bacteria from the patient's skin.

MS. PRUITT: I have nothing further. Thank you.

THE COURT: Cross-examination.

MR. ASSAAD: Yes, Your Honor. Thank you.

CROSS EXAMINATION BY MR. ASSAAD

Q Good afternoon, Dr. Anderson. We've met before?

A We have.

Q This is not related to the case but when basketball

season comes in North Carolina which way do you go?

A Do I have to say this under oath? You get your indoctrination during undergrad, right? And I want to USC as an undergrad so it's likely I'll go that way.

Q I also depends on how good the team was during undergrad compared to?

A That probably had something to do with that.

Q A couple of things first. So my understanding is - you heard about Dr. Mont's testimony. His testimony was that this happened after the infection. He's been retained by 3M in this case. But you come in and your opinion to a reasonable degree of medical probability says that the inoculation of the bacteria occurred during the operation, correct?

A Correct.

Q So 3M has kind of gone both ways in this case; in, before and during, correct?

MS. PRUITT: Objection, Your Honor.

THE COURT: Sustained.

Q You've never used the Bair Hugger, correct?

A I seen it in use but never applied it myself.

Q And you're not an anesthesiologist, correct?

A No.

Q You have done no independent research on the Bair Hugger, correct?

A Correct.

Q And you mentioned that your hospitals use the Bair Hugger?

A Yes, that's right.

Q Now just to be clear just so we know, you're not advocating that forced air warming is the only way to keep patients warm, correct?

A Correct.

Q You don't care how a patient is warmed. You just care that the patient is maintained above 35.5 degrees, correct?

A That's the goal, correct.

Q And that if a patient can be warmed to 35.5 degrees with a blanket, that would be okay with you, correct?

A If it could be sustained for the entirety of the procedure.

Q Okay. We're talking about orthopedic surgeries here, correct?

A I don't know what you're talking about.

Q Ms. O'Haver's case is about an orthopedic surgery, correct?

A Sure.

Q So if a patient can be above 35.5 degrees with a blanket, that's fine with you?

A Yes

Q And a blanket doesn't blow air, correct?

A Not that I know of.

Q And, I want to talk about normothermia with you for little bit. Do you agree that if you maintain a temperature above 35.5 degrees Celsius in a patient that there's no risk of complications with respect to hypothermia, correct?

A If I'm following the question, I believe yes, if higher than 35.5.

Q And that's what your hospital uses, correct?

A Correct.

Q In the study that Dr. Sessler, the 3M consultant that came out, the Protect that you talked about, that was with 5,000 patients, correct?

A Can I look at the number? I don't remember exactly how many.

Q It was a lot of patients?

A It was in the thousands.

Q It was a robust study?

A It was a good study.

Q Probably the best study out there on normothermia today?

A Well, again, I don't know if it was testing the value of the normothermia itself. I don't interpret it that way.

Q It says as long as you maintain the temperature above 35.5 degrees there are no complications.

A It says maintain it sufficiently.

Q And that study was done in China, correct?

A In China and the Cleveland Clinic.

Q And the reason why they did that study in China is because they don't use forced air warming a China like they do in the United States, correct?

A I don't know what they use.

Q Do you remember the routine care in the Protect study was no forced air warming, no prewarming and the majority of those patients stayed above 35.5 degrees, correct?

A The majority did.

Q Okay. So with respect to patient care, the issue you're looking at is with respect to normothermia is the temperature of the patient not the medical device, correct?

A Correct.

Q If the patient can maintain normothermia without an active warming device then there's no benefit to using the active warming device, correct?

A I mean there still would be benefit if you used it.

Q You don't need to use an active warming device if you can maintain normothermia without an active warming device, correct?

A If you can maintain it without it through the entirety of the procedure.

Q And with respect to keeping patients above 35.5 degrees Celsius, it wouldn't matter to you whether the method was something that blows air in the OR as compared to something

that doesn't blow air at the OR, correct?

A Well depending on what result it is on account of it blowing air.

Q Do you have your deposition in front of you?

A I don't have it in front of me, no.

Q I'd like you to turn to page 202 of your deposition please.

A Okay, I'm there.

Q "Question: Okay, so if you had any," I'm sorry, line 19 sorry. "Question: Okay, so if you had any method of using something that blows air in the operating room as compared to not blowing air in the operating room, would that matter to you?

Well I mean yeah. Again, like I said, we'd prefer not to have air movement." Did I read that correctly?

MS. PRUITT: I'd object. I'd ask that the rest of the answer be read.

Q "It's not always avoidable. It depends on where the air movement is and what the subsequent effects of it are as we've talked about," correct?

A Correct.

Q And you're aware there are other methods of warming a patient. There's cotton blankets, correct?

A Yes.

Q There's reflective blankets?

A Yes.

Q Do you know what a reflective blanket is?
A I know generally what it is, yes.
Q It's kind of like those silver blankets you sometimes see. When people get cold it keeps the heat in, correct?
A Correct.
Q There's a company that puts those blankets out to warm patients?
A I assume they do.
Q There's conductive warming, correct?
A Correct.
Q Another option is to prewarm a patient, correct?
A Yes.
Q Ms. O'Haver's not advocating for any particular method of maintaining normthermia, you understand that, right?
MS. PRUITT: Objection, Your Honor. May we approach.
THE COURT: Sure.
(BENCH CONFERENCE.)
MS. PRUITT: It's improper for him to be asking what he understands her motivation in the lawsuit was and what she's claiming in the lawsuit. He doesn't know. I think it's the lawyer testifying. And I'm going to object and ask the Court to strike the question.
MR. ASSAAD: I'm not sure what the objection is. I just asked him if he's aware that she's not advocating

forced air warming as compared to some other method of warming.

THE COURT: The Court finds the form of the question being improper. The objection is sustained. Your request to strike is denied.

(RETURN TO OPEN COURT.)

Q Now you talked about the standard of care for normothermia, to maintain normothermia?

A Correct.

Q We talked about there's many ways to maintain normothermia?

A Correct.

Q And when making the decision as a physician and what method to use to determine what the standard of care should be, a physician should be notified of the risks and benefits of the medical device, correct?

A Well like we mentioned at the deposition I believe, I don't know exactly what a company's obligations are. I certainly know about medications. There's medications that talks about what risks and benefits there are.

Q But every medical device has benefits and risks, correct?

A Everything you do in medicine has benefits and risks.

Q And you need to know the benefits, correct?

A Sure.

Q And you need to make known the risks, correct?
A That's typically part of any equation that we're trying to solve.
Q And it's an equation, right?
A Sure.
Q And to solve the equations you have to have the variables, correct?
A Correct.
Q You can't solve the equation without the variables like math, correct?
A You need a lot of variables to understand the question.
Q Okay. And so with respect for physicians to determine what's the best way to warm a patient in an orthopedic surgery for they to have a prosthetic device that you only need very little bacteria to cause a periprosthetic joint infection, they need to have all the variables to make that decision, correct?
A It would be useful to know the risks and benefits, sure.
Q You yourself have never even looked at the Bair Hugger manual, correct?
A I have not before I did the deposition.
Q 3M did not provide you the manual, correct?
A Correct.
Q You don't know whether or not they even warn for

airborne contamination in the manual, correct?

A I didn't know before the deposition.

Q But now you know they don't, correct?

A I do.

Q Are you aware of any other companies that warned forced air warming devices cause contamination?

MS. PRUITT: Your Honor, objection. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: The Mistal-Air device where they were trying to introduce the warning and the Court recalls that Court kept it out. And this is just a backdoor way of them trying to suggest to the jury and it's in violation of your ruling that that document and the warning were out because comparing this to another product is not appropriate and we've already done that he's trying to go around the ruling by asking this question.

MR. ASSAAD: I asked him do you need to know the variables, the risks and the benefits. He wants to know if he knows anything.

THE COURT: The objection is sustained.

(RETURN TO OPEN COURT.)

Q We talked about the many ways to maintain normothermia. Do you agree that obese people are likely to

maintain normothermia?

A They are more likely to.

Q Do you agree that obese people are more likely to maintain normothermia without the assistance of a warming device, correct?

A I believe there's data to confirm that. I don't know if we have predicted which ones will and which ones won't.

Q But the answer to my question is they can maintain normothermia without the assistance of a warming device?

A Right.

Q You agree with that, correct?

A I do.

Q We looked at this document earlier in trial. Let's talk about the Protect study, correct?

A Okay.

Q The Protect study you agree, in the Protect study as long as you maintained above 35.5 degrees, there would be no difference in surgical site infections, correct?

A Sure. I don't think that's what this sign says but.

Q The Protect study is the most robust study with respect to maintaining temperatures above 35.5 degrees, correct?

A You're comparing two different ways, to different ranges above 35.5. There is not an research arm in that study that looked at patients less than 35.5. So I don't think that that has an impact on what we see if there.

Q In Ms. O'Haver's case the lowest she ever got was 35.9 degrees, correct?

A Correct.

Q And that was for the first little over an hour, correct?

A I don't recall the timeframe. I know that was one of her early measurements.

Q And you understand why forced air warming has been ineffective for the first hour, correct?

A I recall seeing that. That's not something that I've seen primary data on.

Q You understand that 3M admits - 3M admits that the first hour of using forced air warming is ineffective?

MS. PRUITT: Objection, Your Honor. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: I will withdraw the question.

(RETURN TO OPEN COURT.)

Q Doctor, assuming the evidence in this case is that the use of forced air warming is ineffective for the first hour, make that assumption, fair enough?

A Okay.

Q Do you agree that with Ms. O'Haver the first hour she maintained about 35.9 degrees that the force air warming device,

the Bair Hugger was ineffective for her for the first hour? linear increase in her temperature during the procedure.

Q So from 14:10 to 14:45 they maintained at 35.9 degrees? A Yes, I do see that.

Q But then it went up a degree between 14:45 and 15:10, it went up to 36, correct?

A I don't know that this is 36. I guess that's a 36, okay.

Q So for the first hour it's pretty much the same, correct?

A Sure. The first 45 minutes or less it was 35.9 and that it started to increase.

Q There's an error on the temperature of the patient plus or minus .1, correct?

A I don't know what the exact error is.

Q So for the first hour it's pretty much the same?

A It's really similar.

Q So Ms. O'Haver did not need the forced air warming device for the first hour, correct?

A She had one on so I don't know what her temperature would have been if it was not in place.

Q You just testified that obese people have the ability to maintain normothermia, correct?

A I certainly said they were more likely to.

Q So more likely than not. We're not talking about

definitively. You understand when doctors use the word definitively, they're talking about a hundred percent, correct?

A That's not how I'd use that term necessarily.

Q More likely than not Ms. O'Haver would have maintained above 35.5 degrees within the first hour of using - without forced air warming because forced air warming is ineffective for the first hour, correct?

A No. Again, my comparison is a relative one compared to nonobese patients, obese patients are more likely to maintain normothermia. I don't think you can make any specific claims about any individual.

Q So more likely than not obese patients can maintain normothermia, correct?

A Compared to nonobese patients.

Q You yourself have not performed a study comparing the use of force to warming to a non-forced air warming device, correct?

A No, I have not.

Q Now and you looked at surgical site infection rates, correct?

A Sure.

Q And, I think you mentioned 60,000 I don't how many hospitals or how many patients you looked at so many infections or whatever. Have you been asked to do a study?

A Related to a warming device?

Q Yes.
A No.
Q You talked about the drop in infection rates in the hospitals over the past years, correct?
A Yes.
Q And that's one of your reasons why I mean, I think you opine that the Bair Hugger is not the cause of surgical site infections?
A Correct.
Q But there's other things that happened over the past 10 or 15 years that could affect SSIs, correct?
A Sure.
Q You mentioned in your deposition a surgical technique, correct?
A There are several things, yes. I don't recall if I specifically said surgical technique. Certainly, it's very important when it comes to preventing infection.
Q Approved antibiotics, correct?
A Improving the use and a complete use of the antibiotics that we give.
Q So that improves SSI rates, correct?
A Yes.
Q For example, the use of I guess before surgery they take a certain bath with a certain chemical or medicine, correct?

A Yes, chlorhexidine.
Q So the preoperative care has changed over the past 15 years?
A Well for example things like decolonization and other types of things, sure.
Q So unless you do a study that you look at Bair Hugger versus not Bair Hugger, basically your opinion is a guess, correct?
A I don't think it's a guess, I disagree.
Q And you're basing this off of data you had in 2015, right?
A So the data was published - I looked at from I believe it was 2008 through 2012. A CDC study was from 2010 to 2015.
Q You haven't reviewed any study since 2015 with respect to the use of the Bair Hugger, correct?
A We actually have the current data, yes.
Q Your data but not studies?
A It's not published yet.
Q You haven't looked at any other studies? You haven't looked at the Lange study?
A I don't remember the Lange study.
Q You haven't looked at the Stanford study?
A I don't recall that one.
Q Actually, you looked at very few studies by the time I took your deposition with respect to the Bair Hugger and its

ability to increase bacteria over the sterile field, correct?
A Actually, that's one of the specific things I looked at. What I didn't pay as much attention to were the ones that used experimental methods and bubbles and particles. To me the most important part really is about bacteria and infections.
Q Tell me, with respect to your hospital, you yourself or anyone in your team at that time never researched to determine if any of the PJIs - I assume you have PJIs in your hospital, correct?
A Sure.
Q You never did any research after you were aware of this issue. You never did any research at your hospital to determine if any of the PJIs were caused by the Bair Hugger, correct?
A We did not perform a research study to answer that question, no.
Q But you are aware of other medical devices in your hospital that are used in the operating room that caused an outbreak, correct?
A Sure, the heater/cooler, yes.
Q The heater/cooler is used in bypass surgery, correct?
A Yes.
Q It's not used in the surgery that Ms. O'Haver had, correct?
A Right.

Q And the heater/cooler was a big issue around 2015 and '16 and '17, correct?

A Where?

Q Across the world actually?

A Across the world, yes.

Q Okay. And that's a device that's actually in the corner of an operating room that has a big blower on it and aerosolized bacteria then went into the surgical wound and caused infections, correct?

A I don't that I'd call it a bit blower. It has a blower as part of its machine but, yes, that was the theory that we ultimately proved.

Q It's a blower that's powerful enough to actually cool and heat so it has a cooling element, correct?

A It does.

Q So it's a powerful motor. It's not like the motor on a laptop, correct?

A Right.

Q So it's a powerful motor. Probably more powerful than the Bair Hugger, correct?

A I don't know.

Q And it sits in the corner of the room. And the blower blew bacteria into the surgical wound, correct?

A Well it uses aerosols and aerosols can move without blowers as well. They dissipate through a room. So with a

water source like that more likely that's the way things are transmitted so you get aerosols.

Q And you yourself have not done any research. Going back to the heater/cooler really quick. Prior to the outbreak that occurred with respect to the heater/cooler, everyone thought heater/coolers was safe, correct?

A Sure.

Q By the way, are you familiar with the Bernard study?

MS. PRUITT: Objection, Your Honor. May we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, the Bernard study is nowhere in his report. It's not anywhere on his reliance list and he has not cited it as anything that he's relied upon. Based on the Court's prior rulings on impeaching expert witnesses with studies during cross-examination, the plaintiff cannot lay a foundation to question Dr. Anderson about this case report or publish it to the jury.

MR. ASSAAD: That's not the law in the State of Missouri. The State of Missouri says that if something is authenticated, it may be relied upon in the use of cross examination. Otherwise he can just sit there and say, I've never known about that study. I don't know if the study is reliable. I can show you the case law if you want

me to.

THE COURT: I've been here for three weeks of this trial so I feel like I've got a good handle on things. I would ask you to lay the foundation and we could go from there at this point - I don't want you to start talking about the study until you lay the foundation that's required. The objection at this point is overruled but you need to lay some foundation.

MR. ASSAAD: I don't understand. The foundation has already been laid with Dr. Bowling and Dr. Jarvis that the study is reliable and authoritative. So that's the only foundation.

THE COURT: He doesn't even know what the study is.

MR. ASSAAD: I'm just asking. Sorry, Judge.

THE COURT: I'm just asking for you to - he just said I don't know what this study is. I don't want you talking about the conclusion of what the study is until you've given him an opportunity to do that.

MS. PRUITT: You Honor, may I please put something on the record?

THE COURT: Yes.

MS. PRUITT: For the record, Mr. Assaad has not been here for this whole trial or if he has, he's been in the back. The Court now to change the way we've been

handling these reliance studies not in the report, not in the deposition, not having seen it would not be fair quite frankly because we wanted to cross-examined experts about things that they didn't have in their report and they hadn't seen and the Courts ruling which we respect was that way so far with every single witness and I don't think this is any different.

He's already said he doesn't recognize the study. I'm know and I'm representing to the Court as an officer of the court that it's not in his reliance list, it's not in his deposition testimony and he wasn't asked about it.

THE COURT: So here's the problem is that we're kind of jumping like 30 steps down to where we are right now. I've got to know what he's going to say about whether he recognizes the study. He said, remind me which one that is. So I don't know whether he knows what the study is. I don't know what his answers are.

MS. PRUITT: I just wanted for the record to put that on the record. I respect the Court's rulings but that's the way they've been three weeks in.

THE COURT: Okay so let's see what his answers are and stay tuned.

(RETURN TO OPEN COURT.)

Q Doctor, are you familiar with the Bernard study by the case report with respect to the forced-air warming in an

operating hospital?

A I'm not familiar with it.

Q In your research did you not find that study?

A I have not. If I did I don't remember it.

Q 3M did not provide you that study?

A No, they didn't provide me that.

Q Going back to your research, you have not done any research. And because you have not done any research, you could not definitely exclude the Bair Hugger as a possible source of contamination in the operating room, correct?

A Well not from my own personal research but there is other research that I've seen as well.

Q And we'll get to that, sir, when we talk about the science. You specifically stated that - I'll withdraw the question.

Q Do you understand that the Bair Hugger is not sterile?

A Right.

Q Just like the heater/cooler, correct?

A There so much in there that's really sterile.

Q You understand the Bair Hugger has been filtered - that bacteria has been filtered from inside the Bair Hugger, correct?

A I understand that.

Q Just like the heater/cooler, correct?

A It's not always filtered from within. Looking at the

specific organisms that cause the problem with the heater/cooler.

Q But it has been tried?

A Of course.

Q By the way, you could culture bacteria from the hose, correct?

A I've seen that.

Q Now the fact that the Bair Hugger is not sterile and you could culture bacteria from inside the machine as well as from the hose, that was something you were not aware of until the deposition that we took, correct?

A I believe I had seen it before. Again, I don't recall what my exact response was. I certainly understand that's part of the process.

Q Your hospital uses all these Bair Huggers in different places. At your hospital you are in charge of infection control and were never notified by 3M that the bacteria can be cultured from within the device or in the hose, correct?

A Not that I'm aware of.

Q 3M did not provide you any internal documents to review in preparation for your expert report, correct?

A Correct.

Q Didn't show you any internal documents until the day I took your deposition, right?

A That's right.

Q You weren't provided the manual and you didn't go to the 3M website to obtain the Bair Hugger manual, correct?
A That's right and I have a good explanation for why as well.
Q And until the deposition that I took with you, you did not even know that the Bair Hugger even warms the patient, correct?
A That's right.
Q And it wasn't until your deposition that I took that you became aware that the Bair Hugger devices prior to the 750 warned about airborne contamination, correct?
A That's right.
Q 3M didn't provide you the information with respect to the predecessor Bair Hugger devices, correct?
A They didn't.
Q And you didn't do the research, correct?
A I didn't, no.
Q And you're aware that in all generations of Bair Huggers from 2000 to the present, all of them heats air and then blows it through into a blanket? You were aware of that, correct?
A Yes.
Q You don't speak to anyone at 3M, correct?
A Correct.
Q And, I believe you only reviewed a few depositions,

correct?

A I don't recall which ones I had reviewed.

Q I think you reviewed Dr. Jarvis's deposition?

A Right.

Q You didn't review any of 3M's internal employees' depositions, correct?

A Correct.

Q You didn't meet with the corporate rep who spoke on behalf of the company and talked about the issues of particles, bacteria, and increased infection rates, right?

A That's right.

Q You did not review any of the constitutional fluid dynamics?

A As a clinician that's not something that impacts my opinion.

Q Were you were retained as an expert, did you do any independent research with respect to the Bair Hugger and the risk of periprosthetic joint infections?

A Yes, I think it bears that in my expert report.

Q Well you have your sites in the DICOM report, correct?

A Correct.

Q You say what's in your expert report is what you relied upon?

A It sure is part of what I relied upon.

Q And all the materials that you reviewed were available

to the public?

A Yes.

Q And because you reviewed public materials, you did not know how many times 3M refused to perform studies ...

MS. PRUITT: Objection,

THE COURT: Hold on. Hold on. Come up.

(BENCH CONFERENCE.)

THE COURT: Mr. Assaad, when there is an objection I need you to stop talking because it would be inappropriate if you're allowed to finish the question when there is an objection before the Court.

MS. PRUITT: Your Honor, there's no foundation for this subject and assumes facts not in evidence. Certainly, this witness has had to testify to about anything and he's just trying to testify, you didn't know this about 3M and that about 3M. And we've already had a ruling on this by the Court about 3M's motive and 3M's intent and the Court has ruled that that's off limits and that's all he's doing in his question is testifying.

The witness has already said he hadn't reviewed anything from 3M. So I'm going to object and ask the Court to sustain the objection on that ground.

MR. ASSAAD: It goes to his credibility. It goes to the weight of his opinion, Your Honor. It goes to how much did he know or not know. And I get to point out

things that he did not know and whether or not he considered it.

THE COURT: So you've point out that he didn't review anything from 3M. So with that you're loading the answer into your question. If he didn't review anything from 3M there are things already in evidence regarding that. So as to this question the objection is sustained.

(RETURN TO OPEN COURT.)

Q One of the articles that you relied upon was the International Consensus of Orthopedic Surgeons, correct?

A I included that in my report.

Q In this International Consensus it has a preference for certain individuals, correct?

A I don't recall reading that part. That is typically what you see in those types of documents.

Q Were aware that defense expert Dr. Mont was a part of the international Consensus and edited the entire document?

A No.

Q With respect to the science of the Bair Hugger, you did not review many of the studies relevant to the Bair Hugger and how it increases particles in heat and bacteria in the sterile field, correct?

A I've reviewed what is related to bacteria in the sterile field. I reviewed some, correct.

Q He reviewed Zink?

A Correct.
Q You reviewed Moretti?
A Correct.
Q Your reviewed Huang, H-U-A-N-G and Oguz?
A Correct. Those I believe I cited.
Q Those are the four you put in?
A Yes.
Q You did not review any of the Legg studies?
A I did not.
Q You did not review the Belani study, correct?
A I don't recall.
Q You did not review any of the Pisari studies?
A No.
Q If it was not listed in your report, you did not rely on it, correct?
A I didn't rely on them. I think we reviewed the Albrecht when I wrote the newsletter that I didn't re-review that.
Q If it's not listed report you did not review them, correct?
A Not right before the report. I did review them previously.
Q Let's look at your deposition, page 44, line 24.
A Which page did you say?
Q Page 44, line 24. I asked you, "Did you review the

Pisari study?"

Your answer: "Pisari, same idea. If it's not in the report then that wouldn't have been something that I relied upon." Correct?

A Sure, that's what it says.

Q That was your testimony back then, correct?

A Yes.

Q Is that your testimony today?

A It is.

Q You did not review the Avidan study, correct?

A No.

Q You did not review the Lange study, correct?

A I don't recognize the name.

Q You didn't review the study out of Stanford, correct?

A No.

Q You didn't review the Lange and Reed study, correct?

A I don't recognize the name.

Q You didn't review the Tumia study, correct?

A Right, same idea.

Q You didn't review the Baker study. Not your Baker study but there's another Baker study on forced air warming? You didn't review that study, correct?

A It doesn't sound familiar, no.

Q You didn't review Bernard?

A No.

Q You reviewed McGovern, correct?
A Yes.
Q Now with respect to the studies you relied upon; Zink, Lange and Moretti, those studies then compare forced-air warming to non-forced-air warming correct?
A That's right. I guess the Moretti had forced-air warming - Moretti actually did. It should have had some measurements that was used.
Q They did compare it to another forced air warming device?
A Not without the device in place, yes.
Q Now just a couple things in your report. You recite that you cited the Yamada article?
A If you could point me to it.
Q Do you have a copy of your experts?
A I do.
Q I think it's under the section of normothermia. I think it's one of the first articles you cite in your article.
A I'm with you.
Q Yamada. That was in the Journal of Arthroplasty, correct?
A It was.
Q Do you consider the Journal of Arthroplasty to have a good reputation?
MS. PRUITT: Your Honor, may I have a copy?

MR. ASSAAD: I haven't showed it to him.

MS. PRUITT: Your Honor, may I have a copy of the study?

THE COURT: Come on up.

(BENCH CONFERENCE.)

MR. ASSAAD: I'm not going to discuss the study. I'm just asking him has he reviewed it. I'm asking a simple question. If I'm going to use this study, I'll give her a copy.

THE COURT: So all you're asking him is if he relied on the study?

MR. ASSAAD: I'm asking him about the journal.

THE COURT: So that's going to be your only question?

MR. ASSAAD: At this point, yes.

THE COURT: Okay.

(RETURN TO OPEN COURT.)

Q I just want to talk about the Journal of Arthroplasty for a minute. You're familiar with that journal, right?

A Yes.

Q Are you the editor for that journal?

A No.

Q So do you consider that journal to have a good reputation?

A I don't actually know its reputation to be perfectly

honest.

Q You could say it's authoritative and reliable?

A I would say as a peer-review, I don't know where it stands.

Q You cite to the Journal of Arthroplasty in the article, correct?

A I do.

Q You would consider that article in the journal authoritative and reliable?

A And think as a peer-reviewed article as an editorial that summarized information, I thought it was useful to make sure that there was reference to the orthopedic field itself. That's why I chose that from several others that could have been included.

Q I want to talk about PJIs in general. Throughout your direct testimony you were talking about SSIs, correct? You really didn't explain to the jury that when you're talking about SSIs you're talking not just about superficial wound infection but you're also talking about deep incisional and deep joint infections, correct?

A To broaden it, it would be organ space outside of joints, yes.

Q And what we're talking about here with respect to Ms. O'Haver is what we call a PJI or what you call an organ space?

A That's right.

Q I just want to be clear for the jury because there's different studies with respect to infection control when you look at superficial wound infection as compared to periprosthetic joint infection, correct?

A You'd have to show me the studies.

Q Well you understand there is differences with respect to incidents of infections for a superficial wound as compared to a PJI, correct?

A There is a lot of surveillance data and we don't see that there is very big differences. Sixty plus percent are either deep incisional or organ space with a little bit more of that proportion being deep incisional.

Q I want to talk about organ space because deep incisional and organ space are two different types of infections, correct?

A They're both surgical site infections that has to do with how deep they go.

Q It's a different subtitle?

A It's a different subtitle.

Q And, Ms. O'Haver had a deep organ space infection, correct?

A She was diagnosed with what we consider as a periprosthetic joint infection.

Q And with a periprosthetic joint infection which is a deep organ space, very few bacteria can get into - to attach to

the prosthetic joint to cause a PJI, correct?

A The depth doesn't matter. It's related to the prosthetic material.

Q Okay. As compared to a superficial wound infection you need a lot of bacteria?

A You need more.

Q Same thing with a deep incisional infection. You need more bacteria for a PJI, correct?

A Again, it depends on the presence or absence of prosthetic material.

Q Because the prosthetic material doesn't have any vascularity and therefore the body can't fight it off, correct?

A Once the infection is established it's much more difficult to fight it off.

Q But if it is a superficial wound infection you can either put some antibiotic ointment on it or some antibiotics, correct?

A Sure. They come in different types. Some could be a little more severe. Some could be treated with ointment.

Q And I just want to be clear because that's we're talking about here is deep organ or PJI, correct?

A In this case, yes.

Q I just want to focus on deep joint infection, periprosthetic joint infection, okay, not SSIs?

A Okay.

Q Because it's obvious at least and maybe I'm wrong. But there's way more superficial wound infections in the world than there are PJI infections?

A Again, talking about numbers, I don't exactly know. There a lot of arthroplasties performed so I don't know. I'd have to see the comparative data.

Q I understand. But there's more people in the world that don't have an arthroplasty device or a prosthetic joint device than people that don't, correct?

A Fair.

Q But, I'm pretty sure every one of us has had a superficial infection at some point or the other it seems like?

A Yes.

Q The deep joint infection, that's a serious infection?

A Sure.

Q And as you said, that's a bad infection?

A That infection is what I've spent my career trying to prevent.

Q And the outcome can be pretty bad?

A That's why.

Q And because the prosthetic material - because the prosthetic material with a joint implant, you need very few bacteria to cause a PJI?

A You need less, yes.

Q Let's talk about PJIs. You need bacteria, correct?

A Sure.
Q Diabetes does not cause a PJI, correct?
A Correct. Now with a clarification, there are other things that cause infection but that's certainly not the majority.
Q I understand. You might find a case study on it but you're not going to find a randomized controlled trial on fungal infections of the prosthetic joint, correct?
A I doubt you would.
Q You wouldn't find enough patients for that?
A I doubt you would.
Q Obesity does not cause a PJI?
A No.
Q Smoking does not cause a PJI?
A No.
Q Bacteria would be required to cause it? It just makes you more susceptible, right?
A Right.
Q Do you agree that you need bacteria to inoculate the prosthetic joint such as Ms. O'Haver had during her operation, correct?
A Well there are other ways that it can be but you know it's my opinion that the majority of times that is what happens.
Q And many people that have joint replacements they have - one of them are obese or have diabetes or have some sort of

susceptibility, correct?

A Sure. There's lots of different comorbidities.

Q You're not going to have a super healthy 18-year-old patient who is going to come in and get a prosthetic joint replacement?

A Unlikely.

Q And you know the target population of people that get a prosthetic joint, correct?

A Right, I do.

Q Even if the patient didn't have any risk factors, they can still get it, a prosthetic joint infection because it takes very little bacteria, correct?

A Sure. We know that happens a lot.

Q I'm going to talk about particles. But if we could just agree on a few things. The operating rooms are designed to remove particles from the sterile field?

A They're designed to move air to the patient in a way.

Q Do you remember testifying in your deposition when I asked you a question and you agreed with me that operating rooms are designed to moved particles from the sterile field?

A I remember.

Q Operating rooms provide filtered air over the sterile field?

A Ultra-clean air.

Q HEPA filtered air, correct?

A Yes.
Q Air coming in out of the ceiling is 99.99 percent free of any kind particles?
A Correct.
Q The purpose of an operating room is to prevent particles from entering the sterile field, correct?
A Part of it, sure.
Q Another purpose, as you stated in your deposition to maintain sterile and a non-contaminated environment?
A To the greatest extent possible, yes.
Q Would one of the ways that an operating room maintains a sterile field is by having filtered air flow from the ceiling to the floor and push away any potential contaminants or airborne contamination from the sterile field?
A That's part of the process, sure.
MS. PRUITT: Your Honor, may we approach.
THE COURT: Sure.
(BENCH CONFERENCE.)
MS. PRUITT: I expect he's going to start asking this witness about computational fluid dynamics and airflow in an OR.
MR. ASSAAD: I'm not going to do that.
MS. PRUITT: The witness has already testified he didn't look at that.
MR. ASSAAD: Let me ask the question before she

objects so it doesn't disrupt my cross-examination.

THE COURT: I think it's if on an entire topic, I think that it's fair but there's an issue so.

(RETURN TO OPEN COURT.)

Q I want to talk about the sterile field because we've talked about it a lot in this case. And I just want to make sure the jury really understands what the sterile field is. Not everything in the operating room is the sterile field, correct?

A No, definitely not.

Q The operating room table is within the sterile field?

A That has the instruments.

Q Where the patient is?

A Excuse me, yes.

Q The front of the doctors are in the sterile field?

A Typically up to the table.

Q And the front of assistants are a part of the sterile field?

A Right.

Q The surgical table where the instruments are a part of the sterile field?

A Right.

Q And where the implant is when it's open is in the sterile field, correct?

A Sure.

Q And you would agree with me that if an implant gets

inoculated by airborne contamination while it's on the surgical table, that would not be what you would call and endogenous source, correct?

A If it were contaminated while on the surgical table right out of the package then that would not be considered endogenous.

Q By airborne contamination, correct?

A Correct.

Q Okay. So if it's on the surgical table and it gets inoculated with bacteria, that wouldn't be from the patient, correct?

A Correct.

Q And that wouldn't be what all those pictures you've got up about the incision, that's an endogenous source, correct?

A Yes.

Q And below the operating room table is not part of the sterile field, correct?

A That's right.

Q The Bair Hugger blanket that blows air is in the sterile field?

A I looked into this after we had the deposition. I understand under drapes I guess I had some confusion as to whether or not on which side of the anesthesiology drape it was as well. It's certainly near to it. I would certainly concede that.

Q But in your deposition, you testified the Bair Hugger blanket was in the sterile field?

A I did in fact.

Q And, the Bair Hugger blows hot air into the sterile field, correct?

A I don't know if it blows it into the sterile field. It blows it on the patient.

Q But you talked to many physicians that you have in your hospital group that complain about how the Bair Hugger causes warm air to get hot because of the Bair Hugger?

A I don't know that I've had that conversation.

Q You've not had that conversation? And you understand that moving air in the operating room could contaminate the sterile field?

A It can.

Q You try to avoid blowing air in the operating room because the more air you blow the more likelihood you could contaminate the sterile field, correct?

A I don't know that that's necessarily true.

Q Let's go to your deposition page 59, lines 17 through 23. Are you there, Doctor?

A Page 59. I'm sorry, what line?

Q Seventeen through 23. "Question: You try to avoid any disruption in the airflow but you try to avoid blowing air in the operating room because the more air you're blowing the

more likelihood you could contaminate the sterile field?

Answer: The more likelihood you could have living organism that could get into the sterile field."

Did I read that correctly?

A You did.

Q Was that your testimony back then?

A It was.

Q Is that your testimony today?

A It's close. I mean, again, it would be better with context but I did not provide that.

Q You used the word "organisms," correct?

A I did.

Q Bacteria is an organism, correct?

A It is.

Q And we agree that forced air warming devices are the only active warming devices that blow air in the sterile field, correct?

A Again, I don't know if they blow it in the sterile field. And I was under the impression that there are forced-air warmers by other companies.

Q That's why I used the term forced-air warming devices.

A Okay, yes.

Q I mean resistive blankets don't blow air into the sterile field, correct?

A Correct.

Q Cotton blankets don't blow air into the sterile field, correct?
A They don't.
Q Reflective blankets don't blow air in the sterile field, correct?
A They don't.
Q And we focus on the sterile field because when you look at the bacteria loaded in the operating room with respect to a periprosthetic joint infection, we focus on the bacterial load in the sterile field, correct?
A Sure. That's one of the concerns.
Q Not on the floor, correct?
A Right.
Q Not behind the surgical staff, correct?
A Right.
Q Increasing bacteria in the sterile field is going to increase the risk of infection, correct?
A There are some papers that suggest that, yes.
Q And that's what you testified to back in your deposition, correct?
A Right.
Q Do you need to read it or do you agree?
A I agree.
Q Bacteria in the sterile field is a bad thing, correct?
A It's a ubiquitous thing.

Q You want to minimize bacteria in the sterile field?
A That's what so many of our interventions focus on, decreasing skin bacteria, yes.
Q Because airborne contamination can cause periprosthetic joint infections, correct?
A Sure, it can. It's on the list.
Q And, in fact, the International Consensus of Orthopedic Surgeons say the primary cause of periprosthetic joint infections is because of airborne contamination, correct?
A I don't think that's with language says.
Q Therefore, the bacteria in an operating room would be an exogenous source, correct?
A Correct.
Q So, for example, if an airborne squame inoculates an implant and causes a PJI, that would be considered an exogenous source, correct?
A Correct.
Q Not one you talk about with respect to your pictures of skin, correct?
A Correct.
Q You estimate that 20 to 35 percent of SSIs are deep organ or PJIs, correct?
A Actually, it's a higher number and I was able to look up the mean study that we published that I was referencing in the deposition. So it's about 64 percent are either organ space

or deep incision. I think it's 27 to 28 with organ space.

Q We're talking about - you said deep incision. That got me confused.

A Organ space is a label we could use.

Q Twenty-seven to 35 percent?

A That's reasonable.

Q And of that 27 to 35 percent, you have not done a study or seen a study to determine which of those infections are caused by an exogenous source or an endogenous source, correct?

A Correct. We looked at the organisms that cause it.

Q But the organisms - for example, from the skin are going to be from squames in the operating room, correct?

A Well, again, the organisms from the skin are from the patient primarily.

Q The medical staff?

A Much less likely.

Q You've never heard or seen a study that says most of the airborne contamination in an operating room is from the medical staff?

A Yes, I'm aware of that.

Q And you agree with that, correct?

A Correct.

Q Okay. So most of the airborne contamination in an operating room is from the medical staff, not the patient, right?

A That's right.
Q And, therefore, when you look at it statistically, if an implant - if an infection occurs from an exogenous source that's most likely from the bacteria from the medical staff or maybe even the patient, correct?
A If it's exogenous I wouldn't include the patient int that. You said an exogenous source?
Q Yes.
A I wouldn't include the patient in that.
Q Well I think you talked about this. I need to look it up. But if a bacteria or skin squames are shed off a patient and become airborne, that would become an exogenous source, correct?
A It's probably one that defies the definitions that we use but I don't see that scenario happening very likely but I guess it would be hard to characterize it as one or the other of those based on the source versus the transmission method.
Q So let's talk about exogenous sources real quick and inoculation of a periprosthetic joint. If inoculation occurs on the surgical table that would be an exogenous source, correct?
A Yes.
Q If it occurs while it's be transmitted from the surgical table to the surgeon, that is an endogenous source, correct?
A Correct.

Q If it's transmitted because the surgeon's hands become contaminated because of airborne contamination, that would be an endogenous source, correct?

A It would be. But at that point in the surgical procedure where hands would much more likely to be contaminated by the patient's skin.

Q Okay. But it wouldn't be that mechanism though, correct?

A No, that's true.

Q When you say endogenous source, I'm understanding it to be this mechanism when there's a cut and bacteria swims down, correct?

A I wouldn't use the word "swim." Certainly, that is the most common way in my opinion that you are going to have an endogenous. There are other remote sources of infection that would also be included as endogenous sources. So, again, similar to the question about it being on squames, once you get away from the incision probably technically you're still calling it endogenous because it's originally from the patient.

Q Do you know what a Boviee is?

A Yes.

Q What is a Boviee?

A A Boviee is a surgical device typically used to cut or cauterize.

Q And it's very hot, correct?

A That's my understanding.
Q It kills a lot of bacteria that it touches, correct?
A I assume so.
Q Okay. So you understand in surgeries there's a first incision to go through the first layer of skin that allows the orthopedic surgeon to use the Boviee to cut the rest of the way down to the deep organ space, correct?
A I don't know what they use.
Q But you do know they use that to incise skin, a Boviee, correct?
A They can. I don't know whether they do.
Q And if they use a Boviee, that will kill the bacteria that the Boviee comes across, correct?
A It certainly seems like that would kill quite a bit of it.
Q Surgeons would not want to use a medical device that would increase the risk of the a PJI if the benefits outweigh the risks, correct?
A Yes.
Q You would not want to use a device that has no benefit in some appreciable risk, correct?
A If there's no benefit, why use it.
Q Doctor, assume the Bair Hugger increases the bacterial load over the sterile field. Please make that assumption. You would agree that the risk of using the Bair Hugger outweighs the

benefits of using the Bair Hugger, correct?

A I don't agree with the assumption. You still would have to work through how much, what type of bacteria are were talking about?

Q Please look at page 21 of your deposition, line 23. You said, "If you use an assumption that it's definitely proven that it increases the infections, surgical site infections you wouldn't recommend it, correct?"

You can read the whole question but it's a very long answer.

A Yes, that's what I said. Again, probably best with better context with a hypothetical.

Q So you would agree that if the risk of using the Bair Hugger outweighs assuming that the Bair Hugger bacterial load in the sterile field is increased by the Bair Hugger, you would agree that the risk of using the Bair Hugger outweighs the benefits of using the Bair Hugger, correct?

A Again, if I had my way, I would probably change my answer in this particular question with better context.

Q Do you want to change your answer today?

A Again, I don't want to say that anything that increases bacterial load is something were trying to avoid. However, I think the equation outweighs the risks and benefits. There's more to it than just potential bacteria.

Q The answer you've given your deposition under oath you

want to change?

A With the assumption that I don't agree with then or now, I'd certainly acknowledge that's what I said.

Q For the purpose of my question, you agree with that assumption. So the next question, Doctor. I want you to assume two things. The Bair Hugger increases the risk of PJIs. There are other devices that can maintain normothermia that did not increase the risk of PJI. With those two assumptions you would agree that the risk of using the Bair Hugger outweighs any benefit of using the Bair Hugger, correct?

A Right. Once we then move to the area of PJI, then I think the equation becomes more clear. You would assume from that hypothetical that the device is warming the patient at the same level. But if you make that as an admission to the assumptions then yes.

Q Now let's talk about some of the studies with respect to normothermia. You were talking about the benefits of normothermia with respect to surgical site infection. Do you remember that slide?

A I do.

Q Real quick. All of the studies that we looked at on normothermia and infection, we only looked at superficial wound infection, correct?

A That was what was documented.

Q You didn't look at deep joint infection, correct?

A I don't know if they didn't look at it or they just didn't have it.

Q There's no data on it, correct?

A The memory I have is that there were not. I don't know again if it wasn't reported or if there wasn't any.

Q So the Protect study actually looked at surgical site infections, right?

A I think surgical site infections might be in one other that was included as well.

Q In fact, as patients became - the patients that were progressively warmed, progressively warmed with the Bair Hugger prewarming, the whole works that they had forced air warming, the infection rates were higher as compared to people that weren't warmed, correct?

A They were numerically higher. They were not statistically significantly higher.

Q But they were higher, correct?

A They were numerically higher.

Q Okay. And with respect to the evidence that maintaining normothermia reduces the risk of PJI, none exists, correct?

A There are not studies specific in orthopedics but there are no studies in cardiothoracic, neurosurgical, spinal and we still recommend it for all of those.

Q Your hospital makes money for selling the Bair Hugger

to patients, correct?
A My hospital?
Q Yes.
A For what we sell?
Q They sell the Bair Hugger to patients, correct?
A I don't actually know that that's the case.
Q You're not aware of any studies that require active warming for orthopedic implant surgeries, correct?
A Required for what?
Q Orthopedic implant surgeries?
A To maintain normothermia?
Q Yeah, do you know of any studies that require active warming to maintain normothermia for orthopedic implant surgeries, correct?
A If I'm following your question, I don't know of any studies in an orthopedic population where there were investigations of what happened to patients with and without the Bair Hugger.
Q So you're not aware of any studies that require active warming for orthopedic implant surgeries, correct?
A I do not.
Q In fact, the only study that you cite and I think you told the jury with respect to maintaining normothermia in implant surgery is the Yamada study, correct?
A I'm getting confused on what specifically you are

asking me about. I thought the first question was about do you use it and does it actually warm patients. Are you talking about that or are you talking about Yamada?

Q I understand. It's a different question. The only study that you cited with respect to maintaining normothermia with respect to joint implants was the Yamada, correct?

A That's right.

Q And that particular one showed the difference in mortality?

A That's correct.

Q In fact, if you look at severe infections on page 479, the patients that were normothermic had three times more percentage-wise infections than the patients that were hypothermic.

A Of the severe infections.

Q Yes.

A Numerically they were different.

Q And, in fact, that study talked about specific limitations, significant limitations with respect to that study, doesn't it with respect its results?

A It's customary for almost all of our articles in the field to have some description of what we consider to be our own and they do the same.

Q Every study has limitations, correct?

A Every study has limitations and it's more of a

convention that you try to identify them for your reader.

Q And the paper, that paper acknowledges the limitations with respect to the mortality issue, correct?

A Yes.

Q With respect to those deaths that occurred in the Amani study, you don't know whether any of those deaths were related to hypothermia, correct?

A In the Yamada study the inference is that there was an association. We don't use the term cause when we talk about these types of studies.

Q You don't use the term cause?

A No, this is an epidemiological study that's not randomized. We talk about associations of our findings not what it causes.

Q But these studies do not cause?

A It depends on what kind of epi-study you are talking about but certainly not this type.

Q You talk about associations, correct?

A Correct.

Q And you're relying on associations to talk about the benefits of normothermia for orthopedic surgery, correct?

A That's right. The idea you can put that in contrast with the many other studies that were being mentioned about orthopedic studies that failed to show an association. We just set all of those significant limitations as well.

Q And if they put in this study there's no causal effect, there's still a relevant information study for you to make that opinion, correct?

A Causal. I'd be cautious about using that term once again.

Q Why?

A This is the type of study we don't talk about cause.

Q Associations?

A Sure.

Q So it wouldn't be out of the ordinary to offer the studies of an association here but I can't say there was a causal effect, right?

A That's how they should interpret it, that's correct.

Q So if something says that, you don't fault them for saying that, correct?

A You should fault for it if you're looking at the messages in a study like this.

Q I think you testified and maybe I missed the question or answer. You don't know whether any of the deaths in the Yamada study were related to hypothermia, correct?

A That's right. In the arm that was normothermic there were fewer deaths. In the arm that reached hypothermia despite the warming there were a higher number of deaths. But no, they don't get into what you call either attributable mortality or would you make a causal association - a causal conclusion for a

study like this.

Q So just to be clear for the jury, I don't think I asked it this way. For Ms. O'Haver's surgery it's your opinion within a reasonable degree of medical probability that the inoculation of the bacteria was in the operating room, correct?

A Correct.

MS. PRUITT: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: I'm conscious of the time here and I'd like to have just a couple minutes to cross. And I know I only took less than an hour on direct.

THE COURT: How much more time do you anticipate for your cross?

MR. ASSAAD: At least 15 to 20 minutes.

THE COURT: We're not going to get the witness done today. You've been going for 63 minutes. So here's what I'll do. We're going to recess at five and I'm going to limit your time tomorrow. If you make a representation now that it's 20 minutes and I give you until 5 o'clock today and then I'll give you additional 20 minutes in the morning. Then your redirect is going to be limited because we need to get this case to the jury tomorrow. That's the representation that I made to them and so I'm just giving you that heads up that that is the Court's intention at

this time.

MR. ASSAAD: I think I want to go back. I'll probably get done tomorrow in less than 15 minutes. So I'd be happy to shorten the time 15 on rebuttal to five.

THE COURT: You'll get about five an five.

MS. PRUITT: Redirect?

THE COURT: And then re-cross.

MS. PRUITT: On re-cross I'm good with five but redirect, I'm going to be more than five minutes based on what he's done but I can do it in 15.

THE COURT: I'll allow 15 and 15. I'm trying to be - so let's go until another five minutes or so and find a good breaking point.

(RETURN TO OPEN COURT.)

Q Let's talk about the studies. I think you said you looked at the state of the science. When you said the science, you're talking about all the science that supports that the Bair Hugger did not contribute to the risk of SSI?

A That's right.

Q You looked at all the science?

A I looked at the science most relevant to me in what I do.

Q You will agree that there is only one epidemiological study that looked at the issue of forced air warming use and non-forced air warming use with respect to prosthetic joint

infections, correct?

A Right, that's the McGovern study.

Q It's the only study, correct?

A That's the only one I'm aware of.

Q Just to be clear, there's epi studies, correct?

A Sure.

Q With respect to the Bair Hugger, there's bacteria particle studies?

A Sure.

Q And there's bacterial studies, correct?

A Right.

Q There's epi studies and there's mechanism studies?

A Right.

Q And so for epi studies - for epi - okay, there's McGovern. I'm going to say this is O'Haver and 3M. There's no epi that contradicts McGovern, correct?

A No epi study that I'm aware of.

Q You thought there was one but there wasn't, correct?

A I'm not sure what you mean.

Q That there was another study published?

A You'll have to point to that cause I don't recall.

Q You just disregarded the McGovern study as evidence because you say that limitation, correct?

A I wouldn't say it has significant severe flaws.

Q But you'd disregard the McGovern study, correct?

A Essentially, yes.
Q But you don't have another study, another epi study that says the opposite of McGovern, correct?
A Right other than bacterial studies, I don't have an epi study.
Q Are you aware that the McGovern study has been cited 113 times?
A I don't how many times it's been cited.
Q Do you know as recently as 2020 and 2021?
A I don't know.
Q Have you gone to Google scholar to see how many times it's been cited?
A I have not.
Q Have you looked at any of the studies that talk about periprosthetic joint infections that cite the McGovern study?
A I've seen it be cited too. I don't have any specific example.
Q You're familiar with the Lange and Reed study, correct?
A I don't recall that.
Q You never looked at the Lange study that's like the McGovern study?
A I don't know that one.
Q Do you know other people in the field - withdraw that question. You're aware that 3M - you understand that 3M admits

that every single study ...

MS. PRUITT: Objection, Your Honor.

MR. ASSAAD: It's an admission by 3M by the parties.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MS. PRUITT: My objection is this the same thing that the Court has already ruled on with regard to 3M's motives and 3M's intent. He said he hasn't looked at any corporate documents. He's not reviewed any corporate depositions. For Counsel to testify up here that information that he said he doesn't rely on and hasn't been a part of this testimony, I object.

I mean we have a ruling that experts can't talk about 3M's motive and 3M's intent and that's exactly what the question is trying to incur.

MR. ASSAAD: I didn't even get the question out. I was talking about every particle study that looked at this issue on particles. It's been said a thousand times. I can ask him ...

THE COURT: The objection is overruled.

(RETURN TO OPEN COURT.)

Q Do you understand that 3M admits in every single study that's looked at the particles shows that the Bair Hugger has increased particles over the sterile field?

A I recall you telling me that in the deposition.
Q And you understand that 3M admits that, correct?
A That's what you told me.
Q And you don't disagree with that based ...
MS. PRUITT: Same objection.
THE COURT: Overruled.
Q Based on the literature and particle studies you agree with every single study that the Bair Hugger increased particles over the sterile field, correct?
A I didn't review all of the particle studies. I know that they're there. My focus is more on the clinical world when we get to bacteria.
Q I get that. I just want to put particles up here.
A I'm very aware of increased particles.
Q So the Bair Hugger increased particles, correct?
A Right.
Q So just so we understand, we're going to come back tomorrow. Your basic issue is with the bacterial studies, correct?
A Sure. Those are very important to my opinion.
Q The four studies, Oguz, Moretti, Lange and Zink, correct?
A That's right.
Q Okay.
MR. ASSAAD: I think it might be a good time to

break, Your Honor.

THE COURT: Okay. Folks, we're going to go ahead and recess. I anticipate that we're going to have brief testimony tomorrow and then closing arguments. And then you'll receive the case for your deliberation. My guess would be sometime between 12 and one maybe. It might be a little earlier than that. But at that point that's when you guys will lose access to your cell phones and Smart watches and things like that. So just a heads up. I'll ask that you be back tomorrow at 8:30.

(THE INSTRUCTION WAS READ.)

Have a good night. We'll see you tomorrow at 8:30.

(JURY RELEASED AT 4:57 PM.)

THE COURT: So if those folks that have input regarding closing arguments can come up. Mr. Assaad, this will go to you as well. I just want to make a quick record regarding while we have everyone huddled around here.

Earlier - so at the time we had the last objection and we were talking about recessing for the day and I'd indicated that based upon the amount of time that direct had occurred the I would allow the witness to come back tomorrow. You'd indicate that you thought you would need about 15 minutes tomorrow which I have no issue with. And then there was a 15-minute redirect and a 15-minute re-cross that was discussed. Does anyone have any other

records or any issues with that?

MR. ASSAAD: I would just ask if I could have 30 and that I could break it up between my cross and my re-cross? I don't think my re-cross would take longer than five or 10 minutes and I would like to save it for the cross if that's okay with you. If I could get just 30 minutes total.

THE COURT: But then the thing we have - I don't know that that is fair in terms of her. Why don't you conduct your cross, finish your cross and then we'll go from there.

But here's the thing. So we have them here at 8:30. We've been getting started at 8:45. So with this, that's 45 minutes. That puts us a 9:30.

So then we go into closing arguments and my guess is you guys are going to need a break, right, to have the jury go back for you guys before closing arguments. Let's say that then we get started at 10 o'clock. So that's my point and so it matters.

So I guess what I would like to do is start closing arguments at 10:00 and that's kind of where I'm at. What is the plaintiff's request for how long you're requesting for closing arguments?

MR. EMISON: An hour and a half, Your Honor.

THE COURT: And for the defendant’s request?

MS. PRUITT: The defendants request was an hour. But if they want an hour and a half, I mean think it can be done in an hour, Your Honor. And I think all along that we've been trying to speed up and get this to the jury and we need to continue to do that.

THE COURT: Okay. I'll allow an hour and a half for closing arguments. The instructions that have to read won't take any longer than 10 minutes. But just so you know, that is my resolve because I don't want to give it to them late in the day, but I also want their deliberations to begin tomorrow and as early in the day as possible.

So if you guys could be thinking this evening for a first half and second half, what warnings that you want and same for whoever is going to do closing argument for the defense. Just let me know what warnings that you want and then I will get those as instructed. And then, obviously, when you use all your time I'll be sure and let you know on that.

MR. EMISON: What's the Court's typical practice on dividing our main closing argument versus rebuttal?

THE COURT: That your second half can't be bigger than your first. You can't use a minute and then sit down and have an hour and 29 minutes left.

MR. EMISON: I understood that. I just didn't

know if there was anything beyond that.

THE COURT: No. Anything else? I do have a question for defendant. So am trying to kind of manage what's going on up here just because I know that we're going to have to clear the bench tomorrow as well. The defendant 3M has made an offer of proof. So this was given to me. I did not mark the date and I don't know that it matters to you necessarily. I can mark it today. You didn't give it to me today. I can't remember whether you gave it to me on Tuesday or whether you gave it to me last week regarding the FDA letter.

MS. PRUITT: I think we did an offer of proof very early in the trial.

THE COURT: But this that you wanted then filed with the Court. Was that Friday? I just wanted to date it during your presentation of evidence. So why don't I just date it at September 30th as the day it was filed with the Court. Does that work for you? Any objection from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: And there are two things attached to it. The exhibit itself was attached. That exhibit is also within this so I just wondered if just this could be the thing that we file as opposed to this as well, given that it's attached to the offer of proof.

MS. PRUITT: The only - if I can look at it. I know we at one point were given a redacted copy to take care of a hearsay sentence or two. And I just wanted to see if it's the same. It's the same, Your Honor, so yes.

THE COURT: Okay, just that offer of proof will be fine. Very good. Any further the record this evening?

MR. EMISON: Just very briefly, Your Honor. Plaintiffs would like to put on a very short seven-minute videotaped deposition of Mr. Chan as responsive to Dr. Abraham's testimony as to boundary conditions. And just so that the Court is aware of that today and if the Court wants to make a ruling today rather than spending time on that tomorrow.

THE COURT: So rebuttal evidence?

MR. EMISON: Rebuttal evidence of seven minutes total.

THE COURT: It's frustrating to me cause I have talked about the timing of this over and over and over. I talked about it today and there was absolutely no mention of rebuttal evidence. If you guys have it, you had it. And Abraham - anyway, let me see what the testimony is. I'll review it this evening and go from there.

MR. TORLINE: And, Judge, we'll provide you a written response because we do not believe it's rebuttal evidence.

THE COURT: And so this entire thing?

MR. EMISON: The highlighted portions.

THE COURT: The highlighted portions? All right, I'll review it this evening. Any further record from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From defendant?

MS. PRUITT: No, Your Honor.

THE COURT: Let's go off the record.

(COURT IS IN RECESS AT 5:15 PM.)

PROCEEDINGS

October 13, 2022

THE COURT: We are on the record outside the presence of the jury. At the conclusion of the case yesterday the plaintiff indicated that they want to present rebuttal evidence from the videotaped deposition of Andrew Chan. I was provided a copy of that with highlighted areas that they wanted to include. Any further record from plaintiff in that regard?

MR. EMISON: No, Your Honor.

THE COURT: From defendant?

MR. TORLINE: No, Your Honor, other than we worked last night and we believe this is just simply an attempt to get around the motion in limine. It's improper. Dr. Abraham did not rely on it. It's purely attempting to draw an adverse inference to the evidence.

THE COURT: So the Court is going to allow the deposition to be played. If there are counter designations that defendant wants to include, let me know. I will tell you this. I'm allowing this in for the rebuttal evidence as it relates to Dr. Abraham.

In closing arguments there should be no argument that is made, no inference that is made regarding this study and Mr. Chan. The only purpose of the introduction it if this is for the impeachment of Dr. Abraham. That is what was

represented to me yesterday and that's my intention as to how it is used both in its presentation to the jury as well as in closing arguments. Any further clarification needed from the plaintiff?

MR. EMISON: Just briefly. I did not intend to speak about Mr. Chan's deposition in closing arguments, but there was a portion of designated testimony from Mr. Issa testifying as 3M's corporate representative what he acknowledged that 3M's legal department ran this test without telling the clinical side.

I intend to talk to the jury about that portion without making an inference about any results or anything else, just making the point that 3M's legal department directed testing and they did not tell the clinical side about it.

MR. TORLINE: We object, Your Honor, for the same reasons.

THE COURT: Here's what I'll say. If I allow that testimony in, I allowed that in through the deposition. But my ruling regarding this testing and the fact that I believe that because it was done at the direction of legal, that it is work product. I'm not going to allow any further inference inference to be drawn. And if there is a request from the defendant, an objection and a request, then I'll consider what relief they're

requesting at that time.

MR. EMISON: Okay.

THE COURT: Anything further from the defendant?

MR. TORLINE: Not at this point, Judge.

THE COURT: Okay. So it's my expectation that when we finish with Dr. Anderson, that the will there be motions at that time from either side?

MR. TORLINE: Yes, Your Honor.

THE COURT: So my thought is what I'd like to do is if you guys would just come up and we acknowledge those and then we her argument about those after the jury is breaking in between the conclusion of the evidence and the closing arguments.

MR. TORLINE: Okay.

THE COURT: So then we would roll right into your rebuttal and then we will break before closing arguments.

MR. FARRAR: Just for clarification, the rebuttal is queued up ready to go. I assume if they want a counter and after we play ours, I'm sure we can.

THE COURT: Are you guys intending to put on anything?

MR. TORLINE: I will confirm right now.

THE COURT: Sounds good.

MR. ASSAAD: Can I have my time?

THE COURT: Fifteen minutes.

(JURY SEATED AT 8:40 AM.)

THE COURT: You may be seated. Good morning and welcome back. We'll continue with the cross-examination of Dr. Anderson. Sir, I'll remind you that you remain under oath. Mr. Assaad.

MR. ASSAAD: Thank you, Your Honor.

CONTINUED CROSS EXAMINATION BY MR. ASSAAD

Q Real quick let's talk about endogenous source. Do you agree that endogenous source for the purpose of your opinion, Doctor, is that bacteria next to the incision or sebaceous glands or sweat glands, correct?

A Actually it's a little more broad than that. It would be any bacteria that arose from the patient. Most commonly it's from those structures you mentioned.

Q I asked this question. Is it's an endogenous source, what part of the body do you believe the bacteria is coming from?

A It could be from the skin adjacent or adjacent to the open wound.

Q It would be the most common place?

A Yes. The definition is slightly broad.

Q There's no evidence from the medical records that would make you be able to determine if it was an exogenous source or an endogenous source for Ms. O'Haver's periprosthetic

joint infection, correct?

A The gram-positive coccus would give us - it would imply that it's a skin organism and ...

Q Can you look at page 239 of your deposition?

THE COURT: Mr. Assaad, can you guys approach please.

(BENCH CONFERENCE.)

THE COURT: I would ask you to let him finish the answer.

MR. ASSAAD: I'll do my best, Judge.

Q Can you look at page 239 of your deposition?

"There was no evidence that you saw that would make you be able to determine if it was an exogenous or an endogenous, correct?"

Your answer: "We don't have an organism so we can't even know which type of organism it is, you know, where it might have come from. Sometimes that way but no."

A Okay.

Q Was that your testimony back then?

A That was.

Q Is that your testimony today?

A Again, we have gram-positive cocci but no, we didn't get an organism. Frequently we can't determine because we don't have cultures from the patient before him, cultures from all the OR staff, cultures from various machines. We wouldn't be able

to say. We can only assume things that we have an idea where they typically come from.

Q But your answer to that question back there was no, you can't make that determination, correct?

A No, for any one individual, not without additional, we would not be able to.

Q So for Ms. O'Haver, correct?

A Correct.

Q And actually, orthopedic surgeons believe that airborne contamination bacteria outside the wound is the primary cause of periprosthetic joint infections, correct?

A I don't think that's correct.

Q Page 105 if your deposition, line 7. Question: "And actually orthopedic surgeons believe that airborne contamination is the primary cause of their prosthetic joint infections."

Your answer was "They call it primary. I think it's one of the leading causes."

Did I read that correctly?

A You did.

Q Was that your testimony back then?

MS. PRUITT: Your Honor.

THE COURT: Come on up.

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, I'd request that lines 15 through 17 be read as well.

MR. ASSAAD: It's a different question.

MS. PRUITT: It was not a different question.

MR. ASSAAD: It's right here ...

THE COURT: Okay. Everybody, take a breath. So the request is denied. If you want to bring that up in your redirect, you may.

Q You can't exclude airborne contamination as the potential cause of Ms. O'Haver's infection, correct?

A It can't be excluded.

Q Therefore, it could be an endogenous cause, correct?

A Of course it could be but it' most likely not.

Q You can't rule out airborne contamination, correct?

A That's correct.

Q Let's talk about these studies. There's four studies that say you rely on bacteria flow studies, correct? Zink, Lange, Moretti, Oguz.

A That's correct.

Q The combined total of patients with all four studies together was 84 patients correct?

A I don't know the total number.

Q There was 8 in Zink, 16 in Lange, 20 in Moretti and 40 in Oguz, correct?

A There were 80 in Oguz.

Q Yes but only 40 applied to forced air warming to not forced-air warming, correct?

A There were 80 in the study. There were two arms one of them was the forced-air warming and laminar flow. They had a 2 X 2 setup with 80 total.

Q But the issue looking we're looking at in that one was forced-air warming to non-forced-air warming, correct?

A That's one of the important things in my mind.

Q They had 40 patients in that group, correct?

A There were forty and then 40 in the other arm as well.

Q Laminar flow versus no laminar flow?

A If I remember it correctly it was the conductive blankets.

Q You agree that Zink wasn't orthopedic surgeries, correct?

A I don't recall the surgeries. I think - with Zink the -- you'll have to remind me.

Q Zink was the eight volunteers. Do you remember that one?

A That's right.

Q That was an abdominal surgery, correct?

THE COURT: Guys, we can only have one person talking at a time, okay.

A That was and orthopedic surgery with volunteers.

Q And, Lange was the one with 16 patients. That wasn't an orthopedic surgery, correct?

A Again, I don't recall. I'd be happy to look.

Q That was vascular surgery?
A Sounds reasonable. I think that rings a bell.
Q Oguz and Moretti were orthopedic surgeries, correct?
A That's my recollection.
Q And, Oguz was a pilot study, correct?
A That's how they labeled it in their title.
MR. ASSAAD: May I approach, Your Honor?
THE COURT: You may.
Q I've handed you the Oguz Trial Exhibit 635 which I think has been admitted for demonstrative purposes.
THE COURT: give me that number again.
MR. ASSAAD: 635, Your Honor.
THE COURT: I do have it.
MR. ASSAAD: Can I show it, Your Honor.
THE COURT: You may.
Q Now with Oguz you agree that there were four agar plates in Oguz, correct?
A There were four agar plates and two nitro studious membranes.
Q Agar plates. The jury has heard a lot about agar plates. You agree that the plates 1, 2, 3 and 4 where the agar plates were, there was an increase in bacteria with the presence - with the presence of forced-air warming, correct?
A Well they don't like their raw data. What we have are results for multivariable analysis of their models. What I

think you're getting at is that number that is provided is greater than one but none of them reached statistical significance. So our statistical conclusion would be that they were not different between the arms.

Q Would you please go to page 228 of your deposition, line 4. "You agree that in plates 1, 2, 3 and 4 there was an increase in bacteria when the presence of forced-air warming?" Answer: "There was a numerically higher amount of the air bars cross one." Did I read that correctly?

A You did.

Q Was that your testimony at that time?

A It was.

Q Same testimony today?

A That's what the numbers 1 to 5, yes.

Q So in situations and I understand this not a statistical significance, there was more forced-air warming caused an increase in bacteria on those agar plates, correct?

A Yes. But, again, from a research and statistical perspective it was not a significant amount.

Q So it's also a pilot study, correct?

A They also did important statistical evaluations to determine what number of patients to in the compilations.

Q It was a pilot study, correct?

A Well pilot studies are intended to be information that might drive you to the next study but they don't show that's

there's signal, you don't typically move on past the pilot study.

Q And you can't say that forced air warming did not increase bacteria over the sterile field because of Oguz, right?

A I can say that it did not increase it more than the conductive blankets.

Q That wasn't the question, sir. You can't say that the Bair Hugger did not increase bacteria over the sterile field based on Oguz, correct?

A Again, this a comparative study. There's a relative comparison here. So you took part of my answer.

Q Do you remember my question?

A Can you repeat your question?

Q You cannot say that the Bair Hugger does not cause an increase in bacterial load based on the Oguz study, correct?

A I would say it does not cause an increase in bacterial load compared to the blankets.

Q But it did increase numerical, correct, the raw numbers?

A The raw numbers. Based on the output from their model which suggests that their raw numbers were higher.

Q They did a pilot studies or just the initial study to determine whether or not a further studies needed to be done, correct?

A That is supported in the pilot study?

Q The other one I want talk about is Moretti. You're familiar with Moretti?

A I am.

Q Moretti is Trial Exhibit 727, Your Honor. It's already been admitted for demonstrative purposes.

MS. PRUITT: No objection.

THE COURT: Counsel, you may proceed. I'm sorry, did you say 727?

MR. ASSAAD: Yes, Your Honor.

THE COURT: I do not have 727 down as being used.

MS. PRUITT: Defendant's number was 2698.

THE COURT: I don't have 2698 as being used by the defendant either.

MR. ASSAAD: Any objection?

MS. PRUITT: I have no objection, Your Honor.

THE COURT: okay. So the Court will receive 727 for demonstrative purposes and may be published to the jury.

Q This references one of the orthopedic surgeries, correct?

A It did.

Q On page 60 of the Moretti study in the results it states "In 20 procedures in which the Bair Hugger was used, the mean bacterial load values were significantly increased in three

points compared with the at-rest position." Did I read that correctly?

A That's correct.

Q That's what Moretti says, correct?

A That's one part of the analysis, yes.

Q On page 61 of the study it states "Avidan demonstrated a higher airborne bacterial load and the air samples analyzed in a higher incidence of nosocomial infections in patients kept warm using the Bair Hugger." Did I read that correctly?

THE COURT: I'm not sure where you are.

Q Page 61, second column. You can read it on the screen too. "Avidan demonstrated a higher airborne bacterial load in the air samples analyzed in a higher incidence of nosocomial infections in patients kept warm using the Bair Hugger." Did I read that correctly?

A I did. And that next sentence is important as well. blanket was or was not used? Did I read that correctly?

A I'm not sure which study they're talking about in that.

Q You did research, correct?

A I do research all the time.

Q And are you aware of later research from other scientists that agree with the Moretti findings that the Bair Hugger increases bacterial load in a surgical site?

Q That's not how I interpret the Moretti study. In

fact, there are other parts in their analysis that suggest the number of bacteria go down with the use of forced-air warming as the operation continues.

Q That's your opinion, correct?

A That's what the data says.

Q Other scientists 2014 - have you read the Wood study?

A No.

Q *Infection Control Hazards Associated with The Use of Forced-Air Warming in Operations*. You didn't read this study?

A I haven't.

Q Do you know whether or not those scientists agree with Morletti that it increases the bacterial load in the surgical site?

A I didn't read it so I don't know.

Q Are you familiar with the Stock study?

A I want to say that one sounds more familiar.

Q In fact, in your deposition you agree that the Stock article is a reliable and authoritative study, correct?

A We cited in our up-to-date article. I had to refresh myself after you brought it up during the deposition. Now I'm more familar with it.

Q And you're familiar with the Routh study, correct?

A Yes.

Q Now that's one that we discussed?

A Yes.

Q And, the Routh study is a reliable and authoritative study, correct?
A It's an important study.
Q And strong evidence, correct?
A It is good evidence, yes.
Q On page 166, lines 11 through 13 of your deposition.
A I'm there.
Q Line 13 - I'm sorry, line 11. The Routh study is a randomized controlled trial, correct?
A That's right.
Q "Do you agree that the randomized controlled trial is a strong evidence?" And you said "It is."
A Yes. In general, there are different layers of that.
Q And, the Routh says "Particles Increase. The particles increase bacteria, increase periprosthetic joint infection, correct?
A They did. It was associated with duration of surgeries and OR traffic.
Q That was a randomized controlled trial, correct?
A It was.
Q Nearly 300 patients, correct?
A I don't recall the exact number.
THE COURT: You've used up 10 minutes. I'll give you an additional five minutes.
Q What's been marked as Exhibit 530. This is the Routh

study we talked about your deposition, correct?

A That's correct.

Q And it's reliable and authoritative, correct?

A It is a good randomized controlled study.

MR. ASSAAD: I would like to offer this into - I believe it's offered, Your Honor.

MR. TORLINE: What's the number.

MR. ASSAAD: 530. Your Honor, I'd offer this into evidence as a demonstrative exhibit.

MS. PRUITT: No objection. Your Honor.

THE COURT: 530 may be used for demonstrative and published to the jury.

Q I'd like you to go to page 6 of the study under CFU Particle Densities and Infection. This was a study in which they had a device that placed HEPA filtered air right over the wound, do you recall?

A I do.

Q It's called a Minick device. It's clean 99.99 percent clean air that's just gently covers the wound during the operation, correct?

A Yes.

Q It states here "CFU density was positively related to a total particle density in the control group. They maintain that airborne particle count may be used in a proxy for ambient CFU density." Did I read that correctly?

Q Every 10 colony forming units increase in median CFU density approximately doubled the probability of implant infection," correct?

A Correct, that's what it says.

Q That's a periprosthetic joint infection, correct?

A I don't recall specifically talk about incisional infections later on.

Q If you would go to page 53006. "Analysis included CFU counts collected during 2,822 10-minute intervals, and a total of 11,039 CFU were cultured from the air during 470 hours of operative time. Our findings demonstrate that these microorganisms are significant sources of implant infections, and that reducing them within the surgical field also reduced the incidence of implant infections." Did I read that correctly?

A You did. I remember describing Is where my confusion was.

Q "Our study indicates that airborne CFUs entering incisions during operations is a likely source of contamination leading to implant infections. Incisional infections, however, not in the joint may result in a broader set of intraoperative and postsurgical factors, as suggested by studies reporting that skin preparation methods were associated with incisional but not organ space SSIs which would explain why we found no difference in the rates of incisional infections."

Did I read that correctly?

A Yes.

Q And finally the study shows strong evidence, "In conclusion, our results indicate that CFU contamination of the air at the incision site is a risk factor for implant but not incisional infections. CFU contamination is related to the particulate density in the air at the incision site, and both CFU and particulate density are a function of the number of people in the operating room. Limiting airborne CFU contamination at the incision site can be expected to lower implant infection risk.

Did I read that correctly?

A You did.

MR. ASSAAD: I'd pass the witness, Your Honor.

THE COURT: Thank you, Counsel. Ms. Pruitt, redirect.

MS. PRUITT: Yes, Your Honor. May I proceed?

THE COURT: You may.

REDIRECT EXAMINTION BY MS. PRUITT

Q Dr, Anderson, first I want to go back to page 105 in your deposition. You WERE asked the question by Mr. Assaad about that page in the deposition. And if you'll look at line 7 please. The first question you asked is "And actual orthopedic studies believe that airborne contamination is the prominent

cause of periprosthetic joint infections?"

And you said "They call it - I think it's one of the leading causes I think in there ..."

And then Mr. Assaad interrupted you and said "leading causes." And you answered and said "And for example in that report I think they say both ..."

MR. ASSAAD: Objection, Your Honor. She's reading from the deposition. She needs to ask a question.

THE COURT: Counsel, why don't you ask a question.

Q Can you read, Doctor, what was said in lines 15 through 17?

MR. EMISON: Same objection, Your Honor.

THE COURT: Overruled.

A "Right. I was trying to point out that in the International Consensus they actually used and statements. So I said - for example, I think they said both from pages and the air.

Q So when you read all that we've read this morning, what sources might we consider that might be causing the patient's periprosthetic joint infection?

A Again, taking from their language it could be either. Again, that's from the orthopedics opinion in their International Consensus. As you know, most infectious disease doctors still believe that it's an endogenous source as the

primary cause.

Q That's what you're here to give an opinion about?

A Correct.

Q Now the focus of your opinion is that your opinion, more likely than not, Ms. O'Haver's specific infection was due to skin bacteria on her skin, is that correct?

A That's correct.

Q And there was a question about well you can't for sure say there is and you can't for sure say there isn't. Those qualifications apply exactly the same for airborne contamination, don't they, sir?

A Of course.

Q So I want to take a look real quickly at a couple of these studies that you were shown by Mr. Assaad. First, I would like to show you the Oguz study if you would like to look at it again. I'll put it on the projector so the jury can see it. I would like for you to turn with me if you would, Doctor, to the bottom of page 4 of 5.

A Yeah.

Q And the second full paragraph, the first sentence. I'm going to put it up on the projector so the jury can see it. Would you read the first sentence of the Oguz study?

A It says "In our study it was not possible to detect any higher bacterial counts on any plate from forced air warming ..."

MR. ASSAAD: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: I don't want the jury to see this. This sentence down below there says about lawsuits in Oguz. I just don't want the jury to see that and cause any issues.

MS. PRUITT: I'll put a piece of paper over it. I didn't intend to do that.

THE COURT: Thank you.

Q Okay, let's look at this again. And would you read the sentence that begins "In our study" for the jury.

A "In our study it was not possible to detect any higher bacterial counts on any plate in the forced-air warming group versus the resistive warming group."

Q And the forced-air warming group is a group that used the Bair Hugger, right?

A That's right.

Q And the resistive group is the group that was using an electric blanket or some type of blanket?

A That's correct.

Q And so there was a comparison here made and the authors of this study are saying what in this study?

A They're saying there was no difference between those two approaches and the amount of bacteria they were able to get.

Q Then I would like to look at Moretti for a moment, Doctor.

A Okay.

Q If you would take a look at the summary at the beginning please, sir.

A Got it.

MS. PRUITT: This is Trial Exhibit Defendant's 2698. It also has a plaintiff's number. We'd ask that it be admitted for demonstrative purposes and may I publish?

THE COURT: And objection, Mr. Assaad?

MR. ASSAAD: No objection.

THE COURT: You may.

Q So if you'd look starting at the second sentence, does it say "This is crucial to avoid the onset of potentially severe complications that are especially serious in elderly and debilitating subjects. Among these systems, the Bair Hugger blanket has demonstrated excellent advocacy." Is that what it says?

A That's what it says.

Q And advocacy means that it works, it does its job, is that right?

A That's correct.

Q And then if you'll look down at the next sentence that I highlighted. "The aim of this study was to assess the risk of contamination of the surgical site correlated to the use of the

Bair Hugger blanket during hip replacement surgery. To that end, the level of bacterial contamination in the operating theater was quantified with and without the use of the Bair Hugger, during the course of 30 total non-cemented hip implants performed in patients with osteoarthritis."

Can you tell the jury what you interpret that to mean?

A So they took culture samples using these plates at multiple time points during their experiment that they were doing during their study. And, essentially, they are describing the way that they did that in 30 different patients. Some they took when the Bair Hugger was being used. Some they took when the Bair Hugger was not so that they could compare between the two.

Q And that sentence that I have highlighted says "Statistical analysis of the results demonstrated that the Bair Hugger system does not pose a real risk for nosocomial infections ..." And nosocomial infections are hospital acquired infections, right?

A That's right.

Q ... "whereas it does offer the advantage of preventing the potentially very severe consequences of hypothermia during major orthopedic surgery."

Tell us what's your interpretation of that?

A Again, it' telling me that when they measured bacterial count with the Bair Hugger place that it actually went

down during the course of the study compared to not using it. So in fact, if you look at the figures it's on the back here they make a good pictorial description as to how it was lower with the forced-air warmer compared to no forced air warmer.

Q And you're talking about the figures, sir, that's on page 3?

A 61 of the report 004 of the 1727.

MS. PRUITT: Your Honor, I'm not sure where he is.

THE COURT: You may.

Q Is this the figure you're referring to?

A Yes.

Q And also when Mr. Assaad was asking you questions about the study, you said it's important to read the next sentence. I do. I don't recall where it was.

Q It's on this page. That's the reason I pointed it out. I have it marked. If you'll look to the paragraph - he had you read the first sentence there. I'd like you look to look at the second sentence there. It says "More recent studies however have not found a significant increase in the bacterial load in the operating theater attributable to the use of the system."

What system is that referring to?

A The Bair Hugger system.

Q "Whereas, other studies that did report such an increased bacterial load did not find an associated significant

increase in the frequency of nosocomial infections."

Did I read it correctly?

A Yes.

Q And what does that tell you about this particular study that you can share with the jury, sir?

A Again, it would really support the second part of that where it says "More recent studies have not found a significant increase." So it falls in line with the more recent studies that are described.

Q Now you were also asked the question about the Zink study at the beginning of your exchange with Mr. Assaad. And I would like to look at – it's Trial Exhibit Defense 2706. It also has a plaintiff's number. We would admit it for demonstrative purposes. Doctor, if you would look at the top of the first page there.

A I'm not sure I have a copy.

Q Okay. Let's get you that.

THE COURT: I don't know what the plaintiff's number is but I don't have defendant's 2706 in.

MS. PRUITT: The plaintiff's number – I'm not sure what the plaintiff's number is right now, Your Honor.

MR. ASSAAD: One.

MS. PRUITT: One?

MR. ASSAAD: One.

MS. PRUITT: That's the lowest number I've

heard in this trial.

THE COURT: Any objection to - since defendant is crossing, 2706 for redirecting? Any objection to the use of that, Mr. Assaad?

MR. ASSAAD: No objection, Your Honor.

THE COURT: 2706 will be received for demonstrative and may be published.

Q So Dr. Anderson, if you'll look at the top of that study, I want to focus on the summary here. It says "For four hours eight healthy male volunteers lay supine on an operating room table with their lower bodies and lets covered with the warming cover and sterile surgical drape. The convective warming therapy ..." and convective warming is like the Bair Hugger, right?

A Right.

Q "... was administered for two hours. The other two hours served as a control." So they were comparing with the Bair Hugger and without the Bair Hugger?

A Correct.

Q And it says "In each session, culture plates were placed directly on the subject's abdomen during the opening of the drape," correct? They said "The Tympanic membrane in the leg skin temperatures were significantly higher with active warming. No significant differences in the number of bacterial colonies were observed between the two study periods. It was

concluded that that convective warming ..." which is the Bair Hugger, right?

A Correct.

Q "... therapy when appropriately applied, does not increase the risk for airborne bacterial wound contamination in the operating room." Did I read that correctly?

A You did.

Q Is that your opinion about the conclusion in the Zink study?

A Yes, it is.

Q And, the Zink study actually involved a head-to-head comparison between patients when the Bair Hugger was on and patients when the Bair Hugger was off, correct?

A That's correct.

Q Now yesterday the questions were asked of you, Dr. Anderson, about maintaining normothermia without a device. Do you recall those questions?

A I do.

Q Can you explain for the jury why it does not make medical sense to not warm a patient intraoperatively during surgery?

A Right. And this is again kind of where a lot of my focus is for the programs that I run. So I turn evidence into a practical strategy that we can use and employ and make sure that it is then applied to every patient. When we take a more

reactive approach then we run the risk of not actually then applying the treatment like we would like to. Because we know it actually takes some time for warming to occur.

So if we take a reactive approach where someone's temperature drops and they become hypothermic we're already behind the eight ball. It's going to then take some amount of time that they will stay hypothermic until whatever warming device is being used might be able to draw them back up.

Q And you were also asked questions yesterday about obese, medically obese people not going into hypothermia as quickly. But there's also medical data that shows that if they do get hypothermic they don't get warmed up as quickly as thinner people?

MR. ASSAAD: Objection, leading.

THE COURT: Sustained.

Q In your opinion, do obese patient have trouble getting out of hypothermia more so than normal weight patients?

A We think that there's some ability to not necessarily become hypothermic. But yes, then temperature change in the other direction takes more time as well.

Q And is that potentially harmful to the patient?

A Right. So the longer time you spend on being hypothermic then the more harm that can be caused.

Q Now Mr. Assaad was inferring to the jury yesterday that you hadn't done anything since 2015 to look at this issue.

I would like for you to explain to the jury what data you have with regard to surgical site infections and perioperative joint infections on a yearly basis, monthly basis, weekly basis. Can you just describe that?

MR. ASSAAD: Your Honor, may we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: This is outside the scope of his report. She'S going to talk about studies or data that has not been disclosed.

THE COURT: So in response to your question, the objection is overruled. Okay, this will be your last question. You've used 14 minutes and 41 seconds so I'll give you one and a half more minutes.

MS. PRUITT: Thank you, Judge.

(RETURN TO OPEN COURT.)

Q So my question was if you could describe for the jury what data you had available to look at these issues?

A So through our ICON network we routinely collect information on surgical site infections for each of the 65 community hospitals that are part of our network. We provide reports to each of those hospitals twice a year. So we routinely are reviewing the surgical site infection rates at each of those individual hospitals that we have by procedure and by procedure time.

So they get specific reports from us about hip replacements, knee, hysterectomies, colon surgeries, cardiac procedures among others.

Q And you look at that regularly in your job?

A We look at it regularly. And, again, more formally we did the assessment twice year at each hospital.

Q Dr. Anderson, in your job as trying to prevent infections and control infections, if the Bair Hugger was blowing all of this air billowing as the client's counsel has described it into surgical suites all across the country, what would you expect to see with regards to the percentage of surgical site infections?

A Well if it were doing that and as a result depositing bacteria into the surgical wounds, I think we would be worried that they would increase the risk of surgical site infections.

A It has not.

MS. PRUITT: Thank you, Doctor.

THE COURT: Re-Cross.

MR. ASSAAD: Your Honor, may we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. ASSAAD: Just for the record, I think she opened the door. She talks about seeing infections increase over across the country; 6,000 cases on the exact same issue that are filed with the MDL to say that or imply

that there would be an increase in infections and the Bair Hugger doesn't cause infections based on the numbers of infections across the country opens the door.

THE COURT: Your response being the same?

MS. PRUITT: Yes.

THE COURT: The Court will - the ruling on the Motion in Limine will remain the same and the Court will not allow testimony as it relates to that.

RE-CROSS EXAMINATION BY MR. ASSAAD

Q Let's talk about this. Eight volunteers, correct?

A Yes.

Q Not a real surgery, correct?

A It was experimental conditions.

Q Not a real surgery, correct?

A Correct.

Q Not the Bair Hugger issue, correct?

A I don't recall specifically.

Q It was a study from 1993, correct?

A It was.

Q It was the Bair Hugger 500, correct?

A I don't know which one it was.

Q You wouldn't disagree with me, correct?

A I would have no reason to disagree.

Q Also if we look here, it was on the medium setting,

correct, which is the low-volume of air and at 38 degrees, correct?

A That's what it says.

Q Ms. O'Haver was at 43 degrees, correct?

A I don't recall exactly what it was set to.

Q For most of the time it was set to high, 43 degrees, correct?

A It makes sense.

Q Less air flow, lower temperature, correct?

A I'm not sure.

Q Medium flow, 38 degrees, correct?

A The settings on the device?

Q Yes. Not this case? And were you aware ...

MS. PRUITT: Objection ...

MR. ASSAAD: ... that ...

THE COURT: Hold on. One person talking at a time. The objection is overruled. Ask your next question, Mr. Assaad.

Q Are you aware that that 500 model, did you see any documents that show that the 500 model in 1993 had better filtration rates than the 750?

A I'm not aware of that.

Q And, in fact, in the Zink study one patient out of the eight showed more bacteria when forced air warming was used than non-forced air warming, correct?

A The overall number was lower. I don't remember about the individual patients.

Q You're the expert. Didn't you look at the data?

A I don't have it in front of me. Certainly, I did look at it.

Q It was funded by Augustine, correct?

A I don't know.

Q Let's talk about Oguz. Ms. Pruitt put up on the screen the first sentence. "In our study it was not possible to detect any higher bacterial counts from any plate in the forced air warming group versus the resistive warming group."

You read that in your redirect?

A Yes.

Q She failed to read, "The study that odessey not be generalized for an overall safety statement on forced air warming in its primary application applicable in the particular surgical group."

Did I read that correctly?

A Yes.

Q Finally, let's go to Moretti. It states on the bottom of the abstract, "Statistical analysis of the results demonstrated that the Bair Hugger system does not pose a real risk for nosocomial infections not does it offer the advantage of preventing the potentially severe consequences of hypothermia during major orthopedic surgery."

Did I read that correctly?

A Yes.

Q Form of Limitations. "Our study has some limitations the sample size of patients for the calculation of a statistical incidence of surgical site infection after the use was small for the calculation of statistical incidents of surgical site infection after the use of the Bair Hugger."

Did I read that correctly?

A For surgical site infections but they didn't comment about their actual experimental set up for looking at bacteria.

Q So you can't use Moretti to talk about the relationship between Bair Hugger and surgical site infections because the sample size is too small, correct?

A In the study their primary approach is looking at bacterial counts as a mechanism for what we call surgical site infections.

Q You can't look at infections and find an association with Bair Hugger, correct?

A They don't have any surgical site infections so it's not something we can look at as to whether their bacterial were decreased.

Q To few patients, correct?

A They did not have any in their procedure.

Q You understand just so we don't mislead the jury, the operational with no forced-air warmer, that's when samples are

taken when the patient - at the initial setup of the patient, do you understand that?

A I understand.

Q And there was a video that was played of a sped up surgery in this case for an orthopedic surgery. The beginning part of when they're setting up the patient and everyone is moving around and their putting on drapes, you would agree that's the time when there's the highest amount of squames in the OR, correct?

A There's a lot of activity.

Q Yes. That would increase the squames. If you took measurements at that time and compared it to the Bair Hugger, that would not be a fair representative because at that time that's where the highest activity is in the operating room, correct?

A I don't know if it would be fair or not. It is certainly what would expect to have some increase in the particles at that point.

Q Doctor, you would agree this squames can become airborne, correct?

A Yes.

Q And squames can carry bacteria?

A They can.

Q Most squames carry bacteria, correct?

A I don't think I agree with that anymore.

Q Anymore?
A Correct. I know that this was something after my deposition there were several questions I felt a little uneasy about and went back and reviewed some cases after there were some questions.
Q There was a point time you had to fill out an errata sheet. Do you know what an errata sheet is?
A No.
Q Where you get to go back through your deposition and make any changes that you think you answered incorrectly. Did you do that in your deposition?
A I didn't.
Q So this is the first time that you are changing your deposition testimony?
A I do not.
Q Well you said you don't agree with what you said in your deposition?
A Yeah, I mentioned a few other things yesterday that I probably would have had probably better answers as well in my deposition.
Q You read it?
A I never did. I requested it but I didn't receive it.
Q So you requested to read your deposition but they never provided you the deposition?
A They never did.

Q So they also didn't provide you your own deposition in this case to read. So back to your deposition, you agreed that many squames carry bacteria, correct?

A I did agree to that.

Q At your deposition you agreed that more than 50 squames carry bacteria, correct?

A I think ...

Q At your deposition ...

THE COURT: Okay. Hold on. Counsel, can you please approach.

(BENCH CONFERENCE.)

THE COURT: The clock is ticking but a good record is not being made whenever you're speaking at that pace and when you're talking over the witness. You guys want a good record, take a breath you've still got - since I gave Ms. Pruitt an extra minute you have nine minutes.

MS. PRUITT: Your Honor, may I for the record. I would ask that Mr. Assaad let the witness finish his response when he's in the middle of giving a response.

THE COURT: I that's what I just indicated in terms of we can only have one person talking at a time.

MR. ASSAAD: I understand that.

(RETURN TO OPEN COURT.)

Q True or false, at your deposition you said more than 50 percent of squames carry bacteria?

A I did.

Q True or false, in your deposition you say "Most particles are since they are squames would carry bacteria more than 50 percent," true?

A I did but the Stock study would say different ...

Q Sure. In your deposition you said that the Bair Hugger increases ...

MS. PRUITT: Your Honor, can we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: He was in the middle of his answer which was six words long and Mr. Assaad cut him off. He said "Yes but the Stock study would say different." If he interrupts him it's not a good record one of the jurors is not hearing his answer. So I'd ask that this witness be allowed to complete his answer.

THE COURT: If you're referencing an answer in a deposition you need to allow the entire answer to be read to the jury for the purpose of completeness. Okay.

MR. ASSAAD: It's a true or false question.

THE COURT: You are reading it. If you're reading only part of the answer then that is not a complete answer. And that doesn't allow him to give it.

(RETURN TO OPEN COURT.)

Q True or false? At your deposition you testified that

if the Bair Hugger increases particles over the sterile field most of the articles would be squames, correct?

A I did say that.

Q Surgeons want to minimize particles over the still field.

A They do.

Q Especially in orthopedic surgeries?

A They do.

Q They would have very few bacteria that could cause a PJI.

A Correct.

Q I want to talk about the DICOM letter, Exhibit 2257. Could you describe what this document is?

A Sure. So as I mentioned yesterday, we provide a newsletter to each of our community hospitals once a month. And this is the newsletter from November of 2015.

Q In the DICOM study that your wrote, you only cited four articles discussing the Bair Hugger and airborne infection, correct?

A We cited more in the newsletter. We cited eight in the newsletter.

Q Including Albrecht, Albrecht, Legg and the McGovern Forced Air Warming and Contamination of the Sterile Field, correct?

A As I mentioned yesterday, we don't want these to be

book chapters.

Q In fact, you write on the page - the second page, you said, "Moreover, the authors failed to discuss what these important details. No mention was made of the forced-air warming devices as used in the study had proper maintenance including appropriately timed changing of filters in the tubing, do you see that?

A Yes.

Q You wrote filters in the tubing, correct?

A I did.

Q You understand that there's no filter in the tube in the Bair Hugger?

A There's a filter right before it is my guess.

Q Before the tube?

A There's one of the devices I think is what they're referring to.

Q You understand that in Avidan, those findings suggested that 3M incorporates filters at the end of the tube to prevent nosocomial infections?

A I don't know what they suggested.

Q You didn't read Avidan, did you?

A I've not recently and don't recall.

Q That was in 1997?

A I don't recall.

Q Do you know whether or not there is a filter at the

end of the tube?

A I don't know.

Q So you guys thought that the filter was in the tube in the DICOM study, correct?

A That's what was written.

Q I have a question for you, Doctor. You used this exhibit yesterday regarding the slice of the incision and the bacteria?

A We did.

Q There's no copyright here, correct?

A I don't see one.

Q I've looked in textbooks. This is not any textbook, correct?

A I don't know.

Q Who made this?

A I helped make it with the counsel.

Q So 3M paid for a graphic designer to make this image, correct?

A I don't know.

MS. PRUITT: Objection. May we approach?

THE COURT: Sure.

(BENCH CONFERENCE.)

MS. PRUITT: This witness doesn't know. All he's trying to do is just dog 3M and the counts that were involved. He's established that it wasn't him.

MR. ASSAAD: I'll withdraw.

THE COURT: So it's not relevant who created the graphics. Why don't you move on. You have five minutes remaining.

(RETURN TO OPEN COURT.)

Q This image was not used to train medical students, correct?

A There are similar images to that. I don't know about this exact one.

Q Similar image to this?

A Sure.

Q What textbook?

A I don't know what textbook. I've seen that many times over my career.

Q What peer-reviewed article has this been related to a green bacteria coming down into an incision?

A I'm not aware of that.

Q This was made for litigation, correct?

A Like I said, I helped put something together with counsel. I don't know - I assume that was made for litigation.

Q You're not aware of using that image to teach any of your fellows, correct?

A I've not used that image to teach any of my fellows. It's very similar to the others image that exist.

Q I mean there's images of skin, but with the incision

and green bacteria, you've never used that to teach any of your fellows, correct?

A I don't recall using that specifically. We've used similar kinds of images for sure.

Q It was made for purposes of this litigation, correct?

A I don't know the answer to that.

Q You mentioned many articles and that you've done a lot of research. And you've only listed four articles in your DICOM report, four articles in your expert report regarding the Bair Hugger, correct?

A Actually, there are eight articles in the newsletter and several more in the expert report.

Q Regarding airborne contamination, correct?

A Related to the amount of bacteria when it's used.

Q And, I told you yesterday, did you do any Google scholars to see how many times Moretti was cited?

A No, as I answered yesterday, no.

Q You didn't check how many times McGovern has been cited?

A No.

Q You're a paid expert and you do research. But in coming here to testify you don't look at any internal documents. You didn't get a copy of your deposition. You didn't look at any of the deposition testimony in this case. And you didn't even go and do research to look at what other doctors and what

other experiments of what other scientists or what other people have done in this area since 2015?

MS. PRUITT: Your Honor, may we approach.

Q Correct?

(BENCH CONFERENCE.)

MS. PRUITT: Your Honor, this objection for him to say correct. His question includes ...

THE COURT: Okay guys, we're limping along here to the end. So we have two minutes left. The objection is overruled.

(RETURN TO OPEN COURT.)

Q Correct?

A You're going to have to repeat that. There was lots of questions in there.

Q You came in to testify. It didn't look at any internal documents? You didn't read your deposition to see if it was accurate? You didn't do any research or do any Google Scholars to see what other people are saying in the updated literature?

A Can you do these one at a time for me because I've got different answers for each of your questions.

Q I'll withdraw the question. Do you agree, Doctor, that if you could avoid blowing air in the operating room if possible then you should avoid it, correct?

A That's what I stated in the deposition.

Q And that can be done with warming patients, correct?
A There are other devices that don't move as much air, sure.
MR. ASSAAD: Thank you.
THE COURT: May this witness be excused by the defendant?
MS. PRUITT: Yes, Your Honor.
THE COURT: By the plaintiff? Mr. Assaad, may this witness be excused?
MR. ASSAAD: Yes.
THE COURT: Thank you, Dr. Anderson. You may step down. The defendant may call their next witness.
MR. TORLINE: Your Honor, may we approach?
THE COURT: Sure.
(BENCH CONFERENCE.)
MR. TORLINE: Judge, we've got a couple of things. He was our last witness. I need to raise our motion at the end of all the evidence. We have a Motion for Mistrial I want to argue. We have a clip with plaintiff's rebuttal designations and our counter designations in one sequential order that if it's going to get played we think that's the one that should get played. So I guess where do you want to start?
THE COURT: How long is that?
MR. TORLINE: It's 25 minutes.

THE COURT: I thank you indicated that you're going to have objection in your email that you sent me last night.

MR. FARRAR: I have no objection to the substance. That's 17 minutes. I would just ask that we play our 7 and they play their 17 cause they're trying to obscure what they did.

THE COURT: I'm not going to do that. I'm going to play it in its entirely. So we're going to take up your motions at a later time because we gotta keep going. So why don't you guys rest in front of the jury. And it will be noted that you'll have a motion to file at the conclusion. Then we'll take that up after the conclusion of their rebuttal evidence.

MR. TORLINE: Perfect. Judge, the only other question I had Judge, was when we submitted those jury instructions that were tendered and refused, do we need to file those as well?

THE COURT: No, they're right here and they'll be part of the file. So if you guys want to rest in front of the jury.

(RETURN TO OPEN COURT.)

THE COURT: The defendant may call their next witness.

MS. PRUITT: Your Honor, at this time 3M rests.

THE COURT: Does the plaintiff have any rebuttal evidence that they wish to present?

MR. EMISON: We do, Your Honor, very briefly. We would play the videotaped deposition of Andrew Chan. Plaintiffs have designated roughly 7 and half minutes.

(BENCH CONFERENCE.)

THE COURT: So at no time before have we made a record in front of the jury regarding the amount of designations you made versus the amount of designations they made. And so my question to you is what is the purpose of doing that?

MR. EMISON: I'm sorry. Just given the time, I was just reading from the document.

THE COURT: In the past what we've gone is just talked about the entirety. So I'm not going to allow an impression to be made here in front of the jury that I think it's improper.

The plaintiff made a statement last night via email that if I allowed their rebuttal evidence to be presented that they would have no objection to any designations that the defendants would like to make. So I'm going to take you at your word via email in that regard. What I'd ask is that you tell me how long it is in its entirety, 25 minutes.

MR. EMISON: 25 minutes 11 seconds, Your Honor.

THE COURT: I'll make that announcement to the jury.

MR. EMISON: I apologize.

(RETURN TO OPEN COURT.)

THE COURT: Okay, folks. We have another deposition to be played. It's about 25 minutes.

(THE VIDEOTAPED DEPOSITION OF ANDREW CHAN WAS PLAYED.)

THE COURT: Could counsel approach.

(BENCH CONFERENCE.)

THE COURT: Okay so it's my intention to ask if there's any further rebuttal evidence which your answer will be?

MR. EMISON: No.

THE COURT: Is there any sur-rebuttal evidence?

MS. PRUITT: No.

THE COURT: Do you want me to ask that question now in front of the jury?

MS. PRUITT: No.

THE COURT: So then what I'm going to do is I'm going to have them recess until 10:30. Then at that time we will begin with the closing arguments, instructions and I'll ask questions in that regard as well. We'll make a record on any motions that either side makes between now and then, okay?

MR. BLACKWELL: Judge, if I could ask are you

going to break for lunch in the middle?

THE COURT: I'm not breaking for lunch, no. What I may do and that's one of the things I want to talk with you guys about. We may do a stand and stretch break but we'll run through. Does the plaintiff have any further rebuttal evidence to present?

MR. EMISON: We do not, Your Honor.

(RETURN TO OPEN COURT.)

THE COURT: All right guys, so we're going to the next phase. I will be reading some additional instructions to you and closing arguments. And so we need to do some shifting around in the courtroom. And so we're going to recess until approximately 10:30. When you come back we will begin with the instructions and the closing arguments and then you'll recess for your deliberations.

So that's that window of time where we will be collecting your cell phones and smart watches and all that stuff so keep that in mind.

(THE INSTRUCTION WAS READ.)

(JURY BREAK AT 10:08 AM.)

THE COURT: We're outside the presence of the jury. Does the plaintiff have any motions at the close of all the evidence?

MR. EMISON: We do not, Your Honor.

THE COURT: Does defendant have any motions at

the close of all the evidence?

MR. TORLINE: Yes, Your Honor. We want to renew and raise our Motion to Judgment at the Close of All Evidence.

THE COURT: Do you have a paper copy for me?

MR. TORLINE: I do not.

THE COURT: No worries.

MR. TORLINE: We're incorporating with our Motion for Directed Verdict. And, again, Judge, I would just point out that there's been no evidence or expert testimony that establishes causation as opposed with correlation. The medical literature is, as we've seen, is frankly all over the board. We think that there is not a case – a submissable case for punitive damages. There is no – the heating presumption has been overcome. Dr. Bible was not called and he's not testified so there's no evidence that ...

THE COURT: Hey, guys in the gallery, we're trying to make a record so if you could keep your voices down, I'd appreciate it. Mr. Torline.

MR. TORLINE: That he would've heeded any warning and done anything differently than what he did. We will stand on the papers that we filed.

THE COURT: Stand on your evidence and on your response, Mr. Emison.

MR. EMISON: No. We stand on our evidence. I would incorporate the additional argument that I made at the close of arguments.

THE COURT: That defendant's Motion for Directed Verdict at the Closed of All the Evidence will be overruled. Mr. Torline, did you have any other motions that you wanted to make?

MR. TORLINE: Yes, Your Honor. We want to file that in open court our Motion for Mistrial.

THE COURT: Okay. And is this the previous oral Motion for Mistrial or is this based upon new grounds?

MR. TORLINE: I'm trying to remember what the original ...

THE COURT: I'm think we had at least one or two requests to a mistrial. I can't remember.

MR. BLACKWELL: It's additional grounds.

MR. TORLINE: Judge, what we have done here is the basis of this is number one, the deposition transcripts that - the snippets that were played cumulatively over the last three weeks, by my count there were over 24 snippets played in the plaintiff's case in chief. The plaintiff relies on 5707 which says "Deposition can be used for any reason," which is true. It does say that. But it also says, "Any part of the deposition that is admissible under the rule as though the deponent were testifying in court."

The problem we have, Judge, is a 3M witness could not have been called 24 different times in multiple different witnesses to have played a snippet. They should have - what they should have done was played the depositions. The use of this over and over again has been prejudicial and we believe it's the basis - that's one basis for the mistrial.

The other issue that's come up, Judge is in the Motion in Limine in the pretrial conference ruled you ruled and you made specific rulings. We tried to abide by those. And you made the specific instruction that if a party wants to challenge a Motion in Limine they should approach you before doing so.

We noticed and documented that for instance in the Jarvis testimony he was asked a specific question, direct question about other litigation involving 3M. In Abraham there were mentions of an unretained or an undisclosed expert Dr. Settles who was involved in other litigation. the subject of your Motion in Limine and also this Heater Cooler business, all of which were ruled on by you that were inadmissible.

They did it. They didn't approach and we had to object and raise the issue in front of the jury.

So, Judge, the rest of it's in our papers

THE COURT: Mr. Emison.

MR. EMISON: Brief response. With respect to the

video deposition clips, those clips were reviewed and relied on by our experts in the case and we were entitled to talk about the materials that our experts relied on. It's no different than if we showed them the depositions and we blew up the deposition testimony and asked them why this testimony doesn't support your decision.

The Court heard all of those objections. You properly overruled those objections. That is not grounds for a mistrial in this case.

With respect to the Motion in Limine rulings, 3M with respect to Dr. Jarvis, 3M impeached Dr. Jarvis with another deposition from another case that involved the Bair Hugger. And I asked him about that and actually 3M in their questioning with Dr. Jarvis volunteered the information that that was from a case that did not involve Kathy O'Haver.

And I asked the question. The Court admonished me about that and so that's not proper grounds for a mistrial there.

With respect to the other issues that Counsel raised, with respect to the heater/cooler, the witness Dr. Anderson volunteered the information about the Heater/Cooler. With respect to the Court's Motion in Limine on that, that was with reference to a very specific statement in a CDC document about not blowing air into the operating room.

We did not ask anything about that. We asked generally about the similarities after their expert volunteered that information about how the Heater/Cooler was similar and could similarly cause airborne contamination to the Bair Hugger.

And forgive me, I've forgotten the last point. Anyway, the grounds here are not sufficient for a Motion for New Trial. The parties have been diligent in honoring the Courts' Motions in Limine. And after this three-week trial there is no sufficient grounds to grant a Motion for a Mistrial.

THE COURT: Okay, the defendant's Motion for Mistrial be overruled. I will say that I want to be very clear. There should be no reference to other litigation in closing argument by either side. You know, I tried to navigate that as the evidence was coming in. But if there is reference to other litigation in any manner in closing arguments, references, inferences to that, the Court will reconsider the defendant's request for a Motion for Mistrial at that time.

MR. EMISON: Point of clarification. I intend - the 3M witnesses who testified how much they have been paid in Bair Hugger litigation. I intend to reference the amount they have been paid in Bair Hugger litigation.

THE COURT: I don't think that that's

objectionable. That was before the jury in Bair Hugger litigation. But in terms of referencing any other litigation, then that request - then that would be the basis for a mistrial.

MR. TORLINE: Judge, for clarification. The same holds true for your other rulings in Motions in Limine for warnings and other products and the like, correct?

THE COURT: Yes, correct. They are all still effective, enforceable, whatever you want to call it. Let's go off the record.

(OFF THE RECORD.)

(JURY RESEATED AT 10:37 AM.)

THE COURT: You may be seated. Okay, as you guys I'm sure have noticed instruction packets were left on your chairs. I'm going to read additional instructions to you at this time.

(INSTRUCTIONS 3 THROUGH 11 WERE READ TO THE JURY.)

THE COURT: Closing argument from the plaintiff. Mr. Emison.

MR. EMISON: Thank you, Your Honor. May it please the Court.

THE COURT: Counsel.

CLOSING ARGUMENT BY MR. EMISON

MR. EMISON: It seems like just yesterday I was

here talking with you all during jury selection. Standing here three weeks ago I told you that before I did anything else Kathy wanted me to thank each of you for your service and I want to do that again today. You have each sacrificed so much of your daily lives for the past three weeks to hear evidence in this case. And from the bottom of our hearts Kathy thanks you, I thank you and our entire team thanks you.

You've probably heard me coughing a little bit more I think each day over the last seven or 10 days. I promise I have tested negative for COVID. I've got some allergies and some medication on board and I'll do my best when my throat allows me to do. If I get into a little coughing fit I apologize in advance. Please give me little bit of grace. Everything that our trial team has done since the trial started has been to show you the evidence that proves the Bair Hugger was in a defective condition and unreasonably dangerous when it was used in Kathy O'Haver's hip replacement surgery.

Everything that we've done has been to show you the evidence that proves that 3M and its predecessor companies failed to use ordinary care when they designed, tested and put the Bair Hugger out for use in operating rooms across the country.

As you heard 3M's lawyer read the stipulation

yesterday, 3M is the successor to any of the liabilities of Arizant Healthcare and Arizant's predecessor companies related to the Bair Hugger in this case.

You heard Dr. Augustine's testimony. Dr. Augustine invented the Bair Hugger. He started Augustine Medical and then he left the company. Within a day after he left the company Augustine Medical changed its name to Arizant. And then in 2010, 3M bought Arizant.

This stipulated fact means that 3M is responsible for the conduct of these three companies with respect to the Bair Hugger. That's an agreed fact. 3M is the named defendant on the verdict form. And 3M agrees that it's responsible in this case for the actions of its own company, of Arizant and of Augustine Medical with respect to the Bair Hugger.

So everything that we've done in this case has been to show you how 3M, Arizant and Augustine Medical created a defective and dangerous product; how they worked to hide internal confidential documents from the public; how their employees stopped important clinical safety testing; how they knew that the Bair Hugger contaminates the sterile field during surgery and how they failed to warn doctors and hospitals about these dangers.

We started this case with a very simple safety rule that even 3M's employees agree with. That the medical

device has no benefit, then any risk of harm is unreasonable.

And throughout the trial we have showed you the evidence that came directly from 3M, from 3M's employees, from 3M's confidential internal documents. We stood here and showed you the testimony of 3M's employees. We stood here and showed you 3M's internal documents.

Now 3M's lawyers stood in front of you with Dr. Jarvis and talked about the truth, the whole truth and nothing but the truth. The truth is that we were the only ones to show you 3M's internal documents. The whole truth is that 3M didn't even give those documents to the witnesses that it has paid more than $700,000 to come in here and defend them. And nothing but the truth is that 3M has done everything that it could to keep these internal documents from you and from the public for the last 30 years.

If a medical device provides no benefit, then any risk of harm is unreasonable. We know from 3M's own employees and 3M's own documents that the Bair Hugger provided no benefit to Kathy O'Haver in her surgery.

And we know that because Al Van Duren was testifying as 3M's voice. And Al Van Duren as 3M's voice said that an obese patient is not going to become cold and so there's no benefit to the Bair Hugger.

Kathy was obese at the time of her surgery. She looks

great today. She's lost a lot of weight. At the time of her surgery her BMI was over 40. She was not going to become cold. There was no benefit.

You might hear from 3M that Kathy's temperature dropped below 36 degrees when she was put under anesthesia. This is one of the exhibits that 3M showed you. I've added the little thing here.

But one of the things they told you is that intraoperative warming is largely ineffective for the first hour. That's what this shows. This is when Kathy was put under anesthesia. This first intraoperative hour. It's basically a flat line. It goes up one tenth of one degree.

And the other important thing is that this 36 number is the number that 3M wants you to use for normothermia. But we just heard from Dr. Anderson yesterday the real number is 35 and a half. 35 and a half is the safe number for normothermia. This is not hypothermia according to 3M's expert that testified to us yesterday.

And because of Kathy's weight this is as cold as she was ever going. Intraoperative warming is largely ineffective during the first hour. It was having no effect on her at all. This is as cold as she was ever going to get, well above the 35 and a half degrees.

We also know the Bair Hugger provided no benefit to Kathy because of this chart. This is from Exhibit 1739.

This is an internal confidential document that Al Van Duren put together. He put together this chart.

What this shows is different warming methods. One of these is all the subjects combined. One of these is passive warming. Passive warming is warm cotton blankets. You put a cotton blanket in an oven. You put it on the patient and it keeps them warm. Doctors and healthcare providers have been doing that for thousands of years.

The other is active warming. That includes forced-air warming with Bair Hugger. What this shows is from here to here after more than two hours they all perform basically the same. If you are up to two and half hours they all keep them above the 36-degree line that 3M wants you to believe is the right number.

If you talk about the number as Dr. Anderson says, warm cotton blankets would've Kathy about 35 and a half degrees for more than six hours, more than three times the length of her surgery. There was no need to use a Bair Hugger on Kathy's surgery and unnecessarily increase her risk of surgical infection.

This is Exhibit 1668. This is another confidential internal document that 3M produced to us in this case. It was authorized by Al Van Duren. And this is the health economics tool. It talks about the benefits of forced-air warming. Because for the last 20 years 3M has gone out and

told doctors and hospitals and outside researchers about all of the supposed benefits of forced-air warming; how it doesn't increase infections, it reduces them. It prevents somehow - it prevents heart attacks. It prevents bleeding. It prevents the need for mechanical ventilation. It does all these miraculous things.

But what we know from Al Van Duren is much of the evidence that 3M has relied on is relatively weak. It's more than 20 years old and it's not relevant to the clinical practices of today.

This is a document that you can ask for in your deliberations, Exhibit 1668. If you want to look at what 3M says really about the benefits of forced-air warming

It talks about the risk of surgical site infections and cardiac events, heart attacks. What it says is the data is quite old. The authors of the two most important randomized controlled trials, those are the gold standard trials, even the gold standard trials the authors have concluded that the benefits that they computed originally are too great. They're exaggerated. The benefits or exaggerated. They're not reliable today. And that's there's now a least 10 retrospective studies that have detected no difference in surgical infection rates between patients who were warm versus patients who weren't. There's no benefit whatsoever as far as infection.

It also talks about cardiac events, heart attacks. And the author of the study that 3M relies on for that, this paper doesn't get cited anymore. It's not reliable. That study showed no significant difference in wound infection or heart attack. There's no benefit from heart attacks based on 3M's own internal document.

It also talked about need for mechanical ventilation. No benefit. Bleeding and blood transfusion, no benefit. Length of stay, no benefit. The weighted mean difference was three minutes for the length of stay. No benefit whatsoever. It's not based on what somebody outside of the company says, not based on what people who have never seen this document says. This is what Al Van Duren, the person at 3M who knows the most about forced-air warming says about the benefits.

But there's more. They also talk about thermal discomfort, the feeling of getting cold. What Al Van Duren talks about here is he's complaining that the paper and the tool is a review and doesn't describe a method to monetize this outcome. And he wants more research on how to monetize this outcome.

So in this paper talks about how all of the benefits that 3M has been selling for the last 20 years are no longer good. What 3M is worried about is how to make money, how do we keep making money off of this device that

doesn't provide any benefits to the people in the operating room that we're putting it on?

So 3M admits that there's no benefit at all for warming patients especially in orthopedic surgeries that are ultraclean, that are under two hours and absolutely for Kathy O'Haver who was obese at the time of her surgery.

3M and its lawyers have spent the entire trial asking you to ignore 3M's sworn testimony and asking you to ignore what 3M wrote in its internal confidential documents. Because it admits there is no benefit and it also admits it increases the risk.

3M is asking you to believe that increasing particles that carry bacteria doesn't increase the risk of infection. They don't really believe that because Mr. Issa, their corporate representative testified under oath in deposition that 3M is aware that increasing particles over the sterile field increases the risk of infection.

If there's one thing that all of us learned in the last two years during COVID is if you go into a room or a building where a lot of people have COVID and they're breathing out these pathogens in the air, there's a darn good chance you're gonna get infected. That's why we wore masks. That's why we socially distanced. And 3M wants you to disbelieve that very basic premise that its own representative representing the company admitted to under

oath in deposition.

3M has admitted that every single study, every one shows that the Bair Hugger increases the number of particles over the sterile field. Increasing particles increases bacteria. Increasing bacteria increases the risk of infection.

And 3M wants you to believe what it was telling doctors and hospitals through its sales staff in 2010, 12 years ago when it first bought the Bair Hugger. It wants you to believe that there's no evidence that forced-air warming increases the risk of surgical site infections when they know and they've known for the last 12 years that actually there is evidence that forced-air warming increases the risk. This is another internal document from 3M that's Exhibit 225. You can ask to look at this and read those words for yourselves as you all deliberate about this case.

3M wants you to ignore this document. This is Exhibit 1735. It's another internal confidential 3M document that it hasn't given the public; hasn't given researchers; didn't even give the witnesses it paid to come here and defend it. And what this says is that Al Van Duren, he didn't start working at 3M. He did even start working at Arizant. He started working with Scott Augustine in 1994. And when Scott Augustine was selling the Bair Hugger; what

Al Van Duren was selling the Bair Hugger, they were already getting complaints from some clinicians worried about particulates causing surgical wound infections.

They were so worried about it back in 1994, in 2002 and again in 2011, Al Van Duren submitted invention disclosures for air free alternatives to warming patients. They were so worried about it they were working on an air free replacement, air free alternative to the Bair Hugger.

And you don't have to check your common sense at the door when you go back to deliberate. A multi-billion-dollar company like 3M does not spend time inventing products to solve a problem that doesn't exist.

I told you during the opening statement that most of our evidence would be directly from 3M employees and 3M's own documents. And so far, this morning that's all I've talked to you about.

There are studies and you've heard a lot about studies, so much about studies from both sides. And there are studies that do support our case. You've heard a lot about that even this morning during the last of the testimony.

Why don't I spend a lot of time on external studies? For one, those researchers don't know what you know. Those researchers have never seen 3M's internal documents. They haven't watched or read the depositions that you've seen

here in this trial. So those researchers don't have access to 3M's direct knowledge that you have access over the last three weeks of this trial.

And you know no what matter what those researchers find; no matter how strong their conclusions are, 3M's going to stand up and they're going to attack during their closing argument every single one of those studies that dares to suggest that the Bair Hugger is dangerous and that dare we suggest that it increases bacteria over the sterile field and dare to suggest that it could possibly have caused Kathy O'Haver's knee infection.

One of those guys studies is McGovern. 3M has attacked the McGovern study throughout the trial because it doesn't say the word causation. 3M will tell you during its closing over and over and over again that there is no study out there that finds definitively that there's causation between forced-air warming and surgical site infection.

Two things about that. Defendant believes in certainty. Our standard is more likely than not. It's the law that you're given and it says that more likely than not that the Bair Hugger caused Kathy's infection. And we will prove and have proved that it is.

But the other thing is the dirty little secret is none of these studies, none of these epidemiological studies

look at causation. They're not designed to do that. That's not a problem with those studies. That's what those studies do. They look for association.

Doctor Anderson told you that yesterday. Al Van Duren in his testimony also told you that epidemiological studies never solve causation. They all look at associations. And the whole truth is that even 3M's expert Dr. Anderson yesterday was relying on an epi study to support his opinion that this claim causation didn't find causation but he said showed a strong association. And the whole truth is that's exactly what the McGovern study does.

You remember the McGovern study. This is the one where they found a 380 percent increased risk of deep joint infections in the real-life actual surgical patients who had the Bair Hugger versus those who didn't. They found that to a 97 and a half percent likelihood, 97 and a half percent certainty on that association.

We have to tip the scales 50 percent, 50 percent plus whatever a little bit ever so slightly. Ninety-seven and a half percent is tipping those scales almost all the way. That is what because McGovern does.

Even 3M's expert Dr. Borak, he ended up agreeing on cross-examination that that large increase, an increase of infection significantly. That's what Dr. Borak said in his trial testimony.

Now the other thing is that 3M's lawyers spent a lot of time talking about Mike Reed. Mike Reed was one of the co-authors of the McGovern study. He was also one of the members of the International Consensus. 3M spent a lot of it's time on cross-examination trying to convince you that Mike Reed had somehow recanted or disavowed the McGovern study and its results.

But the whole truth is that Mike Reed confirmed, confirmed the McGovern data with an additional 400 cases, additional data that came in after the paper was published. This is Exhibit 212, page 2. This is another internal 3M document that you can ask to look at during your deliberations.

This is important. Why is this important? Because this is a series of emails where Mike Reed is talking about this additional data. He says, "I have attached the data that shows what happened since we wrote the paper. It splits it between hips and knees. It's about another 400 cases." So in addition to the 1,400 or so cases that looked at before the paper was published, a whole additional data with another 400 cases. And what did he find? The effect has been sustained. The increase infection risk, that effect has been sustained.

He talks about conflicts of interest. He has no shares, no interest in the Hotdog. He has no interest, no

financial ties to the Bair Hugger. He has considered that. He wished people would've invested one of those or both of those but he felt this message is so important he wanted it out without any conflicts.

He was present at the experiments. In the video he was the surgeon. And he remained convinced by the data. Far from recanting this study he looked at even more data and he was convinced by the data. You never heard that from 3M's lawyers. You never heard that from its paid witnesses.

You did hear it from 3M's expert Dr. Borak. 3M has paid Dr. Borak more than $400,000 to defend the Bair Hugger in court. He's 3M's main expert on causation. He agreed as 3M's causation expert that he cannot exclude the Bair Hugger as a cause of Kathy's infection. He cannot say the Bair Hugger did not cause Kathy's deep joint infection. He says, "Yes, I agree. I said that before."

He admitted he could not exclude the Bair Hugger as a potential cause of Kathy's deep joint infection. This is the guy they paid $400,000 to to come into court and talk to you about causation who says he cannot exclude the Bair Hugger as a potential cause of Kathy's infection. He said I didn't say the Bair Hugger was safe.

This is really important. He was asked during the trial, "So, you're not aware of any other warming device

that increases bacteria over the sterile field besides the Bair Hugger?" He answered, "True."

We talked about how 3M has been telling you the Bair Hugger doesn't increase bacteria even if it increases particles. This is their main causation expert. What does he say? The Bair Hugger increases bacteria over the sterile field. It's the only warming device that Dr. Borak knows about that does that.

This isn't all the evidence that the supports our case. It's been a long trial. We talked about it more here and there. But these examples prove that we have met our burden.

Because of that, I want to talk with you about some of the key instructions. One of those instructions is the burden of proof instruction. If you want to follow along in your packet, feel free to do so. This is Instruction Number 5. If you want to write a little here between these paragraphs to help keep you straight you can do that. Because there's actually two burdens of proof in this one instruction.

The top half talks about our burdens of proof, the defect in the Bair Hugger and the amount of Kathy's damages. That's what we talked about during jury selection. That's more likely true than not true. That's tipping the scales ever so slightly, even just a little bit.

For punitive damages that we'll talk about later the burden is different. That's clear and convincing. That's not beyond a reasonable doubt. But it is something more than more likely than not. You've got to tip those scales a little bit more to prove our punitive damages case to you.

I want to focus on more likely than not, more probably true than not true and 3M's liability and our damages in this case.

The burden of proof - that burden of proof, more probably true than not true applies to Instructions 6, 7 and 8.

We'll start with Instruction 6. If you look in your packet Instructions 6 and 7 are all almost identical. Instruction 8t is pretty close but a little bit different and well walk through those in a little bit.

So if you look at Instruction 6, again, you can underline this. Your verdict must be for plaintiff if you believe these things. We'll walk through each one of these elements on their own.

First, defendant leased the Bair Hugger in the course of defendant's business. This is not a disputed fact. This is not a disputed fact. You heard this testimony on Kimberly Colby's videotaped deposition. 3M leased the Bair Hugger to CenterPoint Hospital. They leased the warming

unit, hoses. And if anything happened to those units, that they broke down or something was wrong, 3M either maintained them or replaced those. That is not the disputed element. You can go ahead and put a checkmark right next to the first element. We have proven that element more likely than not.

The next element is that the Bair Hugger was then in a defective condition, unreasonably dangerous when put to a reasonably anticipated use. Kind of a lot of words. What does it mean for the Bair Hugger to be in a defective condition, unreasonably dangerous? You as the jury get to decide.

3M has agreed. We could start with the premise that if the Bair Hugger provided no benefit in Kathy's surgery then any increased risk is unreasonable. That's unreasonably dangerous.

3M has admitted that the Bair Hugger increases the number of particles over the surgical site and that of the particles increase, that increases the risk of infection and that is unreasonably dangerous, defective and unreasonably dangerous.

3M admits that the Bair Hugger harbors bacteria inside the warming unit and hose. That is defective and unreasonably dangerous.

3M has admitted the Bair Hugger should not be on the

ground because with of the filter at the bottom of the unit it will act as a vacuum and suck in anything that's on the ground, dirt, water, debris, etc., anything. That is defective and unreasonably dangerous.

So whatever evidence you rely on whether it's all that evidence or whether it's some of that evidence. If there's something that you found to be defective and unreasonably dangerous, we can check off the second element because we have proven more likely that not the Bair Hugger was defective and unreasonably dangerous when used in orthopedic surgeries.

And then we look back at the third paragraph. The Bair Hugger was used in a manner reasonably anticipated. Again, this is not in dispute. This is not something that Kathy O'Haver and 3M are fighting about. Kathy's surgical team used the Bair Hugger exactly as it was intended. You've not heard any evidence to the contrary and no one has told you that the Bair Hugger was misused through Kathy's surgery and we can put a checkmark next to that paragraph.

And so forth. Such defective condition has existed with the Bair Hugger was leased, directly caused or directly contributed to cause damage to plaintiff. Here if you want to underline "contributed to cause" you can do that to help you remember. You probably remember that we

spent a lot of time during jury selection talking about directly contributed to cause.

Some of the people on that panel had a problem with that language. They said they wouldn't be able to follow the Court's instruction about contributed to cause and so they could not serve on this jury with you.

Each of you has sworn an oath to follow this instruction even if the Bair Hugger wasn't the only cause; even if there's lots of other causes; even if the Bair Hugger was only a small cause; that checks the box for paragraph four.

Let's talk about that evidence for just a moment. We know that Kathy suffered a deep joint infection. Everyone agrees on that. There's no question. Here's what 3M's expert doctor Mont said about that. He's the one that testified remotely on the TV last Friday. We asked him, "You have no question by the way why Mrs. O'Haver suffered from a deep joint infection, right?"

He said, "I agree with that." He confirmed that it's not just him. It's Dr. Jarvis who was our expert. Dr. Bowling who was our expert. Dr. Mont who was 3M's expert. And Dr. Anderson who you just heard from yesterday and this morning who is 3M's expert. All of those experts agree that Kathy suffered a deep joint infection. That's not a fact that's at issue.

We also know that Kathy got her infection during the surgery. You heard from Dr. Anderson yesterday. We showed you this exhibit from his deposition testimony where we asked, "In this case, in the O'Haver case, it's your opinion that the inoculation of bacteria, the infection was during the surgery?" He said, "In the operating room." There's no real dispute about that.

Now 3M might talk to you about Dr. Mont again. And how Dr. Mont testified that Kathy's knee got infected sometime after surgery. 3M is trying to have it both ways. One of its experts Dr. Mont said that he is medically certain that Kathy's knee got infected sometime after her surgery.

But 3M's other expert Dr. Anderson told us yesterday he's medically certain that it happened in the operating room. The both can't be right here, diametrically opposed opinions. One of them is wrong. If you can't believe one of 3M's experts, how can you believe either of them on an issue that important?

All of our experts, 3M's corporate witnesses and 3M's expert Dr. Anderson agreed that Kathy's PJI, her deep joint infection started in the operating room during her surgery. How does that happen?

It happens because of airborne contamination caused by the Bair Hugger. Every study shows that the Bair Hugger

increases particles over the sterile field. Increasing particles over the sterile field increases the risk of infections and that contributed to cause Kathy's deep joint infection, her PJI.

And these videos are in evidence and you'll remember this from Dr. Elghobashi. It was during the first week of trial. This is from his CFD study, the model operating room. He didn't load up these conditions to make it show that the Bair Hugger is bad. He had incredibly conservative conditions.

He testified that the people in that operating room would be shedding squames, millions of squames per hour. But he only started with 3 million and he put them all on the floor, the hardest place in that room to pick and contaminate the airflow.

What his model shows is that within 20 seconds of turning on a heated Bair Hugger, that room is fully contaminated over the sterile field in just 20 seconds. This is the comparative. Within 20 seconds with the Bair Hugger off you have a clean sterile field. The protective airflow is doing its job. The Bair Hugger on those thermal plumes pick up the contaminants, pick up the squames, pick up the bacteria and billow them right into the sterile field surrounding the patient where the patient's wound is open; has direct access to the deep tissue of her knee and

where the surgical tools and even the prosthetic device itself are sitting on the table ready to be implanted inside her body.

Again, this is with the Bair Hugger on at 20 seconds. This is a closer view from different angles of the Bair Hugger on at 20 seconds. And you're probably going to hear from 3M when it gets a chance to talk to about how it didn't see any of those individual little particles fall directly into the surgical wound on this model.

Well one of the reasons is this only runs for 20 seconds. Dr. Elghobashi had to use a supercomputer that's expensive, time is limited. He was able to model 20 seconds to show how the Bair Hugger disrupts that.

Kathy's surgery lasted a little over 90 minutes, 91 or 92 minutes from her incision until when the wound was closed. That is 270 times longer than 20 seconds. What Dr. Elghobashi's model could do is it actually count individual squames, individual particles that got within a very, very narrow zone surrounding the knee. And in 20 seconds there were 600 particles at that patient's knee.

You multiply that by 270 times to get the length of Kathy's surgery and that is 162,000 particles emitting over a 90-minute surgery.

That's just one way that those particles can get in to cause this kind of infection. It doesn't have to happen

that way. It can also contaminate the tools. These tables here, that's where the surgical instruments are. Where all these particles are at the surgeon's hands, that's where Dr. Ballard's gloved hands are working; where he is touching the implant; where he's touching Kathy's knee; where he's touching tools going into the surgical wound.

These tables here, that's where they opened the sterile prosthetic and set it opened up in what's supposed to be the sterile field. But with the Bair Hugger is a huge mess of contamination. If those particles fall on that sterile device, if my cell phone was a prosthetic knee and this is billowing in, all those contaminants and it's falling down over five or 10 minutes it's out before it's put in and those particles attach, that gets put directly into Kathy's knee to cause her infection.

Now Dr. Elghobashi's work is confirmed. It is validated by the video from the McGovern study. They set up a real operating room in Europe and they used the neutrally buoyant bubbles, not because they are exactly like particles. But that's how you can visualize the airflow that you wouldn't otherwise be able to see.

And this starts about a minute in. But this starts where they are in the operating room. This is the conductive device. This is not the Bair Hugger. The bubbles go straight down. You can see the bubbles going

straight down here protected by the protective airflow. But when you switch to forced air warming, this is non-porous drapes. There is nowhere for the air to escape up. So it's forced down. And when it comes down the hot air rises and pushes those bubbles right in front of the surgeon, right where his hands would be right over the surgical site just like Dr. Elghobashi's CFD model. This absolutely validates Dr. Elghobashi's work.

And the thing is it doesn't take hardly any bacteria to cause this kind of infection. So even though there's hundreds of thousands, millions of bacteria that the Bair Hugger is churning out and putting into that surgical field over a 90-minute surgery, Dr. Jarvis told us that even a single colony forming unit could cause Kathy's infection.

And 3M agrees. We were talking with Jay Issa. He said that 3M is aware with respect to implant surgery, the amount of bacteria required to cause a PJI is very small. So even though we know that Kathy got her infection during the surgery because all the experts have said it. 3M's expert Dr. Anderson has said Kathy got her infection during the surgery, how much time in this trial has 3M's lawyers talked about her knee bleeding and her staples getting removed.

Dr. Jarvis explained why Kathy's undiagnosed PJI that started during her surgery would have caused her wound to

open up when those staples were removed a couple of weeks later. When bacteria attaches to a prosthetic it creates a biofilm. There's no blood flow in this metal knee implant that can deliver our natural immune defenses or antibiotics to kill this bacteria. It forms that cocoon around it that protects it from those defenses. So until this bacteria grows enough to erupt out of that protective shell and start attacking the body, nothing happens. But when it does, it starts attacking the tissue. The body sends in protective fluids. It creates pus. It swells and that swelling creates pressure. That pressure finds a weak spot in Kathy's skin to escape and it opens up that incision ever so slightly at the top third.

Now she was on antibiotics from the day after her surgery until she discharged from the hospital about 10 days later. She was off antibiotics for four or five days until this bleeding occurred. And as soon as she reported the bleeding, the same day it happened she gets another antibiotic prescription for five days of Keflex. She's immediately up on antibiotics again. She's on another 10 days of antibiotics when she goes in to have that opening re-stitched. And so she's on antibiotics for 25 of the 30 days immediately following her replacement surgery.

And that's exactly what happened. It broke free. It caused the pressure to open the wound. The antibiotics

knocked down the infection in her tissue but it couldn't attack the protective bacteria on the knee implant. So two weeks later it happens again. That's when she goes in for the revision surgery to clean out that infection and treat that infection.

So in weighing this evidence we tipped the scales more likely than not. In fact, we think we've tipped the scales a lot more than more likely than not that Kathy's knee was infected by airborne contamination that caused bacteria to attach to Kathy's knee implant, whether that was directly falling into the wound and getting on the implant there or whether that was when the knee implant was open and in the sterile field or did Dr. Ballard touch it with gloves that were supposed to be sterile but they had been moving inside the sterile field in all the contamination caused by the Bair Hugger.

So if we go back and look at Instruction 6 again if we could have the Elmo please. We've talked about the first element. We've checked that. We've talked about the second element. We've checked that. We've talked about third element. We've checked that.

And we have proven that the Bair Hugger's defective condition contaminating the sterile field contributed to cause Kathy's infection by contaminating the air in the sterile field with bacteria carrying particles. The Bair

Hugger doesn't have to be the only cause.

3M probably is going to talk to about doors opening. They'll talk to you about operating room lights. They'll talk to you about other equipment in the room that has heat that has a fan like a computer or a laptop or a monitor or even the anesthesia machine.

But what haven't heard at all during this trial is one single witness who has told you that any of those things are the sole cause of Kathy's deep joint infection. There is no evidence in this case that any of those other things are the only thing that cause Kathy's knee, deep joint infection. And if those things are not the sole cause, the most they could be is a contributing cause with the Bair Hugger.

We have proven that the Bair Hugger contributed to cause Kathy's infection under the law. We can check off this fourth paragraph and your verdict must be for the plaintiff on Instruction Number 6.

Instruction Number 7 is almost identical. The first one is again defendant leased the Bair Hugger in the course of defendant's business. That's the same as for 6. We talked about that. We get to check that off.

Second, the Bair Hugger was then in a defective condition, unreasonably dangerous when put to a reasonably anticipated use without knowledge of its characteristics.

That's basically the same as Instruction 6. We've talked about that. We can check that off.

I'm going to skip over paragraph 3 right now and talk about the fourth paragraph that the Bair Hugger was used in a manner reasonably anticipated. We talked about that in Instruction 6. That's not the disputed fact in this case. We can check off the fourth paragraph.

So let's talk about third paragraph for just a minute. That is third, defendant did not give an adequate warning of the danger. Now as it turns out this element is not disputed either. 3M admits that it never warned about the Bair Hugger's dangers when used in an operating room.

3M used to warn about model 200. 3M warned doctors and hospitals don't use the 200 series in an operating room because airborne contamination might result. That's for the Model 200. It took that warning away. So not only does 3M not war. It took away a warning that used to be there.

This is from Al Van Duren's testimony when he was speaking as 3M's voice as their corporate representative. He admitted that between the 500 unit and the 500OR that went into the operating room, the company removed the warning regarding the possibility of airborne contamination. Took it away.

Again, Al Van Duren speaking as 3M, 3M's voice as its

corporate representative. Corporate representative. "3M is aware that every single study that looked at the issue showed that an increase in a particulates in absolute numbers when the Bair Hugger is used. But even until this day 3M does not warrant that the Bair Hugger may increase the amount of particulates over the sterile field."

3M has never warned that the Bair Hugger creates airborne contamination. It's never warned that bacteria can be cultured from inside that blower unit and hose where it's blown through the blanket onto the patient. It never warned doctors and hospitals that it's forced air warming provided no benefit to surgical patients who were obese.

And it never warned doctors and hospitals that the Bair Hugger should never be placed on the floor because it acts as a vacuum to pick up dirt and debris and whatever else is there.

Even though 3M has known that since 2014, it's never warned users to not place the Bair Hugger on the floor. We even talked about that with Scott Augustine who invented the Bair Hugger. We asked him, "Do you agree the filter located on the bottom of the Bair Hugger could act as a vacuum?" He said, "Yes."

Then we asked him, "Do you agree that doctors and hospitals should be warned not to place the Bair Hugger on the floor?" And he said, "Yes."

And we asked why? "Because placing the Bair Hugger on the floor could increase the risk of airborne contamination." And he knows now that it was a mistake for Augustine Medical to prevent the 750 to be placed on the floor.

3M knew that when it bought the company. Arizant knew that when it changed its name. 3M was responsible for that mistake. 3M is even more responsible because since 2010 in the last 12 years it has not fixed that mistake. The fact not only has it not fixed the mistake, it doubled down telling the market that these devices were completely safe and there was no problem at all.

You heard from Dr. Ballard, Kathy's surgeon. You heard from Kimberly Colby at the hospital. They wanted to know all of this information so they could make an informed decision about whether or not to use this dangerous product in their operating rooms. They cannot weigh the risks and the benefits unless they get accurate information from the company that makes the device.

THE COURT: Counsel, you've used 50 minutes.

MR. EMISON: Thank you, Your Honor.

Going back to Instruction Number 7, you can check off the third paragraph. We showed that the warning directly caused or contributed to cause - I'm sorry, we showed the defendant not give an accurate warning.

So we look at the fifth one; that the Bair Hugger being leased without an adequate warning directly caused or directly contributed to cause damage to the plaintiff. That's almost the same as in paragraph 6 but it's a little bit different - Instruction 6 but it's a little bit different. It's talking about that failure to warn.

What is that? That means that if 3M had warned Kathy's doctors, warned the hospital, they would've done their own risk-benefit analysis with the accurate information and they would not if use the Bair Hugger if it caused airborne disruption in these orthopedic surgeries. They would either have used warm cotton blankets. They would have used a competing. Or because of Kathy's weight they didn't have to use anything at all because she was not going to get cold. If they hadn't used the Bair Hugger she would not have had this infection and we can check off the fifth paragraph and your verdict must be for the plaintiff.

I want to talk to little better Instruction 8 because it's just a little bit different. Instructions 6 and 7 just talked about the Bair Hugger itself, whether was defective or unreasonably dangerous. It didn't talk about 3M's conduct or its knowledge or the conduct and knowledge of Arizant or Augustine Medical.

What Instruction 8 does is it includes the conduct of those companies. Let's walk through these together.

First, defendant manufactured the Bair Hugger. That's not a disputed fact. Everybody agrees 3M and these companies manufactured the Bair Hugger.

Second, the Bair Hugger was defective because its design permitted airborne contamination of the sterile field during surgery. We talked about that a lot this morning for all the same reasons that it applies to Instruction 6 and 7, that applies to this paragraph. You can put a checkmark by that paragraph.

The third paragraph, Defendant, and again remember. 3M accepts the liabilities from Arizant and Augustine so that meets all of those. Fail to use ordinary care. I'll underline ordinary care. So either - and circle "either" designed the Bair Hugger to be reasonably safe. Circle the word "or" adequately warn of risk of harm from airborne contamination. There's a lot going on there.

I'll ask you to underline the phrase "ordinary care" because that's defines the part of the instruction. The phrase ordinary care means that degree of care, skill and learning that an ordinary careful expert in defendant's business would use under the same or similar circumstances.

The twelve of you as that jury in this case stands as the guardians of our community. You'll determine what that ordinary care needs. You'll determine if a medical device company could have its paid litigation expert edit every

single word in the published version of the International Consensus that talks about forced-air warming. Is that what an ordinary careful company would do.

You'll decide if a company makes a mistake and removes a critical safety warning, whether it's ordinary care that double down on that mistake for the next 12 years. Instead of correcting it, they tell the public that everything is fine.

You'll determine whether a medical device company can let its lawyers decide what clinical safety studies to run because of the risk of an ongoing legal situation because that's exactly what 3M did. 3M had its lawyers dictate what clinical safety testing it would do on the Bair Hugger.

This is Exhibit 134A. This is another of 3M's confidential internal documents. This was talking about the aerobiology study from Michelle Hulse Stevens. She was the 3M's Director of Infection Prevention. That study was moving forward. It'd been approved by its Medical Advisory Board. Then it was killed by 3M's legal department.

"Given the ongoing legal situation, decisions were made previously at a high level not to pursue clinical research." Clinical safety research on the Bair Hugger on this topic. You heard Ms. Michelle Hulse Stevens' testimony about this. She said, "Yeah, yeah, so I think

this was a decision that was made with input from our legal counsel. I remember discussions about doing the study just stopped after we had this input from our legal team."

The medical clinical people wanted to run a safety study on the Bair Hugger and 3M's lawyers stopped it cold. Is that using ordinary care? That's the question you get to decide.

This another internal document from 3M, Exhibit 1745 from Al Van Duren. "There was another study that somebody wanted to run to talk about and test the safety of the Bair Hugger." And what did Al Van Duren say? "I don't think that promoting a study like this would be a good career move for me."

Is that what an ordinarily careful company does? Stop a clinical safety study because the guy who knows most about the devices says I don't think that's a good career move for me.

So going back to Instruction 8 on the third part. There's two parts. Defendant failed to use ordinary care to design the Bair Hugger to be reasonably safe. You can check off that part. They did not use ordinary care to design this product to be reasonably safe. We don't have to prove both sides of that or we don't have to prove - it's not an and. You don't have to prove this part and that part. We only have to prove one.

We've already talked about failure to warn. That's not in dispute. We know that 3M did not warn about the Bair Hugger. We just talked about that so we can just go ahead and mark off both sides of the third paragraph. Check those boxes.

Again, fourth we talked about this such failure directly caused or contributed to cause Kathy's injuries. And so on Instruction Number 8 your verdict must be for the plaintiff.

Now if you find for the plaintiff under any of those instructions, it doesn't have to be all three, we think we've proved them all. We think you should find for the plaintiff on 6, 7 and 8. And even if you only find on one or two or all three, if you find for the plaintiff on any instruction then you must award the plaintiff the full amount of her damages that will fairly and justly compensate her for her injuries.

I want to talk just briefly about the punitive damage's instruction. That's Instruction Number 10. This is also a little complex. It's broken out. So if you find in favor of plaintiff under Instruction Number 8 that the conduct of the defendant as submitted in Instruction Number 8, that's the ordinary care instruction. That shows complete indifference to or conscious disregard then you can award punitive damages.

You could draw a line here happy to help you separate this out. We talked about those things. For all of the reasons that 3M failed to use ordinary care, that's also evidence of its conscious disregard for the safety of Katherine O'Haver and other patients, covering up, taking off the warning, having its lawyers dictate clinical safety decisions, that is all conscious disregard for the safety of others.

But then again there's an or. We don't have to prove all of these things. We just to prove one of them. We think we've proved all of them but we don't need that to have you award punitive damages.

And so you can also draw a line here. This middle part talks about Instructions 6 and 7. If you find in favor of plaintiff under Instruction Number 6 or Instruction Number 7, it doesn't have to be both, if you believe that at the defendant leased the Bair Hugger system the defendant knew of the defective condition and danger submitted in Instruction 6 or 7. That's easy. Of course, they knew. They've known since the early 90s about the risk of airborne contamination at they've worked since that to cover that up. We can check off the first element of the punitive damage instruction in the middle.

Second, defendant thereby showed complete indifference to or conscious disregard for the safety of others. That's

pretty simple. If a medical device company knows that its product is defective and unreasonably dangerous and it doesn't do anything for the next 25 years to either fix the problem or at least warn the users, the doctors and hospitals that this problem exists, that's done on purpose. That's not done on accident. That is conscious disregard for the safety of others and we can put a checkmark here. such sums that will be enough to punish the defendant and deter others from like conduct.

THE COURT: Counsel, you've used 60 minutes.

MR. EMISON: Thank you, Your Honor.

So that brings us to the verdict form. You will use this to complete your verdict. So the first line on the verdict form there's three places that you can see on here where you're going to write in the name of who wins this case. So it's going to be plaintiff Katherine O'Haver or defendant 3M Company.

And the Instructions 6, 7, and 8 tell you how you must find based on the evidence that you believed. That's why we walked through those. So on the claim of Katherine O'Haver on Instruction 6 defective and unreasonably dangerous, we checked off each one of those elements. So on this first-line you write Plaintiff Kathy O'Haver.

And on Instruction Number 7, because we've checked off all of those elements you write Plaintiff Kathy O'Haver.

And then once you've done that, there are lines at the bottom for the amount of damages. So we gotta talk about damages. This first-line is for the actual damages, the compensatory damages, the damages that Kathy has suffered because of her knee infection. That's how much it will take to fix the harms that can be fixed, how much it's going to help the harms that can be helped and how much it's going to take to make up for the harms that can't be fixed and can't be helped.

Kathy's damages for this terrible infection are enormous. This infection has upended every aspect of her life. Dr. Smith talked to you about one part of those damages. He talked to you about her economic loss. He walked you through how he calculated each one of those numbers. He showed you all the figures that he used and you haven't heard anything different from any one else.

3M did not bring in an economist or other witness to challenge any of the calculations that Dr. Smith made. For Kathy's economic losses Dr. Smith calculated the loss at between 3.2 million and $4 million. That's an economic loss.

But in Kathy's case those are the smallest harms. The real harms that Kathy suffered are losses that don't come with a price tag. They don't come with a dollar figure. How much is it worth for somebody to suffer chronic pain

all day every day for the rest of Kathy's life? How much does it take to make up for Kathy not being able to hold her grandchildren or get down on the floor to play with them when all they want to do is play with their grandma?

How much does it take for Kathy not to be able to spend what should be her golden years doing the things she loves with the person that she loves the most of this world? She should be fishing. She should be camping. She should be cooking. She should be traveling. But instead she feels like she is a constant burden on the people that she loves the most in the world.

And in this case, those are the most substantial damages. So you'll decide what number to put on this line. I'm not going to tell you an exact number. That's part of your job as a jury. You know part of the losses are between 3.2 and $4 million dollars. I think Kathy's non-economic losses are worth every bit of that. I'm not going to give you an exact number, but if you put something between $8 million and $10 million on here I think that's an amount that will fairly and justly compensate Kathy for the damages and the losses that she has suffered because of her infection.

In this last slide is where you arrive at your number for punitive damages. I've had to think hard about how to talk with you about punitive damages because punitive

damages aren't awarded very often. In fact, I've never asked a jury to award punitive damages in one of my cases before but they're necessary in this case. They're necessary to make sure no other surgical patient like Kathy going forward gets the kind of infection that she got. That's what punitive damages are for.

They are to protect the public. They are to protect our community. They're to make sure that the conduct that causes harm stops now. You have the power to do that in this case. You have the power to tell 3M, a $15 billion company these infections stop today.

You heard the evidence about 3M's net worth. I read that into evidence just before we rested our case last week. 3M's net worth is $15 billion and that is a lot of money. It's more money than I can understand. How in the world can I come here and put $15 billion in terms that those of us this courtroom can understand?

But if 3M was a regular person, a regular Joe $150 to their name. Most of us can't complete comprehend how large $15 million is but most of us are probably familiar with 150 bucks. So can we have the slideshow. I created this slide. One the left is $15 million. The right is regular Joe $150. Regular Joe develops, marketed and put into hospitals a medical that caused deadly and debilitating infections, how much would it take regular Joe

to stop doing that? A penny out of 150 bucks. Probably not. Would a dollar out of 150? Probably not. Out of 150 bucks would $10 or $20 be enough? Maybe so. I don't know. That's going to be up to you.

So what is it going to take to get 3M's attention sitting on $15 billion. How many dollars out of 150 would it take to get regular Joe's attention? You can make a chart like this back in the jury room and use that to make that conversion because it's up to you. You have the power today you could tell 3M to stop the infections now.

My part of this case is almost done. In just a minute I'm going to sit down and I'm not going to be able to stand up here before you again. Mr. Farrar is going to have a chance to talk with you for a little bit if I leave him any time but my part is going to be over.

And for the last four years it's been my honor and my privilege to represent this lady, Kathy O'Haver. All of us at our table and all of us on our side of the courtroom have felt the great weight of responsibility to Kathy. And as my part of this trial comes to an end, I can finally feel that weight coming off of my shoulders but I can sense it moving on to yours.

Because when this trial is over I go back to my family, I go back to my law practice. I go back to my other clients and more trials. 3M's lawyers will go back

to Minnesota and Little Rock. Judge Phillips will have other cases in this courtroom. And you guys will finally get to go back to your families and your jobs.

But for Kathy this trial never really ends. Whatever you decide, Kathy wakes up the next morning and she has to live with the results that you've given her. This is Kathy's one opportunity for justice. She never gets to come back here again. This is her one chance to hold 3M responsible for the harms that they caused. And under our system of justice that's how we make sure corporations are held responsible to do the right thing.

That's what you do with your verdict, hold 3M accountable. Make sure that this kind of infection doesn't happen to anyone. Thank you.

THE COURT: Thank you, Counsel. Can Counsel approach.

(BENCH CONFERENCE.)

THE COURT: So I just wanted you to know that you have 20 minutes remaining. You used 70 minutes. I just wanted to give you a heads up. You wanted a 20-minute warning and you want a 10.

MR. FARRAR: Yes please.

THE COURT: That's 70 maybe I'll put 30 minutes into yours and then break at 45.

MR. BLACKWELL: Your Honor, we could use a little

break even now quickly.

THE COURT: Do we need a real break or we don't. We'll go ahead and break now and we'll just let the jury know. Do you think you're going to use the full hour and a half?

MR. BLACKWELL: No, I don't think I'll use the full hour and a half.

THE COURT: I think we'll take about 10-minute recess now and we'll just roll right to the end.

MR. BLACKWELL: Thank you.

(RETURN TO OPEN COURT.)

THE COURT: Okay, folks, we've been sitting for bit so we're just gonna do a five-minute break. I really want to keep it at five minutes. And then defendant will give their closing argument. I'm not trying to starve you guys out. I'm just trying to keep us running as efficiently as possible. So when you guys begin your deliberations you'll have lunch ready for you.

(INSTRUCTION WAS READ.)

Let's get going at 12:05 please.

(BREAK AT 11:57 AM.)

(RETURN AT 12:05 PM.)

THE COURT: You may be seated. Mr. Blackwell, your closing argument.

MR. BLACKWELL: May it please the Court.

THE COURT: Counsel.

CLOSING ARGUMENT BY MR. BLACKWELL

MR. BLACKWELL: Ladies and gentleman, again my name is Jerry Blackwell. This will be the last time that I get to speak to you, that 3M gets to speak to you in this trial.

I'm going to start off by telling you that I am actually proud to be speaking on behalf of 3M. The way that they've been talked about in this courtroom has been unfair. What you've heard from plaintiff's counsel, they've gone through a million 3M documents to find the words and phrases that help them - they've cut them out, put them on a piece of paper. Whenever they were done it was over a billion dollars. And they came and asked for - well we'll talk about how much money 3M spent.

When I think about this case I think about actually - I'm originally from North Carolina. And think about when I was just going to law school. I wasn't a rich law student. I ate cheese sandwiches in law school. But I needed a car. So I talked to my brother. My brother was going to hook me up with the car. So you know how this is going to go.

So my brother - I gave him $900 and he said he was going to get me a Volkswagen bug, a nice car to have in Chapel Hill from North Carolina. I went to school in

Chapel Hill. He bought me a Volkswagen bug all right. It had no floor in the back. So you just stapled the mats over. When it rained the water splash and hit the ceiling a drip down on the floor. If you wanted the horn to blow you had to connect two wires and it would blow until you disconnected the two wires. This pedometer didn't work. When the wind blew you'd have to shift with the wind and shift over again. It was that kind of car. I love my brother but he will never sell me a car again after that experience.

When I listened to what you heard in this case it reminds me of that experience. Now why do I say that? Why should you be skeptical of the kinds of things you have heard in this trial? Now when I stood here in opening statement I almost begged the plaintiffs, the first thing in the case, I almost begged them to do it. Why don't you plug in the Bair Hugger and let the jury experience it all for themselves. Why don't you do it please.

They had so many Bair Hugger units up here on the floor, they almost tripped on them. They had several different models, a model 200. They waved the blanket over here. They waved the blanket over there. But what they never do is take and let you come up here and experience it for yourself. If somebody tried to sell you a car that way you'd have been gone already after one hour, right?

Why wouldn't they do it? Because they'd rather talk about it than have you experience the so-called billowing air that you couldn't even feel three inches from the blanket. They knew that. That's why they wouldn't do it. The only time they got up here is after we started our case. And one of the first things I did with the first witness we could use is we plugged it for you to check it out for yourselves and to see if you even believe it. So we did.

After that they came up and decided they're going to show you a demonstration too. And did they use the product the right way? No, the first thing they did is took the hose out of the blanket and they pointed it at you like it was a leaf blower to come up, like that's the way it was used. They knew it because if you use it the way you're supposed to you wouldn't feel anything.

And, frankly, what they did was misused the product. It said so right on the label. You should never use that product detached from the blanket pointing it at people because there's a risk of thermal injury. They put a warning here to make it safe and they're pointing it at you with the risk of thermal injury to make a point because they knew the other point was not ever going to be believable to you. But I can't just stop there. I'm thinking about my brother and the kind of car we got, I got

from him.

Now if you listened to the opening statement you heard some extraordinary things. For example, they came in and they told you that Ms. O'Haver left her job in Oak Grove because of the infection. In fact, they worked on the infection so hard that they defined her whole life sort of like before the infection and after the infection. And the entire time they spent in opening statement there's one word you never heard, stroke.

They never told you in the entire opening statement that she had had a debilitating stroke in March of 2017. And if there's a blessing, there's a blessing it just about anything. And the blessing that after two months she was able to walk again.

We are the ones who showed you her resignation letter from Oak Grove. We are the ones who showed you the evidence that she'd had a stroke. We're the ones who showed you the letter, the medical record from her doctor where he said she's not going to be able to continue this job anymore because of the stroke, not her left knee, not her right knee, not her elbow but because of a stroke. Did they tell it to you? No, why not? Did they forget about it?

Ladies and gentlemen, I can't even stop there. He just stood here and told you something about a Model 200.

Look, they used to warn on it and they took it away. Punish that company. They're terrible for the Model 200 didn't warn anymore.

The truth of the matter is ladies and gentlemen, is that Model 200 first of all was never ever, never ever designed to be used in an operating room. That's the first truth. It wasn't designed to be used in an operating room. It wasn't used in the operating room. That's not what it was for. It can't be used in an operating room if you listen to Al Van Duren.

Can't get enough of Al Van Duren every day. If you listened to Al Van Duren he told you, that 3M witness you heard from that the Model 200 was going to be too hot to be used intraoperatively in terms of needing a temperature control. It was too loud. The warning that he talks about had nothing to do with risk of causing surgical site infections, perioperative joint infections. It was a warning not to put the blanket on open wounds, open infected wounds outside of the OR because the open infected wound with air blowing on it might cause somebody else to get infected outside the OR. That's what that was about. They just stood up and talked about it and didn't bring it up to you. Absolutely incredible.

Incredible but I can't even stop there. Because if you heard the evidence in this case, Ms. O'Haver in January

of 2017, she did go in a washout of the infection that was diagnosed in late December of 2016, late December of 2016 to early January 2nd or so of 2017, a washout with antibiotics. Absolutely no treating doctor has come in here and told you that she had a recurring infection from that point on, not one. She didn't have to go in for anymore treatment for an infection. It was a successful washout procedure. It came. It was done. It worked.

Now they made a whole case of this asking for now I think it was $14 million and then a billion maybe is enough I heard counsel say over a washout procedure that was successful.

Now I'm not telling you that Ms. O'Haver has struggled with mobility in her left knee but it's because she got a joint replacement, not because of the infection. It's because in order to get a flexible mobile joint and to get past the pain you have to do the physical therapy, ladies and gentlemen. And you heard from me talking to Ms. O'Haver right here on the stand. She explained - I went over with her and you can pull out her deposition, that she hadn't been regular in her physical therapy for two years, for two years.

That matters. Lots of people have joint replacement surgeries. But if you don't do the physical therapy it takes a while. It can be painful in the joint. But

absolutely no treating doctor of hers took the stand to say to you that she's got permanent injury from the infection. No treating doctor of hers took the stand to say that any pain in her left knee today are in any way related to the infection that she had late December of 2016 to the first week of January of 2017.

So when you're back there deliberating I want you to just take a moment and just pause and just marinate on what exactly is the injury that was really proven up. One other thing I'll mention that was also extraordinary.

You might remember from the opening statement they told you the truth, the whole truth and nothing but the truth. They told you that she suffered from depression as a result of this infection from late December to early January. You didn't learn until we had her on the stand that she had struggled with bouts of depression for five years before she had either knee replaced. So why did they get up there tell you about that? Why? You'd think if I know it, her own lawyers don't know it? Why didn't they tell it to you?

So - and you all will remember this. What you heard from the plaintiff's lawyer. "Heat billows out from underneath the drapes and picks up microscopic particles that could be carrying bacterial and it lifts it up. Breaks through the 'forcefield' of protective air that

comes down from the OR's ceiling and move germs and contaminants directly over the sterile field." That's what was said.

Now what you learned in the course of this trial, this is how they got you started at the very start of the trial to get you hooked in by making a claim like this. So now you know from your experience you couldn't feel a thing from that blanket three inches from where the air comes out of it.

Billow. You couldn't get billow out of that if you put it on an index card and stuck it on the drape unless you pulled the word billow off again. There's no billow from that. That's lawyer speak.

Forcefield. Dr. Elghobashi took the stand and told you there's no such thing as a forcefield. In fact, he and I played around with the word for anybody that comes in and says that. Their paid expert, they paid $250,000 for Dr. Elghobashi's CFD. And somehow it got in front of the International Consensus too, the Dr. Elghobashi CFD in order to influence their process. He says that the idea of a forcefield laminar flow was rubbish. Then why did they get up there and tell you that?

Again, if you're buying a car and that's how it started, how long would it take you to get going if that's what they're selling you on the car lot. Not being honest

about the way the Bair Hugger works; not being honest about the nature of the injuries of Ms. O'Haver; not even being honest about the science.

They said we're not going to spend a lot of time talking about the science because after all the scientists who did this study don't have what you have seen. They don't have the confidential 3M secret documents. This is all kind of hypes you up with intrigue about confidential documents. And it's supposed to kind of get you sucked into the idea that there's something nefarious because we found confidential documents.

When they get up here next after looking at all of these confidential documents and spent years doing it, I want them to pull out the confidential document where 3M is saying we secretly know that the Bair Hugger causes surgical site infections in orthopedic surgeries in a confidential document and it's been hidden from everybody. I don't mean we say we know what caused the infection, not people saying things other than marketplace. I'm going to talk to you about that in a minute.

Or that 3M confidential documents where 3M says we know that there is no benefit to patient warming. If they don't show that it's fair to say, ladies and gentlemen, it's gaslighting. It's to get you worked up, to get you whipped up for purposes of talking about the verdict form

and the numbers they put up.

Now I'll walk with you through some more of the evidence that indicates things I want you to consider and just to keep in mind. So remember, because when all is said and done, if they make a claim that a product doesn't work, the Bair Hugger doesn't work, the proof is in the pudding. Turn it on. Let's see. Get the drapes a billowing. It would have been the easiest thing in the world. We had a table right. Most of the studies they loved so much didn't involve people at all. They only involved mannequins. They bought a bunch of mannequin studies where the subject in it was one. They talked about underpowered studies. You can't get more underpowered in a study that only has one participant in it. And I'll show you some of those mannequin studies.

They could've brought one right here, put a mannequin on there, put the drapes on it, turn it on and let's see it go, right? They chose not to and there's a reason for it. Because it's easy to talk about it than it is to show it.

Now I'm from Minnesota. I told you all when I started. When I started this trial, I told you all I wished I was from Missouri because I talked about that for not being from here and wished I were because this is the Show Me state, right. So they could've showed you, brought it in and showed it to you. They have the burden of proof.

It's not a burden of prejudgment. It's not a burden of accusation. It's not even a burden of talking about what the defense didn't show because we don't have the burden. They have the burden in this case.

Now in terms of how the Bair Hugger operated, you all remember the draping. And I'm just going to go through these quickly just to bring back to your mind again the way the Bair Hugger unit would be draped in the surgery. The blankets on that end. And you all remember us going through this, that the Bair Hugger unit would be behind a patient with layers of drapes and then finally the anesthesia screening is hoisted up here and the Bair Hugger's on the other side right here from anesthesia screening. And you can see here there's all the draping is here. Here is where the Bair Hugger would ordinarily be located and the anesthesiologist where I'm pointing.

And in order for the Bair Hugger to do all this disturbance they're talking about it would have to overcome all the drapes, get out from behind the anesthesia screening, go down to the floor because in their world hot air goes down to the floor first to pick up the bacteria and then it would go back over the screen to rain down on the surgical site.

Now all of this was overwhelmingly based upon the CFD from Dr. Elghobashi. The point - one of the points about

Dr. Elghobashi's CFD and I'm going to come back to him too in a minute. It was not meant or intended to model an operating room where Ms. O'Haver surgery took place. That's how they're trying to use it but that's not what he did. There's all kinds of differences between that OR and what Dr. Elghobashi followed.

One other thing you just heard. Do you remember when Mr. Emison was just up here and he said to you that the Elghobashi CFD was validated by the video in the McGovern study? He just said that when he stood up here and showed you the video from McGovern.

Dr. Elghobashi was on the stand. You never heard him say one word like that. And I'll submit to you that that was made up just now. He never said that. Nobody in the whole trial testified to the fact like that. Nobody. I will show you what Dr. Elghobashi acknowledged; that his CFD was never validated in the real world. They know that's a problem.

That's why they pulled out the McGovern study. They played the McGovern while we was in trial too but not as a validation for the Dr. Elghobashi CFD, they didn't. They just pulled it out just now because they know that's a problem. You have to validate all that math in the real world and it did not happen. It did not happen. It did not happen. They know it's a problem.

So we look at the CenterPoint Medical Center operating room number 8. I'd draw your attention to this again because you will hear them say repeatedly the Bair Hugger sat on the floor where it sucked up dirt, sucked up bacteria and so on. The fact of the matter is in this case they had no idea in operating room number 8 whether the Bair Hugger was on a pole like the one you see here or where it was. Again, they have no idea.

And they'll get a chance to get up here for another 15 or 20 minutes, I hope the first thing they do is pull up the record that shows the Bair Hugger was sitting on the floor, first thing and that they don't pay attention to that. The first thing they do, pull it up, show it to you. And if they can't show you that the Bair Hugger on the floor, I'm talking about burden of proof, then why are they talking about it? Why? It's one thing to say we don't know for sure but that's not what they said ever in the trial.

Now I wanted to show you again what we did see. And this was from Dr. Abraham's CFD. His CFD had a specific purpose. It was to examine whether or not the exhaust air from the Bair Hugger that you all felt when you came up and were able to actually experience it, whether that air coming out of there is going to be forceful enough to disrupt the unidirectional airflow that comes down over the

sterile field. He isolated everything out so he could focus on just that. And they afterwards he validated it with certain airflow visualizations that you all saw. And I want to show you a few of those just so you see it.

You can see over here is where the Bair Hugger is turned on. Here's the fog generator. The other is where the Bair Hugger is turned off. There's a unidirectional air flow there. And you can see what happens with the air from the Bair Hugger. It's coming out through the head area. And do you see any difference when the Bair Hugger is on or off of any of it going over the surgical field?

He also showed you under the table, the same thing with the Bair Hugger on and the Bair Hugger off. We have the directional flow. Now see if you see any difference. And here he did just for purposes of showing what happens in the opposite side if you went away from the anesthesia screen and actually just brought it out to the surgical field area and what do you see? Is there any difference with the Bair Hugger on or off in terms of disruption of the unidirectional flow?

So I wanted to bring your attention to International Consensus. This is really important because as you can see we could probably be here arguing about the studies until this time next year. They'll pull out a study and they'll mention paragraph 1, sentence 3. We'll pull up the same

study. Here is paragraph 4, sentence 5 and it can go back and forth.

So with most of us in our lines of work we've got certain references and resources we go to where we're much certain as to what the answers are. The lawyers can go to something called Westlaw and we get usually pretty authoritative information there.

On a much lighter note, my wife has owned a hair salon in Minneapolis for about 30 years. Anything that involves pop culture, we know who to call. At the time somebody, friends who are judges had heard that Patty LaBelle and Aretha Franklin got in a fight. So I said I know who to call. So we called my wife and she straightened that out in about three seconds. She said, everybody knows that's not true.

So if you're looking for scientific studies on the science that relates to infections, periprosthetic infections, the International Consensus is a wonderful authoritative place to go because they've looked at all the science, they've looked at all the studies. There are 800 or so delegates in the 2018 one. They have no axe to grind. They're simply trying to find out do we have a consensus position on issues of importance in the orthopedic surgery arena. I've highlighted certain names here. You heard them talk about Darouch when they were

just up. Mike Reed and Greg Stocks.

Now Mike Reed, you were just shown when Mr. Emison was here an email from Mike Reed saying I stand behind the McGovern study and its results. But if you looked at the data, it was 2012, right. This is 2018, 16 years later you see what Mike Reed is saying about forced-air warming and even McGovern 2018, six years later. So over 800 leading experts from 92 countries around the world. And it said, to the best of their knowledge no published work related to orthopedic infections was missed. Fair enough.

As I say, they either considered Dr. Elghobashi's CFD or they considered McGovern. They considered by Darousche too. They considered Oguz. They considered Adivan. They considered all of them. And you know the conclusion they reached - well first, here's the countries that were represented.

And sure enough Dr. Mont was one of the editors. But on the question that relates to forced-air warming, Dr. Mont wasn't on that particular one. Mike Reed was. Question Number 1: "Does the use of forced-air warming during orthopedic procedures increase the risk of subsequent SSIs/PJIs?"

Recommendation: "There is no evidence to definitively link forced-air warming to increased risk of SSIs/PJIs." Creating a Warning, what does this warning say other than

there's not evidence that links forced-air warming to an increased risk of SSIs/PJIs. That's the science. Agree: 93 percent; Disagree: 2; Abstain: 5. The super majority had a strong consensus in that regard. A strong consensus.

And that has taken every single argument that you've heard for the last 2+ weeks into consideration as late as 2018. So to the point of saying this is old science, well that's not old at all.

Now the other comment that was made and we'll just kind of go over here. I want to show you that but the question was raised to a 2013 International Consensus group also five years before. "We recognized that their allowed to go posed by forced-air warming blankets and that no studies have shown an increase in SSI related to the use of these devices. We recommend further study but no change to current practice."

No change to current practice. Agree: 89 percent; Disagree: 5 percent; Abstain: 6. Strong consensus. You can see the consensus was strong in 2013 but it was even stronger in 2018 on that point. Having heard everything that it said here.

Now when Mr. Emison was here before you a moment ago he tried to say that definitively means something other than having at least a minimum basis for drawing a connection. I want to show you here that International

Consensus group was clear. It says, "The literature is conflicting and there is no lack of strong evidence linking forced-air warming to increased risks of SSIs. In light of this while we recognize that theoretical is posed by forced-air warming, we cannot recommend discontinuing the use of these devices at this time."

It says International Consensus. If you had to go again to any resources that's going to be as close to objective as you're going to find it would be an organization of experts brought together from all around the world to try to answer these questions. And that's what the International Consensus is and that's what it does.

Now I want to switch gears and talk to you about another sort of narrative sort of running underneath this case that I think is really important that I try to connect the dots on so that you fully understand. Because you may be wondering with all the things in an operating room that blow air, all the things that might generate heat, all the things that might contain bacteria, why is this focused on the Bair Hugger? Why is it the most studied patient warming device in history? Why not focus at all these other things? Is there a story to it?

Well people ought to know that yes, there is. First let me just point out the operating room environment is not

a sterile environment. The Bair Hugger is not sold as a sterile piece of equipment. It couldn't be. As a matter fact, in the operating room we have here the sterile field. Everything around it is not sterile. If it had to be sterile we couldn't have operations because they are people in there and people shed squames even through the clothes or the shoes or the shoes you put on. That as you learned through the trial that as humans we are 100 trillion parts of bacterial to impart human cells so 10 to 1. So it's impossible for humans to come anywhere without being just a little bit like take 10.

So the Bair Hugger is not marketed as sterile. It's not required to be sterile so the fact that somebody could go swabbing around in in and find bacteria inside the Bair Hugger, you can do that with any kind of a non-sterile area of the operating, not unique to the Bair Hugger.

But what is unique, again, that we told you about because you didn't hear this in opening statement from these lawyers is that they're admitting many efforts to culture bacteria from the blanket when it is connected properly. And it's not something anyone has been able to do. They've only been able to culture bacteria when they first take it off and then blow it around and swab around inside of it. I'll show you something about the history of that in just a moment.

But with the blanket on I even asked Dr. Jarvis was there any study where they attempted to culture bacteria from anything that comes from the exhaust from the Bair Hugger. He said he was aware of no such thing. To the extent they found differences of any kind, Scott Augustine will say those weren't statistically significant, meaning any difference they saw could be chalked up to even chance random.

Or as I said in opening statement to you all, it would be so easy to just get your little agar dishes, set them, put them under the blanket. You can buy a stack of like four for $25. Do the test, bring it in here. You don't need to spend $250,000 on a CFD, you know. You can get the real deal right here. Do it. It's been tried and it's been tried and it's been tried and it's been tried. Never succeeded, right.

The story is it could be culturally bacteria actually out of the Bair Hugger. Where that story ends is where the rest of this begins. The Q-tip swabs they're talking about particles and all the rest because you know you couldn't get any bacteria if used properly. It will never happen. So it's not happening.

So we have here an operating room in an environment that's not sterile with the various sources of bacteria in the OR. And, incidentally, with these different sources of

bacteria in the OR there's certainly sources of bacteria outside the OR.

One of the other untruths about this case is Ms. O'Haver's surgery on the left knee was in 2016. And the idea that somebody could come in here six years and later tell you where a single individual bacteria came from without any way of you seeing it, nobody found it had any unique signatures to it to be able to identify it and they tell you they know what the source is is impossible and not believable and not credible any more than you can leave this courtroom today, go over there to Dave's Deli and Bakery and have a sandwich, go home, meet your kids and friends and then wake up in two days and have a cold and be able to swear it must have come from somebody at Dave's Deli six years later after the time.

Similar to invisible bacteria that could be anywhere. It can be any of them or none of them or even her own self is the truth of it.

So sources of air movement within the OR. You heard about these during the trial. Now the Bair Hugger Model 750 is the only other piece of equipment in the OR that you heard about that has a filter. Not just any filter. It has the sort of filter that you would find in a general surgery operating room, Merv 14. So when you talk about it's sucking up dirt and this and that from the floor, they

don't tell you what the endpoint is of the filtration. And they also don't tell you what actually comes out of the blanket when it's used properly.

So let me tell you about Dr. Augustine since they did bring up Scott Augustine in their remarks. You heard his testimony. You heard the testimony of Mr. Albrecht also about what's relevant to this.

So you learned already that in 1987 the FDA cleared the first Bair Hugger System Model 200. That Model 200 again wasn't designed for use in the OR. It had a warning on it that had nothing to do with the issue of blowing air in an orthopedic surgery inside an operating room and cause an infection. It was a warning not to put it on an open wound is what that was about.

So Scott Augustine is selling the Bair Hugger. In 2002 he leaves Augustine Medical because he pleads guilty to Medicare fraud because he had not been forthcoming with the Federal Government and he ends up being banned from selling medical devices for five years that you just heard, banned for Medicare fraud.

Now while he's in the ban period he creates this Hotdog competitive warming device cleared by the FDA. So while he he's banned he creates the Hotdog to compete against the Bair Hugger so new device. The company started that in the name of his son.

So during this period then he starts selling the Hotdog after. It's all pretty important. I'll show you how it connects. Because from 1991 to 2017 the published studies out there showed no bacteria from the Bair Hugger. So 1991 to 2017 there's no bacteria coming from the Bair Hugger.

Then in 2007 to 2008, we're right here in the middle of the band period, there are secret studies that showed no bacteria for the Bair Hugger. And I'm going to show you a lot of those secret studies too. After the secret studies showed no bacteria, that is when all of a sudden, the particle studies began. Can we actually prove that there's bacteria being kicked around by the Bair Hugger. The answer was no.

Well let's talk about particles instead because we know particles aren't bacteria but we can say they're the cause. So we have Mr. Augustine and Mr. Albrecht. We've got secret bacteria studies and the particle studies. Then you heard from Mark Albrecht biostatistician and employee of Augustine Biomedical. And this was the testimony you heard.

"All the studies you've done on the Bair Hugger when you were with Augustine Biomedical and Design, not with you were at Arizant?"

He answered, "There was a market launch. And there

was a product on the market at the time these studies were done, yes."

"And that product was the Hotdog, right?"

"Correct."

"Which is a competitive product to the Bair Hugger, right?"

"Correct."

"And any research that you might have done that raised any kind of questions about either the safety or efficacy of the Bair Hugger, that kind of research would have the potential to help out Hotdog sales, wouldn't it?"

"It's a promotional tool as to sales, yes."

So these studies - you might wonder were all these studies comparing the Hotdog to the Bair Hugger. It wasn't coincidental. And do you remember hearing the witness about the Legg study. And I was having this discussion with Dr. Abraham. And I was asking him you might remember, why do we have this Legg study comparing the Bair Hugger to the Hotdog. And he started off flooding the chamber teeny particles that are 0.3 microns in size. Why did you do that? What you've learned throughout this trial is that particles that are smaller than a micron are too tiny even to carry bacteria.

So why do you test it with those tiny particles except you know the results you're going to get and you get to say

look what the Bair Hugger's doing, right? That's the part for the particle study is to be able to say look at the Bair Hugger. It's not going as well as the Hotdog. The whole series of these particle studies and Legg, you heard them coming in in that Legg study. They didn't mention it was full of teeny tiny particles that don't carry bacterial. But it started as promotional tool.

THE COURT: Counsel, you've used 40 minutes.

MR. BLACKWELL: Thank you, Your Honor.

And so Scott Augustine invented a competitor. So during the ban he invented the competing Hotdog conductive warming device. You see here where he tried five times to capture bacteria coming from the Bair Hugger with three different capture techniques and he was not able to capture bacteria coming from the Bair Hugger. The very thing they're claiming the Bair Hugger does he was trying to do to capture bacteria from it and couldn't do it.

So despite the results of the secret no bacteria studies, he ghost writes articles regarding the supposed danger of forced-air warming. So I can't get bacteria out it so I'm going to ghostwrite it saying forced-air warming is dangerous because this is the way that I'm going to compete is by giving the Bair Hugger a haircut and my product is the Hotdog. That's why I have all these comparisons up and down the chain.

So those studies are done with agar plates where he was trying to culture bacteria. He used various techniques but was never able to do it. So published over 25 years show the Bair Hugger system does not increase bacteria at the surgical site.

Same thing, they didn't focus on it. The reason I might submit to you they didn't focus on it didn't help them to talk about studies where you actually tried to culture bacteria from the Bair Hugger. And those studies say again and again no dice, you can't culture bacteria with anything coming out of the blanket.

So what about the secret studies by Mr. Albrecht. So Albrecht visits three Minnesota hospitals to measure bacteria coming out of the Bair Hugger in use. He talked about this in his testimony. St. Cloud Minnesota, Alexandria, Minnesota and Hastings, Minnesota. He's working for Scott Augustine. And what he found is there's no difference in bacteria that comes from the Bair Hugger on or off; no bacteria in the air coming of the Bair Hugger hose; either one. Couldn't culture any bacteria from what was coming out the Bair Hugger.

Dr. Jarvis, you've heard from. He acknowledges that the Bair Hugger is the most studied patient warming device. You can see that in those studies he uses the agar plates has found no bacteria coming out the blanket at all. He

agrees that the Oguz study found no difference between the Bair Hugger and Hotdog in terms of the number of bugs that it captured on the agar plates.

So then what do we have? We have a lot of these particle studies after this. So we can't capture bacteria so now we start doing the particle studies because then we can say look at the increase of the particles and the more particles, the more bacteria and the more bacteria, the more risk, the more risk equals causation. Except for the whole thing started that they knew they couldn't culture bacteria from the blanket in the Bair Hugger.

It's hard for you to see from there but you can see in a bunch of the studies some of which have been in front of you, there's Mark Albrecht's name here being this study, Forced-Air Warming and Ultraclean Ventilation Do Not Mix. Albrecht. Here's Mark Albrecht here. *Effective Forced-Air Warming on the Performance of Operating Theatre Laminar Flow Ventilation*. Here's Mark Albrecht here. *Forced-Air Warming: A Source of Airborne Contamination in the Operating Room*. And Mark Albrecht on the one on the bottom. *Forced-Air Warming Design: Evaluation of Intake Filtration, Internal Microbial Buildup and Airborne Contamination Emissions*.

So this employee of Scott Augustine is behind a bunch of these particle studies they decided to do when they

couldn't get bacteria to come out of the Bair Hugger through the blanket. In all those studies, not one of them shows that the Bair Hugger actually causes infection, not one of them. It's not just because they're epidemiological studies. It's because they know you couldn't culture any bacteria with any particles coming out of the Bair Hugger blanket.

So what about Al Van Duren report? They kept saying Al Van Duren has said that every time that the Bair Hugger is turned on particles increase, particles increase. They're right back on the particles thing again. Mr. Van Duren said it depends on the distribution of size of the particle in a given space. What he's purporting to is all particles aren't created equal. So do increased particles equal more bacteria? Not tiny particles, not sub-micron sized. There are 25,400 in one inch. So those that are the smaller than one micron are too small to carry bacteria.

So much of those particle studies involving the Bair Hugger they're raising up a bunch of sub-micron sized particles that do not carry bacteria. This is what Al Van Duren's talking about and they quote him. They don't quote the full meaning of what he's saying, that it isn't just any particle or all particles.

Now I want to talk about the benefits of patient

warming as to who knows best about patient warming and you've seen these. You just were told that there is no benefit the patient warming at all. We'll submit to you that this the standard of care in hospitals all across the United States of America is to warm patients. Even Dr. Borak who came in here as their expert to criticize warming and the Bair Hugger, he could tell what he really didn't criticize for and that is at his own hospital where they still warm them at the hospital. That's the standard of care there.

So, again, the International Consensus, what does it say? The Benefits of the Value of Patient Warming Known as Normothermia.

Question 4: Does perioperative normothermia affect the rate of subsequent SSIs?

It says based on the data from general surgery and other surgical disciplines normothermia has been found to be an important factor during the preoperative period to minimize the risk of subsequent infections. We recommend that normothermia is also maintained in patients undergoing orthopedic procedures.

Notice what the International Consensus of 800 of the world's leading experts from all over the world did not say. They did not say that there is no benefit to patient warming. They did not say that since there is no benefit

that any risk that it's dangerous and unreasonable.

That's lawyer speak, not the speak of experts who are concerned about patient care and taking care patients. This is what they say.

Looking at 2013 you'll see again, "Does patient normothermia have an essential role in preventing infectious complications? We recognize the significance of patient normothermia and the data from non-orthopedic procedures. We support general recommendations from the general surgery literature and identify this as a field that requires further research." Agree: 92 percent; Disagree: 1 percent; Abstain: 7 percent. Strong consensus. Made five years before in favor or maintaining patient warming.

Again, Dr. Mont being the editor-in-chief for the Journal of Arthroplasty that publishes the International Consensus performed over 15,000 joint replacements, performed 6,000 revision surgeries, treated up to 2,500 periprosthetic joint infections. He's the real deal. He says he uses the Bair Hugger forced air warming system to warm all of his patients undergoing hip and knee replacement surgeries whether they are obese or not and regardless of the length of surgery. His infection rates used in all of his surgeries are below the national average, a percentage of the national average.

Then we heard from Dr. Ballard, the treating orthopedic surgeon for Ms. O'Haver. He agrees that maintaining a patient's normal body temperature during surgery leads to decreased infection rates and shorter period of postoperative recovery and approved healing. His hospital warns patients using the Bair Hugger system.

Now I know that they talked about Dr. Ballard. They talked about the information he would like to have known. And I'll submit to you that what the lawyers here would say he would have like to have known are things that the lawyers, would you have liked to have known the Bair Hugger increases infections, increases particles and puts patients at risk anytime you turn it on? Well what doctor says no to that? If I heard that, I'd like to know too but it's not supported by the science. It's not what the science says.

And you can see what the International Consensus says about it. Incidentally, the person who is making the decision about what kind of patient warming to use with the anesthesiologist, Dr. Bible. In their opening statement they said they were going to bring Dr. Bible and you were going to hear from Dr. Bible. Cause Dr. Bible is the person who is ultimately deciding what patient warming modality to use. You all know with them having rested their case that they did not play Dr. Bible. They did not

call Dr. Bible. You didn't actually hear from the person who was making the decision so he could speak for himself about what it is he knew cause he's making the decisions. We don't know what he did or didn't know. They didn't call him. And it's fair for you to consider why they didn't call him given that he makes the calls.

Doctor Bowling, their orthopedic surgeon, you might remember that Dr. Bowling has already had his own issues with respect to infection management and was sent off to essentially a remedial instruction course in infection management to sharpen his knowledge and to get better trained how to treat infections essentially. He said he treated it as an educational opportunity which is fine. But that's something he had to do in order keep his license. He had to go to that.

Now he claimed no benefits to normothermia in orthopedic surgeries but then he warms all of his own patients. Because he knows that if doesn't that's the standard of care and he's going to be going back up here to this again for more remedial training.

He performed surgeries at a surgery center where the Bair Hugger is used. There's been one PJI joint infection where the Bair Hugger's used. And he does surgeries in a hospital where another device is used where there have been eight PJIs. He has worked where the Bair Hugger is used

and where the non-Bair Hugger is used.

He took x-rays of Ms. O'Haver when he met with her but he never sent them to her. We never saw them during the trial.

Now you heard trial a quote from Al Van Duren where they kept showing this quote from Al Van Duren suggesting that the Bair Hugger was contraindicated in orthopedic surgeries. And you saw this several times. It was on a blowup. I want to just bring back to attention what Al Van Duren was really saying, that he was not saying it was contraindicated for orthopedics surgery. So I want to show you his actual testimony.

It says, "You agree there's no contraindication of the Bair Hugger with respect to use of the Bair Hugger intraoperatively for orthopedic cases?"

Answer: "I would agree. However, in 2007 whenever this was done, yeah."

Question: "Yes. In 2007 there were orthopedic surgeons who would not allow Bair Hugger to be used in orthopedic cases. So in a sense they were contraindicated by the surgeons in these hospitals."

So there were certain surgeons who had concerns. Why did they have concerns? You saw those particles studies put out by a competitor. So Al Van Duren is saying he knows that there were orthopedic surgeons who would allow

them to use because they had concerns given the stuff they were reading. And for those persons that it's better to warm a patient before a procedure than not warm at all. That's what he's saying, not that there's been some regulatory decision or a decision within 3M that the Bair Hugger shouldn't be used in orthopedic procedures.

I wanted to touch on the Protect study because this was a study that was in 2022. And it's important for a couple of reasons. Mr. Anderson was just talking about what's the temperature span for when you go from normal temperature to being hypothermia. And this 2022 study from Dr. Sessler lowered that just a tad bit and you'll see it when we walk-through Protect study. I think you will.

In 2016 when Ms. O'Haver's surgery was done, what you'll see in our graph is hypothermic is what it was in 2016 for hypothermia, not 2022. I think it's important to point out, it's only a few degrees different anyway. But in the trial, you may have heard Protect study being discussed as a study that stood for the proposition that there are no benefits to patient warming. The Protect study had absolutely nothing to do with the question of whether or not a patient warming was good for patients or not. The only question in Protect was at what level does the body temperature get so low that you start suffering from depilatory and damaging effects of hypothermia? So do

you have to maintain a temperature of 98.6 or can you go a little bit below? Because at some point you're hypothermic and you suffer all of the difficulties that come with being hypothermic.

So recommendation to warm patients are based on randomized trials showing that mild hypothermia causes complications relative to a temperature of about 36.5 Celsius. But you can read here where it says "Although none of the outcomes we considered differ between patients assigned to routine care which are 35.5 degrees Celsius or aggressive warming up to 37 degrees Celsius. Available evidence suggests that temperatures below 34.5 cause complications. This is, again, "Lower body temperature, complications including surgical site infections, coagulant allopathy, prolonged recovery, shivering and thermal discomfort. Patients having surgery should thus be warmed as necessary to keep their core temperature at 35.5 Celsius or above." It's a study that's saying everybody needs to be warmed.

"As with any trial, our conclusions directly applied to the patients we enroll and could reasonably be extrapolated to similar patients. Nearly all involved patients were Chinese. A few had orthopedic or vascular surgery, they all had general anesthesia. As such, results might differ in other population included patients with

obesity."

So I wanted to show you again what the Protect study actually said. This does not stand for the proposition that there's no benefits to patient warming. It's the exact opposite that we know that there are dangers in not warming patients. And at what level do we define hypothermia so that everybody's protected.

Now I want to talk a little bit about what Dr. Dev Anderson has told us and you just heard from him today and yesterday, what the scientists will tell us. And what Dr. Anderson tells us is for example the standard of care supports warming patients. And the doctors will be in quite pickle if the standard of care says warm the patients and they decide not to and the patient's hypothermic and something happens to them. That's the standard of care. study. But you also heard from Dr. Jonathan Borak, 3M's epidemiology expert who said there's no scientific evidence that the Bair Hugger actually increases bacteria.

I know that there was a comment maybe it was yesterday or the day before that this is a case about particles. That's not how this case started. This case started with saying that the Bair Hugger caused Ms. O'Haver's surgical site infection, not that it caused particles, not that it caused increased particles, that it caused an infection. And that's what you'll see on the verdict form, her injury

relates to the infection, not that it relates to particles.

No scientific evidence that increases particles lead to an increase a bacteria. No scientific evidence that the Bair Hugger caused the surgical site infections. Again, the McGovern data is flawed. He was saying that the upshot is that there was no evidence that the Bair Hugger in fact increases infections, that it increases infections.

In the scientific hierarchy of scientific evidence and studies with the absolute best study, the gold standard study is randomized controlled studies which is like the Oguz study that you've heard about. That again found that they weren't able to culture bacteria from the Bair Hugger attached to the blanket used like it should. But McGovern slides down the tree as a retrospective study ...

THE COURT: Counsel, you've used 60 minutes.

So again looking at Oguz patients were randomized wit Excel random numbers to intraoperative warming with either a Bair Hugger forced air upper body blanket or a Hotdog upper body electric blanket after induction of anesthesia. An important finding of our study was that the type of patient warming did not influence the amount of bacterial sedimentation on either plate position. And that's just what I've been saying. The Oguz study was just another example of it.

And as to McGovern, the authors themselves agree that

the study didn't establish any causal basis for the association. What you might remember that the study says to itself in terms of the confounders in the study that he couldn't draw on a causal conclusion. And they noted that record-keeping was incomplete for additional factors that would impact the Bair Hugger study period in comparison to the Hotdog study period.

But Dr. Borak he showed us a graph where there was an apples to apples comparison where the same regiments were being used for the Bair Hugger and the Hotdog. Then what he found when they had used the same blood thinner and antibiotics that there's no difference in infection rates if that's the case.

And not just Dr. Borak but biostatistician Mr. Albrecht says "So you had to compare the period when the Bair Hugger was used with the same antibiotic and the same anti-fungal embolism drugs?"

And he says, "Those would not be significant for that kind of time, significantly different.

Not even close to significantly different, right?"

He seems so clear they wouldn't any different, let alone 380 percent more. There would be no difference if he does compare apples to apples. And that's the biostatistician who crunched the numbers on the McGovern study.

But I wanted to show you also that in the International Consensus McGovern was addressed there too. It says, "The authors noted their observational study did not account for infection control procedures that changed over the study period would account for several possible differences in patient risk factors such as obesity and fitness for surgery."

So it was also in the International Consensus is recognized the McGovern was a flawed study and to try to use it for the proposition that the Bair Hugger is increasing has the increased risk of causing infections is not a fair take away from the McGovern study.

Now you did hear something about what was called a study, Bernard. And so this relates to an outbreak of Acinetobacter baumannii bacteria in certain hospitals. It's a case report, not a study. But the main thing about it is it did not say that the Bair Hugger was the cause of the outbreak. So there was an outbreak. If we're going to the was beside the Bair Hugger mostly which a good place for it to be, not that anything was propagated from the Bair Hugger out of the blanket and into the operating room. That's not defined in the case report.

Incidentally, when a case reports appear on the hierarchy of scientific evidence, they're all the way down here next to what Dr. Borak described as unfounded expert

opinion, that is an expert opining that something is true just because the experts say so without any scientific basis. So the case report are way down the tree.

So I wanted to just a note to Dr. David and some of their - Dr. David and some of their use of the science and this was a quote that struck me. On a certain afternoon he was in favor of the Lange study, L-A-N-G-E and had talked about it. And that day that particular study is a study when they saw there were no infections in total knee arthroscopies when using the forced-air warming. We talked to the jury about the study yesterday.

"You don't know whether it showed any surgical site infections in orthopedic surgeries?"

He said, "Yesterday it was in my memory. Today I don't remember. So I'd read it again to refresh my memory" said Dr. David.

You saw this quote before about the "Heat billows out from underneath the drapes and picks up microscopic particles." But what you learned was the heat from Bair Hugger exits at the head and neck and doesn't go down to the floor. Particles don't equal bacteria. It says, no such thing as a forcefield and no evidence that the Bair Hugger deposits particles or bacteria directly over the surgical site.

And so I wanted to show you here just another picture

of an OR to set the stage and the various sources of the bacteria in the OR that we have showed you previously. And you've heard that the patient is the number one source because you learned there are oil glands or sweat glands, etc. that contain bacteria which is why we are the number one source of bacteria. There is other sources in the OR also.

So we get into the real environment of the OR which is the Elghobashi simulation and the environment of use. You saw the video of what orthopedic surgery looks like with all kinds of motion and doors and people in and out and the anesthesiologist. This is just to show that the environment of use used for the CFD that Dr. Elghobashi didn't involve anyone moving. You can see the arms here are kind of outstretched and that was the position of the surgeon. No bacteria on him or her. It was a very different environment. Here's what Dr. Elghobashi told us. If anybody says you have laminar flow in the operating room, that person is wrong.

Now in a report from Dr. Elghobashi from the trial. "Dr. Elghobashi, is it true you didn't actually take a measurement of the heat that was coming up from under the drapes?"

He says, "That's correct."

"Is it true also that you didn't take any measurements

of the velocity of air that was coming up from energy to undertake the drapes?"

Answer: "Correct.

Why is important?

Well because you're trying to figure out a unidirectional flow coming down. It's going to be disturbed by the actual heat and air coming from the actual Bair Hugger."

So if you're doing mathematical calculations you need to validate in the real world. And here he didn't even measure. He didn't measure velocity. He didn't measure the heat coming out from under the drape. You were just told that the McGovern study video validated his but that's not what he said.

So we talked about some of the differences in his inputs. No powered air return vents for example makes a huge difference. The doors opening. Dr. Abraham told us that that any CFD is not reliable without a validation. So you know he didn't have validation for it.

So what did Dr. Elghobashi tell us? "In order to make sure that your code produces physically the list of results you have to compare your computation of results with good experiments that you have. It's very difficult to conduct measurements in the operating room to validate your results. That's why there were no experiments to validate

the results so we have to do our best to do that."

That's him saying that he didn't have, again, as we saidm no experiments to validate the results of this testing. So the one thing he didn't testify to in McGovern was his validation. He didn't say that.

And so you recall records in reference to Al Van Duren in the Memarzadeh study. And this I just wanted to again refresh your recollection. As you saw a blowup of this several times in the trial where Al Van Duren is saying that there is evidence that forced-air warming increases the risk of infection. He said that was the motivation for the work of Dr. Memarzadeh who did a CFD.

And what Dr. Memarzadeh concluded from his CFD there's zero percent deposition on the patient for contaminant sources and the heat generated by the patient provide some protection. That it is where the wound is there's a thermal plume that comes up. And that its particles will be repelled from there by the thermal plume from the wound so they don't land. He says his investigation validates Moretti.

So this is a longer quote. This was in the International Consensus. I won't read it all. But just to point out here in the International Consensus, they also considered Memarzadeh's word that it's good for the proposition that there was no increase in squame deposition

for potential contaminant sources through forced-air warming. That's in the International Consensus also.

And for Dr. Elghobashi I wanted you to see this also because we saw 23 seconds. I think it was 23 seconds of Dr. Elghobashi's CFD. Dr. Elghobashi testified that 23 seconds with all we needed to see of it for that. What was supposed to be special about his CFD is that the particles are used putting all 10 microns aside, they could account for every single one them. So we watched the 23 second video and not a single one of those squames landed in the wound. They were getting close to it. They would hit the thermal plume but they'd be repelled. Even in his CFD not a single one landed in the wound.

MR. BLACKWELL: I'm sorry, Your Honor, how long do I have to go?

THE COURT: You've gone 72 minutes.

I'm just going to show you this briefly and then I'm going to turn to address a couple of things on the verdict form. I've gone longer than I planned.

So here this is from Ms. O'Haver's body temperature during her surgery. And you can see that as a surgery is progressing from the time that she goes under anesthesia till the time that she's out from under the knife, it's close to actually two hours from the time the anesthesia starts. As she goes she's hypothermic from the start. The

idea is that her body temperature would have dropped and it's just going to raise on its own. There's no basis for making that statement.

You heard from Dr. Anderson that if a patient starts out hypothermic you need to get them warmed back into a normothermia range. So if she's been warmed by the Bair Hugger as you can see here and that she is back in the normothermic range that she's been warmed at that time. range and just wait to see what happens to a patient.

Now I want to point out with respect to Dr. Stan Smith their economist who put the numbers up that you all saw. What he put up there on the screen and the numbers that you saw when he testified, he didn't really do any independent verification of Ms. O'Haver's condition at all. He did not in any way account for the fact that she even had a stroke and if that was the reason for example she had resigned from the job at the school. He didn't see any medical records in her employment file where that was described as a lifelong disability at all. And he most certainly didn't examine her records.

And I did this with Ms. O'Haver on the stand. We went through her medical records. And you can see that there weren't complaints about left knee pain or problems until around the time the lawsuit was filed. Before that there was complaints of shoulder pain, neck pain but not the left

knee pain.

And then at the time litigation was commenced then there were more complaints that about left knee pain at that point. And you'll remember the records in that regard.

So if we could switch to the Elmo. Ladies and gentlemen, I won't go through all these other than to point out couple things I want you to consider when you're going through your verdict form. I know that Emison was trying to tell you when the verdict must be for the plaintiff. It is for you to determine who your verdict should be for if they've met their burden of proof.

For example, if you'll look here at Number 6. And that's another thing I want to point out to you. If you determine with respect to Number 6 that they haven't really proven to you what the cause was of Ms. O'Haver's infection let alone that the Bair Hugger either causes or directly contributed to cause it, them haven't met their burden of proof. If they haven't proven that the Bair Hugger in fact caused or directly contributed to cause, they haven't met their burden of proof and they need to be held to their burden of proof.

And defective or unreasonably dangerous. The standard enunciated that's if a product has no benefit then any risk is unreasonable. That's the lawyer formulation. It's for

you to determine if the product is defective and unreasonably dangerous and you've seen the science.

And in the International Consensus is recommending not change in practice, 800 of the world's leading experts, what would anyone do in following the science. If 3M didn't follow the science, what you think they'd be saying then the case.

With respect to failure to warn, each one of these they have to meet the burden showing more probably true than not true, each and every one of them. If they haven't proved them to you, number 1, you have to understand what Ms. O'Haver's injury actually is. And have they really proven to you that she had a permanent injury from the infection that lasted from late December to early January and that it was not a recurring infection at all. And no doctor testified that it was. No doctor says she couldn't even go back to work. You didn't hear that testimony.

But apart from that, if they haven't proven that the infection was either directly caused or directly contributed to by the Bair Hugger, they haven't met their burden. And all the things that cause infection including dehiscence, the reopening of the wound, for two weeks after surgery even her treating doctor said that's a pathway for an infection cause it's an open wound for five days.

Could it have been during her surgery? There are many

sources in the OR including even her own body. Even the sterile field was not still sterile. You've got unidirectional flow going down on the surgeons, squames even from there in the OR.

Bandages were changed where infections could be introduced. You even heard about – about the seating. If there's an infection otherwise in the body it can affect a joint where a transplant or implant has been put in. None of that has been proven or explored. They simply jumped to a conclusion it must be the Bair Hugger. But they haven't proven that the Bair Hugger was the direct cause or directly contributed because they haven't met the burden of proof on any of the causes of action.

On punitive damages that has to be shown by clear and convincing evidence, clear and convincing. Not just more likely than not that we acted with indifference to the right.

I submit in attempting to follow the science, you haven't heard any evidence that said 3M did anything other than try to follow the science. All the intrigue about the lawyers are stopping research, they didn't tell you what the research is. They didn't tell you what it's for. They just simply say they're stopping research. And you've seen what the International Consensus said.

We thought long and hard about bringing a 3M witness

in to speak with you to address all the comments that have been made. And, ultimately. we decided that's really beside the point. They said the Bair Hugger doesn't work. Look at the science. Let's look at the science, turn it on and see what the studies show about whether it does or doesn't. It's the most studied patient warming device in the history of patient warming devices in the world is the Bair Hugger.

So ladies and gentlemen, I'm getting ready to sit down. Frankly, I wished I'd sat down a while ago so you can have lunch. I took longer than I expected. But we're getting ready to turn this over to you. And what I would suggest and urge you all to do again is think about what I call the 21st witness.

If you heard from 20 witnesses, 21st witness is common sense, right? The one that is testifying before you walk through the doors; that talks over every other witness on the stand; the only witness that goes back and deliberates with you is just your common sense.

How in the world could it be if it used orthopedic surgeons all over the entire world safely with their patients and infection rates have gone down? Only these lawyers and their experts say that's somehow dangerous and that's unacceptable. Common sense.

If it really is billowing air, common sense, well

let's turn it on and let you experience it for herself. to have a verdict here in this case that potentially takes away an option that two of the doctors have to take care of their patients is a difficult thing for doctors. It might be a difficult thing for the patients. And I would submit to you that it's better to entrust the good practice of medicine into the hands of medical practitioners and the medical profession and not to put it in the hands of lawyers and their paid experts. Thank you, ladies and gentlemen.

THE COURT: Thank you, Counsel. Rebuttal argument.

MR. FARRAR: Your Honor, can we approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. FARRAR: Two issues, Your Honor. Mr. Blackwell just said that only these lawyers say the Bair Hugger not safe. I cannot imagine the door more open to 7,000 people that they know of that have brought claims against 3M for infection with use of the Bair Hugger. That's kicking it as open as you can kick it.

THE COURT: The evidence portion of this case is closed. So are you suggesting that you be able to make that statement with an argument?

MR. FARRAR: I am, Your Honor, because there's no

question that's a true fact.

THE COURT: Your request is denied.

MR. FARRAR: Mr. Blackwell said "Question: Dr. Elghobachi said there were powered return vents." That is not true. There's no evidence of it. He said it twice now. I want a curative instruction that there were no power return vents in Ms. O'Haver's operating room.

THE COURT: I think that objection is untimely. The time of the curative instruction is at or near the time of the statement. So I don't know - Mr. Blackwell, do you have any response you want to give?

MR. BLACKWELL: No. I discussed it with Dr. Elghobashi on the stand about powered air return vents. And my recollection is that he said he didn't have them in his CFD and that there were in OR number 8.

THE COURT: So the request for the curative instruction is denied on that basis as well, untimely.

(RETURN TO OPEN COURT.)

MR. FARRAR: May it please the Court.

THE COURT: Counsel.

REBUTTAL ARGUMENT BY MR. FARRAR

MR. FARRAR: For two and half years 3M has been telling all of us the facts trying to keep us safe from bacteria and infections. We understand we need to protect

ourselves from viruses and bacteria. And they sat in this courtroom for three weeks and said bacteria does not increase the likelihood of infection.

3M has no problem speaking out of both sides of their mouth if it benefits them. They have no problem being deceitful, being misleading, lie, cheating, stealing, buying evidence, buying studies if they make more money. 3M - make more money at all costs.

We just heard that this idea of truth, whole truth and nothing but the truth. You just heard their last opportunity to be truthful and it was a miserable failure.

You just heard about Dr. Abraham and how he said all the heat, all the heat from a Bair Hugger comes out of head and neck. You saw us play Andy Chan's deposition and rebuttal. He's the one that gave the boundary conditions to Dr. Abraham. He said we did a study for 3M. All of the heat comes out of the arms just like Dr. Elghobashi has said. That's what 3M just said.

The lawyers are unconstrained by what their actual company says, completely unconstrained by it. He just said there are powered return vent in OR number 8 where Ms. O'Haver had her surgery. That is absolutely not true, not true.

They questioned Dr. Elghobashi as if he made a mistake or as if that would have made a difference in his CFD.

There are not powered return vents in OR number 8. That is a lie.

If you take off that grate and you stick your hand in that return vent, nothing happens. There's no motor there. That's a lie.

If we could just play on a fair ground, that's different. But whenever there is just deceit at every turn it gets frustrating.

There are some challenges to make. I want to see if you do this and this and this on rebuttal. I can't do them all. You've asked me to do all of them first thing. But one of them he said show you the confidential documents where 3M says we did this, we know that there's an increased risk. Easy enough. Exhibit 225 that you can ask for.

MR. BLACKWELL: Your Honor, I do object that that's not what it says.

THE COURT: Overruled.

Clear as day. Actually, there is evidence that forced-air warming increases risk. They were trying to get their salespeople in 2010 - remember this was before McGovern. This is before McGovern. They're trying to get their salespeople to lie just like they're doing here. They were trying to get their salespeople to say there's no evidence that forced-air warming increases the risk of

surgical site infection. And Al Van Duren said we can't do that. That's a lie. They're doing it here.

Where is Al Van Duren? They said they were going to call somebody. They could have called somebody. They thought about calling somebody. They're in Minnesota. This of $15 billion company. It clearly isn't that hard to get from Minnesota to Kansas City. Mr. Blackwell did. Ms. Zimmerman did. Dr. Abraham did.

What kind of company - you heard Dr. Mont say this. Patient warming is a billion-dollar company, a billion-dollar a year industry. 3M has 90 percent of that. Their $900 million baby is on trial here and they don't have a single person from their company. Not one person from the company to come and take the stand and say what we did wasn't wrong. Our product doesn't hurt people. Here are all the internal tests we've done. Let me explain it to you. Let me show you with our own documents and our own evidence what we did was right and we weren't trying to hide things. They never did that.

We can't do that. The plaintiff cannot call people from Minnesota. We don't have that power. They can. And the fact they didn't do it should tell you everything you need to know.

They said - Mr. Blackwell just said well the plaintiffs didn't call doctor Bible. They didn't call Dr.

Bible. He's available to anybody. We can't call 3M people. We don't have that ability. They do. And when they don't do it that tells you everything you should need to know. They can't put someone on the stand because what am I going to do. I'm going to crucify them.

I'm going to look through their own documents and say, let's talk about how you paid off Dr. Parvizi at the International Consensus. You paid him $5,000 a day. Let's talk about how you paid off Dr. Mont. You remember him. He's like the NASCAR driver for orthopedics, right. Every single company sponsors him. He gets millions of dollars a year to go around being a parrot. He looks like Max Headroom up here. But he didn't have to time to come talk to you people in Kansas City. He didn't have the time for that. He was in Baltimore being paid like he always does to say whatever companies want him to say. That's what he does. Whatever they want him to say.

He edited every line of the International Consensus. And they keep coming back to that question too of International Consensus. That's what they keep coming back to. There's no definitive proof that forced-air warming increases the risk of surgical site infections. I'll tell you this. I'm surprised two percent voted no. Definitive proof. What did Dr. Borak tell you? There's no such thing as definitive proof. We have not definitively proved

smoking causes cancer. It's not definitive. It's an association. It's what it always is. I can't believe two percent voted no to that. I'm surprised it wasn't 100 percent. Of course, it wasn't. That is a carefully crafted answer though, right.

It's not if there's some evidence. It's not if there's medically sufficient evidence or legally sufficient evidence. Somebody crafted that answer to say the word definitive. We know one thing. We know for absolute sure not only were they paying the lead of ICOS $5,000, not only was Dr. Mont their guy and he was hired in this litigation by that time.

Michelle Hulse Stevens, the medical director for 3M Infection Prevention Division, what does she say? The draft document will be sent to us sometime in the next few weeks. The terminology in the consensus statement can be reviewed. The terminology can be reviewed. Definitive can be added. Bought the science, bought the experts protecting a $900 million a year industry.

Let's be clear. One thing I don't think is clear, you've heard they sell 50,000 of these a day. The thing that's so different about Bair Hugger than other warming devices. If you make a conductive blanket or reflective blanket or cotton blankets, you sell it once and it's done. You do one sale and that's products done.

There's a reason 3M - you heard from the doctor, I'm sorry, from the hospital 3M doesn't even charge the hospital for the blower unit. They don't care about the blower unit. That's pittance. They make money every single time it's used because blanket is disposable and it's thrown away. It is a brilliant scam.

We want to be warm every night when we go to bed, right. Some of us get down to our skivvies and some of us wear PJs. But we all do one thing to stay warm. We put blankets on. Warm up some blankets and put them on and that keeps people warm. That's all we have to do.

We've done this elaborate scam. We're going to blow hot air through little holes. Why, why do that? Because you can make money every single time. 3M, makes more money at all costs.

We talked about confidential documents should say we know. 2007, we know. This is Al Van Duren saying we know. We're on it. The advantages to prewarming over intraoperative over forced-air warming. It can be used when intraoperative warming is contraindicated like in orthopedic cases. It doesn't contaminate the sterile field; reduces the incidents of surgical site infections, reduces the potential for nosocomial transmission of pathogens by eliminating the need for intraoperative warming. That is Al Van Duren saying I know.

This idea that the orthopedic, the contradiction is somehow related to Dr. Augustine or whatever he is talking about is completely relied by craziness.

THE COURT: Counsel, you have 10 minutes.

MR. FARRAR: Thank you.

This is Al Van Duren again. "Dr. Augustine and others made it clear to me when I started here in 1994 that some clinicians had concerns about particulates as causes of wound infections." He says, "We should start working on our own air free alternative to the Bair Hugger."

This isn't some dreamed up thing by Augustine. This is a dreamed-up thing by Mr. Blackwell.

So the challenge to me today is the Bair Hugger was on the floor. Show me the Bair Hugger was on the floor. Show me the Bair Hugger was on the floor. Dr. Ballard testified to that. Dr. Ballard said, "I'm not sure I've ever seen it on an IV pole." More likely than not, pretty definitive really.

They keep showing this picture of Ms. O'Haver's OR as if that was during her surgery. We take pictures of patients having surgery. 3M took that like a year ago. I have no idea if that Bair Hugger had pictures on the IV. I'll tell you it's not a 750. It's a 775. Maybe they put it on there. I don't know. Maybe that's part of the deceit, part of the misleading, part of the sleight-of-

hand, part of keeping the truth from you.

Mr. Blackwell spent a lot of time on where we were trying to hide the product review? Why didn't we let you put your hand under it? Only 3M did that. Because it doesn't matter. This isn't an OR. We're not 60 degrees in here. We don't have jets coming down from under there. We don't have drapes over the top of it. We don't have people moving. This isn't a sterile room that we're trying to keep a sterile field. That doesn't make any sense.

Why would I show you that when I can just tell you what their own experts tell you? This guy gets paid $400,000 to come tell you something about the Bair Hugger. What he ends up saying is well, he's not aware of any other warming device that increases - and this is the key word, "bacteria" over the sterile field besides the Bair Hugger, true? True, bacteria.

Mr. Blackwell just spent 20 or 30 minutes saying there's no bacteria, there's no bacteria. The Moretti study showed you bacteria. That was just talked about with Dr. Anderson this morning. And he agreed Moretti showed a statistically significant increase in bacteria for the Bair Hugger regardless. Take the studies way.

Their $400,000 man says the Bair Hugger is the only warming device that increases bacteria. If you have any doubt at all, if anybody back there says, I don't know, I

don't know. Is it bacteria or is it just particles, look at their own expert. He says bacteria. I'm not aware of any evidence that the Bair Hugger is safe. That's their guy. $400,000 to come tell you, I can't tell you if this thing's safe or not.

There's no evidence that it was safe to use in Ms. O'Haver's surgery. $400,000 to come tell you I've got no evidence that this thing was safe for Ms. O'Haver.

"You cannot say the Bair Hugger did not cause Ms. O'Haver's deep joint infection?

Yeah, I agree. I've said that before.

Believe him when he says I can't eliminate the Bair Hugger. Believe him when he says that. And you know it's interesting too. Go back to slide two. One of the things Dr. Anderson said yesterday. He said if you increase the bacteria – if a device increases the bacteria it is unreasonably dangerous. He agreed with that sentence.

So if he agrees that increasing the bacteria makes a device unreasonably dangerous and Dr. Borak says, well it increases the bacteria, their own experts have answered the jury questions for you. They answered them for you. The answer is yes.

So why didn't we show – why didn't we have you come put your hand under here for one second in an environment that's not an OR? Because that was worthless. That was

show. That was meant as a sleight-of-hand. It was misleading. It was pure show.

The proof is in the expert's testimony. The people that it paid to study this. He's an epidemiologist. All he does for a living is find causation. He said I found causation. I found it. $400,000 3M paid this man to come in and say I found causation. Right over there, I found it. It's the Bair Hugger.

Mr. Blackwell asked you why did we focus on the Bair Hugger and not all this other random stuff that's in an OR. There's cabinets and there's a crack in the floor and there's lights? Why didn't we focus on that? Because there's no evidence that any of that stuff causes surgical site infections. They just threw it up against the wall. that supports that. We've done some testing. We have those cabinets over there and that trashcan. Those really, really increase the chance of surgical site infections. We've done the testing. Here's the evidence. None of that.

Why focus on the Bair Hugger? Because Michelle Hulse Stevens said it's the only device that picks up dirty air and blows it all over the patient. The only device that does that. That's crazy that we do that, that we allow that to happen.

I mean Dr. Mont who clearly, they will get paid to say

anything tells you, I think - I think the infection happened 15 days after the surgery; let's talk about all the things in the operating room that could have caused her infection. Doesn't that just disqualify him right off. What's he talking about? Why is he talking about multiple different theories? I mean the lights of the operating room didn't give her an infection 16 days later. He's not even consistent with their other expert, Dr. Anderson. He's says just put me on TV - literally some guy in Baltimore had some things that he wanted to say so I'll guess we'll put him on TV for a couple of hours and see what he has to say. That's Dr. Mont. He collected his check and off he went.

Mr. Blackwell said they cherry picked. They took these little snippets out of the documents, this little piece here, this little piece here about they've known it since 1994. And this little piece here where Al Van Duren said we should contraindicate this thing in orthopedic, just little things, nothing all that really important.

It's their documents. He said you have hundreds of thousands or millions of pages. Where are the good ones? They've had their opportunity to put on their case. They called four paid experts and they paid what - three quarters of a million dollars for. They didn't even give their experts their documents. How telling is that?

THE COURT: Counsel, you have two minutes.

How telling is that. You won't even give your expert - they won't even give Dr. Anderson his own deposition to read. The man is going to come testify live under oath, hand to God and they won't give him his own deposition. Just hiding everything every way possible to protect a $900 million a year business because make more money at all costs.

This today you have an opportunity that most people never really get to really make change, to really make change. Not just for Ms. O'Haver, to everybody out here, to everybody here, to everybody you can make change. That's what our system does and it's beautiful in that way. It does cure harms for Ms. O'Haver. It does do that.

But when you have conduct like this against someone you could actually make change. You can send a message to both 3M and others, every other medical device company, we do not accept blind science. We do not accept putting ...

MR. BLACKWELL: Your Honor, I object. May I approach.

THE COURT: Sure.

(BENCH CONFERENCE.)

MR. BLACKWELL: Your Honor, he's made an argument about sending a message. That's improper in closing arguments to send a message by punishing a company.

MR. FARRAR: The jury instruction says to deter for others. Deter for others is that.

THE COURT: So I don't know that the line has been crossed but I think you should make another argument.

(RETURN TO OPEN COURT.)

THE COURT: Counsel, you have one minute.

I trust that you guys will do the right thing. You will punish 3M for what they did. You will deter others from doing it and you will absolutely say today is the day surgical site infections like Ms. O'Haver's ends today. Please go do it. Thank you.

THE COURT: Thank you, Counsel. Okay, folks, so now is the time for me to excuse the alternates. So Mr. House, Ms. Redman and Ms. Perkins. Do you guys have anything in the jury room? You do? Would you guys mind going back and grabbing those things. And then if you could just go stand by that door that says do not enter, I would appreciate it. Thank you.

To the remaining jurors, so the instructions indicate that you are not to deliberate until all of you are together. So what that means literally is that if someone needs to use the restroom you have to suspend deliberations until all 12 of your present and can deliberate as a group.

We will first send you back to the jury deliberation room, take your notebooks and the instructions with you.

Lunch is there. I'm sure you guys are hungry. We're going to work on clearing out the courtroom. And then you'll have access to both the jury room and the courtroom. It's up to you. If you find the jury deliberation room a good space, that's fine. Otherwise, you're welcome to move into the courtroom. And Carly will give you the all clear.

Again, she'll be collecting your cell phones, smart watches, iPads, things like that. They'll be kept in my chambers and no one will have access to them while they're in there.

And Carly will bring this back as well which is the copy of the instructions that includes the verdict form. Court is in recess for jury deliberations.

(CASE TO THE JURY AT 1:52 PM.)

THE COURT: The Court is in receipt of the first question from the jury. It reads "Can a juror leave the jury room to smoke right now?" It's signed by the foreperson Gail Evans who is Juror Number 5. The Court's response is going to be the law clerk will accompany you during the break. Please suspend deliberations at that time.

Any objection from the plaintiffs?

MR. EMISON: No.

THE COURT: From the defendant?

MR. TORLINE: No, Your Honor.

THE COURT: Let's go off the record.

(OFF THE RECORD.)

(BACK ON THE RECORD AT 5:20 PM.)

THE COURT: You may be seated. It's my understanding the jury has reached a verdict. Jury foreperson, could you hand the packet to Ms. Ross.

The Court has reviewed the verdict, finds them to be in order and will announce them as follows. On the claim of Plaintiff Katherine O'Haver against Defendant 3M Company for personal injury as submitted in Instruction Number 6, we the undersigned jurors find in favor of Defendant 3M Company.

On the claim of Plaintiff Katherine O'Haver against Defendant 3M Company for personal injuries as submitted in Instruction Number Seven, we the undersigned jurors find in favor of Defendant 3M Company.

On the claim of Plaintiff Katherine O'Haver against Defendant 3M Company for personal injuries as submitted in Instruction Number 8, we the undersigned jurors find in favor of Defendant 3M company.

The verdict is signed by 10 jurors. Could counsel approach.

(BENCH CONFERENCE.)

THE COURT: Does the plaintiff want the jury polled?

MR. EMISON: Yes, Your Honor.

(RETURN TO OPEN COURT.)

THE COURT: Okay. So you guys are not in order but I'm going to - how about this. If you signed the verdict can you please stand. All right, thank you. I'm going to do my best to remember who is who. Juror Number 1, Mr. Montez, is this your true and accurate verdict?

A It is.

THE COURT: Juror Number 4, Ms. Kelly. Are you Ms. Kelly?

A Yes.

THE COURT: Is this your true and accurate verdict?

A Yes.

THE COURT: Juror Number 10, Ms. Babcock, is this your true and accurate verdict?

A Yes.

THE COURT: Juror Number 5, Ms. Evans, is this your true and accurate verdict?

A It is.

THE COURT: Juror Number 2, Mr. Nichols, is this your true and accurate verdict?

A Yes.

THE COURT: Juror Number 12, Ms. Sullivan, is this your true and accurate verdict?

A Yes.

THE COURT: Juror Number 6, Ms. Platt, is this your true and accurate verdict?

A Yes.

THE COURT: Juror Number 8, Mr. Sesker, is this your true and accurate verdict?

A Yes.

THE COURT: Juror Number 9, Ms. Phasuk, is this your true and accurate verdict?

A Yes, Your Honor.

THE COURT: And Juror Number 11, Mr. Lading, is this your true and accurate verdict?

A Yes.

THE COURT: Thank you, sir. I'm sorry, Counsel. Can you approach again. I got things out of order.

(BENCH CONFERENCE.)

THE COURT: Is there any reason why I cannot discharge the jury at this time from the plaintiff?

MR. EMISON: No, Your Honor.

THE COURT: From the defendant?

MS. PRUITT: No.

(RETURN TO OPEN COURT.)

THE COURT: The Court has reviewed the verdict and accepts it as the verdict of the jury and will enter it as judgment of the court. Ladies and gentlemen, your

service as jurors has ended. I know that I speak on behalf of the attorneys when I thank you. I know I speak on behalf of the attorneys when I tell you that I'm so thankful for your service the past three weeks. You guys were incredibly attentive. You were timely. Our alternates who are in the back of the courtroom were disappointed. And the reason they're disappointed is because you guys showed up and there was no need to use them. Honestly, I was surprised that we didn't have to. But it's a testament to your commitment as jurors and so I thank you for that.

The previous admonition not to talk about the case no longer applies so you're able to talk about it. If you could go back in the jury deliberation room for just a few more quick minutes, I would like to go back and personally thank you myself.

Court will be in recess.

(COURT IS IN RECESS AT 5:24 PM.)

REPORTER'S CERTIFICATE

I, Gail M. Eckert-Conaway, Certified Court Reporter, certify that I am the official court reporter for Division 6 of the Jackson County Circuit Court; that from September 27, 2022 through and including October 13, 2022, I was present in Division 12 and reported all of the proceedings in the case of Katherine O'Haver, Plaintiff, vs. 3M Company, Defendant, Case No. 1816-CV30710.

I further certify that the foregoing pages contain a true and accurate reproduction of the proceedings transcribed.

___/s/ Gail M. Eckert-Conaway_____

Gail M. Eckert-Conaway, CCR 0836, CVR-M, RVR

Transcript completed: December 12, 2022