In The Matter Of:

Pressgrove, et al v.

Byrd, et al

Jonathan Eisenstat, MD

March 24, 2016

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IN THE CIRCUIT COURT OF TENNESSEE FOR THE THIRTIETH JUDICIAL DISTRICT AT MEMPHIS, SHELBY COUNTY

BEVERLY PRESSGROVE and PHILLIP SIMMS, individually and as next of kin of HOLLAND N. SIMMS,	)	
Plaintiffs,	)	No. CT-004425-08
	)	Division VII
vs.	)	
	)	JURY DEMANDED
WILLIAM G. BYRD, MD, et al.,	)	
Defendants.	)	

Videotaped deposition of JONATHAN EISENSTAT, M.D., taken on behalf of the Plaintiffs, pursuant to the stipulations contained herein, reading and signing of the deposition being reserved, in accordance with the Tennessee Rules of Civil Procedure, before Stephanie K. Feen, Certified Court Reporter, at 5855 Sandy Springs Circle, Suite 140, Atlanta, Georgia, on the 24th day of March, 2016, commencing at the hour of 12:08 p.m.

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STEPHANIE K. FEEN, CCR-2573
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This, the 15th day of April, 2016.

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- - -

(VIDEO CAMERA ON.)

THE VIDEOGRAPHER: This is the beginning of tape number one in the deposition of Dr. Jonathan Eisenstat. We are now on the record, Thursday, March 24, 2016. The time is 12:08 p.m.

This is the case of Pressgrove, et al. versus Byrd, et al. This deposition is being held at 5855 Sandy Springs Circle, Atlanta, Georgia. Please proceed.

MR. SMITH: Swear in the witness.

JONATHAN EISENSTAT, M.D.,

having been first duly sworn, was examined and testified as follows:

MR. BAKER: Okay. And we'll go around the room and everybody announce themselves.

My name is Bryan Smith. I'm here on behalf of Holland Simms' family.

MR. BAKER: I'm Darrell Baker and I'm here on behalf of Dr. Tony Wright.

MR. SMITH: And we have a number of attorneys appearing by video, if you all would announce yourselves.

MR. GILMER: I'm Brad Gilmer, and I represent Saint Francis Hospital-Memphis.

MS. BENNETT: Samantha Bennett, and I represent Dr. Chris Gillespie.

MR. ALEXANDER: John Alexander, here on behalf of Dr. Byrd, Dr. Waldrup, and Tennessee EM-I Medical Services.

MS. MALKIN: Andrea Malkin, representing Dr. Shiva Natarajan.

MS. STEINBERG: Jill Steinberg, representing Methodist Healthcare-Memphis Hospitals.

MR. SMITH: If you could re-swear in the witness. Just do it again so we've got it on the record.

JONATHAN EISENSTAT, M.D.,

having been first duly sworn, was examined and testified as follows:

MR. SMITH: And before we get started --

MR. GILMER: I think we had a couple of stipulations, yes.

MR. SMITH: I was getting ready to announce those.

MR. GILMER: Mr. Smith, will you put those stipulations on the record, please.

MR. SMITH: We've agreed to the standard caption, meaning that all objections except

to -- except as to the form are reserved.

This is a discovery deposition of an expert witness taken pursuant to the Tennessee Rules of Civil Procedure. We've agreed, to the extent that there are any informalities in the video introduction, that they will be waived.

We've also agreed that one objection is good for all defendants or good for all parties, and I'm assuming that Dr. Eisenstat --

THE WITNESS: Yes.

MR. SMITH: Is that correct?

THE WITNESS: That's correct.

MR. SMITH: -- is going to read and sign?

MR. BAKER: Yes.

MR. SMITH: Anything else?

MR. GILMER: That's all.

MR. BAKER: Everybody agree?

MS. BENNETT: We agree.

MR. GILMER: Yes.

MR. ALEXANDER: Yes.

MR. BAKER: All right.

EXAMINATION

BY MR. SMITH:

Q All right. Have you given a deposition before?

A I have.
Q How many times?
A Oh, probably around 20 to 30.
Q So you know how the process works?
A I do.
Q You, I'm assuming, had an opportunity to meet with Mr. Baker to prepare for your deposition?
A I did, yes.
Q You understand how the process -- how we're going to do it here today? In other words, we're here today to talk to you about opinions that you have or that you've formed about Ms. Simms and some of her medical conditions.
A Yes, I do.
Q I'm going to be asking you questions and getting answers so that I can understand your opinions. I won't go through all the dos and don'ts of a deposition.

I don't know -- sometimes with doctors that are actually -- that are treating patients, they get pages and things like that. I don't know if you're on call. If you do, just let us know and we can take a break if you get a page or a call or anything like that; okay?
A Okay.

Q Likewise, it's not a -- if you need to take a break to go to the restroom or anything like that, just let me know and we'll be happy to take a break. I may want you to answer the question first, but we'll be happy to take a break if we need to.

A Sure.

Q The main thing is, is as I go through and ask you questions, I may ask you a question at some point in time that you don't understand and I don't want you to understand -- I don't want you to answer a question unless you understand it; okay?

A Yes.

Q So if I ask a question that you don't understand, I need you to tell me that you don't understand my question. Will you do that?

A I will.

Q And would it be, if you -- if I ask a question and you answer it without telling me you don't understand it, will it be fair for me to assume that you understood the question?

A That's fair.

Q Would it be fair for the judge and the jury to assume the same?

A Yes.

Q On the other side of it, if I do ask a

question that's confusing in some way and you tell me, I'll do my best to rephrase it so we're both on the same page before you give me an answer; okay?

A Sounds good.

Q You understand -- we're not in court today, but you do understand that you're under oath?

A Yes, sir.

Q You understand that when you raised your right hand and swore to tell the truth, that it was just like you were in court?

A Yes, sir.

Q And that you have an obligation to tell the truth today?

A Yes.

Q You have an obligation to tell not part of the truth or half the truth, but the whole truth?

A That's correct.

Q And that's what you intend to do?

A Yes, sir.

Q Again, you understand that you have been identified as a person or who has or is going to potentially give opinion testimony in the trial of this case?

A Yes.

Q You understand that my purpose here today

is to make sure that we get all of your opinions out on the table and we discuss the reasons that you have those opinions so that I'm not surprised at trial?

A Yes, I understand that.

Q And you'll do your best to make sure that we go over all your opinions today?

A Yes.

Q And that we go over all the reasons that you have for those opinions so that there's nothing new, there's no surprises at trial; fair?

A Fair.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-1.)

BY MR. SMITH:

Q First thing I'm going to hand you is what we've marked an Exhibit Number 1 to your deposition, which is a notice to take your video deposition.

There was actually an amended notice filed yesterday. It's the same, but the times were off, but it's got the same list of items --

A Okay.

Q -- for you to bring.

You have brought your file with you today?

A Yes.

Q And all the things that we requested -- there's a couple of things we'll go over that you didn't bring, but you did bring your entire file with you today?

A I did.

Q Let's go through and mark some of these things.

The first thing that you were asked to bring was a current copy of your CV or professional resume. You have brought that with you?

A Yes, I have.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-2.)

BY MR. SMITH:

Q I'm going to hand you what I've marked as Exhibit Number 2 to your deposition.

Is that a true and accurate copy of your professional resume?

A It is.

Q Is it up to date through today?

A It is.

Q Does it accurately reflect your medical education and training?

A Yes, it does.

Q We'll go over that in a little bit in

more detail in a minute.

A Okay.

Q I'm going to go through -- there's a bunch of bullet points, but I'll tell you that generally, they ask you to bring everything that you have reviewed in connection with this case.

We have a pile of stuff over here. I'm going to go through that and identify those things, but you did bring everything that you reviewed?

A I did.

I don't have the glass slides because I had to return those to Dr. Schwartz, but I have everything else that I've reviewed.

Q Some of these I may not mark because we don't -- we don't need more copies of all this stuff.

The materials that you've gone through and reviewed in connection with this case, you have not marked on or made notes on or highlighted in any way?

A That's correct.

Q That's something you said you don't do that as a matter of course?

A That's correct.

Q So the first thing that we have that you have reviewed is a copy of the Complaint for Wrongful

Death that was filed in September of 2008. You have reviewed that?

A I have.

Q There was an Amended Complaint that was filed or -- that was filed in January of 2009. Have you reviewed that as well?

A I did.

Q And if you need any of these things, I'm going to pile them over there, but if you need them, just let us know.

A Okay.

Q You also have reviewed some medical records?

A Yes.

Q Including some records from the CDC, which are Bates stamped CDC 1 through CDC 3?

A Correct.

Q You also have reviewed some information from the California Department of Health that are Bates stamped CDH 2-1 through CDH 2-16?

A That's correct.

Q Let me make sure all the pages are here.

You also have some binders -- or not really binders, but folders that have some medical records in them. The front pages of -- you have three

different binders and the front pages of these binders have -- have a table of contents?

A Yes.

Q What I'd like to do is -- we can put these back in later on, but I'm going to pull out the table of contents. We'll mark those an exhibit and then we can make a copy of them at a break and put the originals back in your binders.

A Okay.

Q I'll take the staple out later, but if we don't, they'll get all mixed in.

A That's fine. No problem.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-3.)

BY MR. SMITH:

Q I'm going to hand you what I've marked as Exhibit Number 3, which is a -- the table of contents from the first volume of medical records that you received, and it says Office Records. Volume I, Office Records; is that correct?

A That's correct.

Q Part of what you have on here are records from the Vanderbilt University Medical Center, the Tennessee Unexplained Encephalitis Study?

A Yes.

Q And they are Bates stamped 44 through 55 -- 50?

A Yes, that's correct.

Q Are those the only records that you received from the TUES program?

A I'd have to look at my page of notes, but as far as I can remember -- well, let me take a look first to confirm that.

Q I'm not going to mark those yet, but just --

A I believe that those are the only records from T-U-E-S that I -- that I received and reviewed.

Q Okay. And I don't know if we're right or not, but we're calling that the TUES program.

A Yeah, I wanted -- I was saying that so she knew what TUES was.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-4.)

BY MR. SMITH:

Q And just so -- just to clarify this, I'm going to hand you what we've marked as Exhibit Number 4.

Those would be all of the records that you have received and reviewed from the -- from Vanderbilt University Medical Center from the TUES or

T-U-E-S program?

A Yes.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-5.)

BY MR. SMITH:

Q Okay. I'm going to hand you what I've marked as Exhibit Number 5 to your deposition, which is an index from Volume II of the records that you've looked at which has the related ER visits?

A That's correct.

Q Again, you haven't made any notes, highlights, or marks on any of those records?

A No, I have not.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-6.)

BY MR. SMITH:

Q I'm going to hand you what I've marked as Exhibit Number 6 to your deposition, which is an index from the Volume -- it says IV, medical records, which has Baptist Hospitalizations, Collierville and transfer to Memphis; is that right?

A And then a few more records as well.

Q And Baptist Hospitalizations continued on to page two. Is that volume or that index were all the records that you've looked at in connection with

this case?

A Yes.

Q All right. We have Volume I, II, and IV. Do you know where Volume III is?

A I either didn't receive Volume III or it was also part of Volume II, if we can look at the front.

Q (Handing.)

A Right. Then I never received a Volume III.

Q Okay. You also have brought with you a copy of Dr. Schwartz's deposition?

A Yes.

Q Okay. And you have reviewed -- and his deposition was taken on November 9, 2012?

A Yes.

Q You've reviewed his deposition?

A I have.

Q You also have brought a copy of the deposition of Dr. Scheld that was taken on July 2, 2014?

A Yes.

Q Have you reviewed that deposition as well?

A I have.

Q Other than the depositions of Dr. Schwartz and Dr. Scheld, have you reviewed any other depositions in this case?
A No, no other depositions.
Q Have we now gone through and identified all of the medical records and depositions that you've reviewed in connection with this case?
A I believe so.
(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-7.)
BY MR. SMITH:
Q All right. I'm going to hand you what I have marked as Exhibit Number 7 to your deposition.
A Okay.
Q And if you would, tell me what -- and it's collective Exhibit Number 7. If you would tell us what collective Exhibit Number 7 is.
A These are printouts that I printed of photographs that Dr. Schwartz submitted, I believe it was during his deposition.
(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-8.)
BY MR. SMITH:
Q Okay. I'm going to hand you what I've marked as Exhibit Number 8 to your deposition, if you

would tell us what that is.

A So when I asked to review the slides myself so I could make my own determination, Dr. Schwartz requested that we do it through an intermediary. And when we did that, he had had a photocopy of the slides that he was handing to me, so this is a printout of that photocopy of the slides he handed me.

Q I've got some additional photographs, four other photographs. We'll go through these in more detail, but if you would tell me what these four photographs are.

A So those are photographs that I took when I reviewed the slides, basically documenting my findings.

Q So I'm going to mark these -- I'm going to mark them individually so we can go through and talk about them specifically later on.

A Sure.

(Thereupon, marked for identification, Plaintiffs' Exhibits Number P-9, P-10, P-11, & P-12.)

BY MR. SMITH:

Q All right. I'm going to hand you what I have marked as Exhibits Number 9, 10, 11, and 12. And

as I understand that, those are copies of photographs that you took when you reviewed the slides that you received from Dr. Schwartz?

A That's correct.

Q All right. Are there any other materials that you have reviewed in order to form your opinions?

A No.

Q All the materials that we've gone through: The medical records in Volume I, the office records; the medical records in Volume II, the related ER visits; and the medical records in Volume IV, which is the Baptist hospitalizations; and the depositions of Dr. Schwartz and Dr. Scheld, are those all the materials that you relied on in order to form your opinions in this case?

A Yes. Of importance in the medical records is that there is the report of the neuropathology, the limited autopsy of the brain, and that's part of those medical records.

But yes, this is everything that I've reviewed and everything that I've relied on, other than my experience and training.

Q And when you talk about the -- I mean, I think I know, but I want to get you to tell me why.

When we talked about the medical records,

you specifically pointed out or pulled out the autopsy report.

A Correct.

Q Is there a reason for that?

A Well, I think there's -- there's a positive and a negative of that limited autopsy.

The positive is that I actually agree with the description and -- of what the neuropathologist saw of the perivascular inflammation, the lack of viral inclusions, the lack of hemorrhagic necrosis in any of the brain, but specifically in the temporal lobes, in the frontal lobes. So I think that is important, extremely important.

One possible issue is that it was a limited exam, just to the brain. I understand why they, you know, the family decided on that. I think it would have been nice to have a complete autopsy because I would have liked to see what else was in her body.

She did have a history of having an ovarian cyst. I really would have liked to have seen if that ovarian cyst may have possibly been something other than a simple cyst. Specifically, if there was any evidence of a teratoma. That would help me formulate or possibly become -- be more specific in

what my diagnosis is.

Q Okay. I know we're talking -- we're going through and marking everything that I asked you to bring, but I do want to ask you a few questions while we're talking about this because we're going to come back to it later on.

A Sure.

Q Is it fair to say that a large part of your opinions are based upon the autopsy findings?

A Well, a part of is on the autopsy findings, as well as the studies that followed the autopsy findings such as the immunohistochemistry, the PCR, as well as the CSF studies that were done as well.

So yes, the autopsy, of course, as a pathologist, that's extremely important to me but so are the other laboratory studies as well.

Q Let me ask it a different way.

A Sure.

Q And we'll get into your opinions in a little bit. But is it fair to say that your -- although you've reviewed all this stuff and relied on all the things that we've discussed, that your opinions are primarily based upon the autopsy findings, as well as the -- the other studies that you

discussed, the immunohistochemistry stainings, the PCR testings of the cerebral spinal fluid, as well as the postmortem testing that was done at Vanderbilt University Medical Center?

A Yes. And if I may turn it around, I think what you're getting at is, I'm not a clinician, so the medical records are important to me because if I see something that makes my mind go down my differential diagnosis route, that's great.

I'm not going to be speaking to specifically what should or should not have been done from a clinician's standpoint, but the medical records do play a role. In this case, I would say they're not as important to me.

Much more important are the autopsy, my review of the slides, my revision -- revision, excuse me -- my review of the brain autopsy report, as well as those ancillary studies we talked about.

Q And just so we're clear about the ancillary studies that we're talking about, we're talking about the postmortem studies that would have been done, the immunohistochemistry staining, the other testing that would have been done as part of the autopsy, and also the other testing that would have been done at the direction of the TUES program at

Vanderbilt University Medical Center?

A Right. So the CSF studies that were done, as well as the postmortem brain studies that were done.

Q And you talked about you agreed with the description in the autopsy report that included, you said, the lack of inclusion bodies?

A Correct.

Q You said the lack of hemorrhaging in the frontal and temporal lobes?

A Correct.

Q And the -- the overall softening or swelling of the brain as a result of the encephalitis?

A Well --

Q I mean --

A No, that's fine.

Basically, I would need to look at the report again to tell you exactly what I agree or disagree.

But in essence, reviewing the gross description of the brain led me down a path that was separate from a herpes encephalitis. And that's what I mean. Not necessarily that I agree with it, but the way it's described and then my review of the microscopic slides correlate with his -- with that

pathologist's gross description. That led me down my route of diagnosis.

Q And that's what I want to clarify.

You have not -- you have not done a gross inspection of the brain itself?

A No. I don't know if it even exists anymore.

Q You haven't seen any pictures of the brain?

A No. Just one -- just the description by the pathologist.

Q So when we talk about the condition of the brain at the time of the autopsy, all you have to go on is the description that's in the autopsy report; is that fair?

A That's fair, after which, I looked at the slides. But from the gross description, that's fair.

Q In other words, just tell us what a gross observation or gross inspection would be.

A Sure. So in a case such as this, the first inspection is when the brain is removed from the head. You look for any natural process. You look for any traumatic injuries. You look for bleeding or necrosis, which is death of the tissue, and that should be pretty obvious to any trained pathologist.

And then in this case, as many neuropathology tests, you fix the brain in formaldehyde. That makes it a little firmer and easier to examine as you cut.

So then you look at that and you look at the description of, is -- again, is there hemorrhage? Is there necrosis? Is there any other lesion within the tissue of the brain itself or surrounding the brain that is obvious at the time?

That's the gross description and that's the first part of the report or that's the first paragraph or maybe first two paragraphs of the report.

Q Would it be fair to say that in an autopsy like this, that there would be two types of inspections; the first would be the gross inspection and the second would be the microscopic inspection?

A Yes. That's in most autopsies, that's correct.

Q And the gross inspection would be just basically eyeballing it?

A Yes. But I would hope that the pathologist is trained at eyeballing it with specific disorders. You should be able to make a diagnosis or at least give your differential at that time.

Q And I wasn't taking the doctor out of it,

but my point is, just in lay terms, in other words, the gross inspection would be essentially the doctor eyeballing it?

A Yes, but --

Q Looking for specific things?

A Right. To use an example, I'm doing a gross inspection of you right now.

Q As am I, you.

A Yeah, as you are of me. So we're looking -- it's just what we see visually.

Q And then -- then the slides are made and then we do a microscopic evaluation later?

A That's correct.

Q All right. You talked about this one being a limited autopsy. This was limited to the brain?

A That's correct.

Q And you talked about the -- you wished -- you said that it would have been helpful if there had been a full autopsy done because there was a history of ovarian cysts; correct?

A That's one reason. Being a pathologist, a forensic pathologist, I always err on the side of doing more than less. And to me, in general, a limited autopsy gives limited results.

We don't know what was going on in her heart. And the reason that I say that is, if we're thinking of maybe a different type of virus, like an echovirus, you may see inflammation in the heart and that can correlate.

We don't know what's going on in her ovaries, as we -- as I already mentioned. Is there something in the ovaries that make me think down a different route?

So the neuropathology was very adequate to document what was there and what was not there, but I think there may have been more information added if a complete autopsy was done.

Q Any other things that you would like to have seen, other than the heart and the ovaries?

A Well, I would have liked to have seen everything, but those were just two examples of organs that may help in your differential diagnosis.

Q Since a full autopsy was not done --

A Uh-huh (affirmative).

Q -- since the heart and the other organs weren't examined -- well, let's focus on the heart in particular. Since the heart wasn't examined, you don't know what the autopsy would have found?

A That's very true, yes.

Q And it would be speculative for you to now tell us what things may or would have been on -- would have been seen if they had looked at the heart?

A Right. I can't tell you what would have been there, but if asked about if I found something, would it correlate with a different pathology in the brain, I could speak to that.

But no. I mean, without a full autopsy being done, I can't tell you what was or was not there.

Q And I guess that's my point. Without a full autopsy being done, you can't tell us -- you don't know what would have been found if they had done a full autopsy; is that fair?

A That's fair.

Q And for you now, after the fact, to give an opinion about what would have been found would be completely speculative?

A In those words, yes, absolutely.

Q And when you talked about the heart, for example, you talked about an echovirus. You can't say that the heart would have been consistent with an echovirus at this point in time?

A I cannot.

Q It would be speculative?

A That's correct.
Q The ovaries, you talked about that. The medical records indicated that she had a simple ovarian cyst.
A I recall a cyst. I don't recall it being a simple cyst.
Q I thought you said that. Okay, a cyst.
A Right. What I said -- I said simple cyst afterwards -- is that it could have been a simple cyst or it could have been something more like a teratoma, but there's no way to know without having looked at the ovary.
Q Is there any -- do you have any evidence to suggest that this was a teratoma?
A I don't have any evidence to tell me what type of cystic structure it was, so no.
Q It would be speculative at this point in time to say that it was a teratoma?
A That's correct.
Q Because there's no factual support to indicate it was a teratoma; is that fair?
A That's fair.
Q All right. Let's go back to our Notice of Deposition.
A Sure.

Q We are now finished with our detour.

So we've gone over all the records that you have reviewed in connection with this case, either with forming your opinions or preparing for your deposition?

A Correct.

Q That would also include any documents that you have reviewed relating to the allegations in the plaintiffs' Complaint? We've covered all those as well?

A Yes.

Q It next had asked you to bring a copy of any articles that you have authored in any way related to the medical care referenced in the plaintiffs' Complaint.

I know you do have some articles and we'll go through those in a minute, but do you have any articles that are particularly relevant to the issues in this case that you've written?

A Right. No, I don't believe so.

Q Next -- and I know this is -- some of this is a little bit duplicative -- but complete copies of all records, articles, texts, or other documents or resources you have reviewed in order to form your opinions in this case. Have we gone over

all those?

A Yeah. I mean, I didn't really go back and specifically review anything. This is -- this is stuff that I've, over the years, studied and seen, so I didn't go back to anything specific.

Q Let's just make sure we're clear about what you're saying. I think I know what you're saying, but I want to make sure that I'm on the same page with you. You have not done any specific medical literature research to bolster your opinions in this case?

A No. I didn't think I needed to.

Q Next it asked for a complete copy of your file. And there's a couple of notes and things like that we're going to go over in just a minute, but you have brought everything today?

A Yes.

Q All written reports that you prepared, including notes that you've made. And I know that you did bring some notes.

A That's correct.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-13.)

BY MR. SMITH:

Q I'm going to hand you what I've marked as

Exhibit Number 13 to your deposition. As I understand it, those are the notes -- those are notes that you made as you went through and reviewed the materials that we've already gone through and identified.

A That's correct.

Q Are those the only notes that you have?

A Yes.

Q Do you have any -- you don't have any handwritten notes?

A No.

Q They're all made on your computer?

A That's correct.

Q Do you -- have you prepared a report, a written report, summarizing your opinions?

A No. There's just the disclosure, but I have not written an actual report.

Q And we'll go through that in a minute.

Typically, the disclosures are written by the attorneys?

A Right.

Q They talk to you about their opinions and they write their disclosure up?

A Right.

Q I'm not suggesting you weren't involved in that. But typically, although not always, some

doctors do actually write their own reports. You haven't done that in this case?

A I have not, no.

Q Next it asks you to bring all correspondence between yourself and Mr. Baker's office?

A Yes.

Q And you have brought that?

A Yes.

There's a cover sheet for the records when they were sent to me and then we had a phone call, I believe it was back in 2011, and that just states what my opinions were at the time.

And essentially, the only other stuff was e-mail that says, here's the date of your deposition, and I don't retain those. I don't have that.

Q You say you don't keep e-mails?

A Well, I don't have any e-mails that are -- have any substance or value to them. They're really, are you available on this day for a deposition; here's your date. Things of that sort.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-14.)

BY MR. SMITH:

Q I'm going to hand you what I've marked as

Exhibit Number 14 to your deposition. Is that -- collective Exhibit 14. Is that all the correspondence that you have between yourself and Mr. Baker's office?

A Yes.

Q Next it asks you to bring bills or invoices.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-15.)

BY MR. SMITH:

Q I'm going to hand you what I have marked as Exhibit Number 15 to your deposition and get you to identify that for us.

A So these are two different invoices, one from 2011 and the other from 2014.

Q Are those the only invoices that you've submitted?

A That I've submitted, yes. There's one more that I just realized that I hadn't submitted and just my preparation for the depo.

Q Do the two invoices that we've marked as Exhibit Number 15, do they include all the time that you have spent up until you started preparing for this deposition?

A Except for probably, I think another two hours or so that I just realized I hadn't submitted

yet, and that was from 2014.

Q And what were those two hours? What were you doing during that two-hour period of time?

A It was -- I'd have to look. I don't recall. If I looked at my notes, it would probably be the very last things. Oh, the deposition of Dr. Scheld.

Q And then how much time have you spent preparing for the deposition?

A A couple of hours, basically looking through what you have here.

Q A couple of hours means different things to different people.

A I think it was like two or three hours.

Q See, my wife would fight with you and say a couple means two.

A A couple to a few.

Q Okay. So somewhere between two and three hours preparing for the deposition today?

A Yes.

Q All right. Is that all the time that you spent on this case up through today until now?

A Yes, sir.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-16.)

BY MR. SMITH:

Q I'm going to hand you what we've marked as Exhibit Number 16 and get you to tell me what that is.

A So this is a list of my trial testimony and civil depositions from 2012 until today.

Q Is it complete?

A Yes.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-17.)

BY MR. SMITH:

Q I'm going to hand you what we've marked as Exhibit Number 17 and tell us what that is.

A This is the disclosure, my expert disclosure, with my opinions.

Q I believe that is everything that you've brought you with today.

A Yes.

Q That we've gone through and either identified or marked as an exhibit?

A Correct.

Q All right. We've also asked you to bring copies of advertisements for your services in reviewing medical-legal matters for the years 2012 through '15.

A I don't advertise.
Q How do you get cases?
A Attorneys find me. I also am -- I work with a group called Rieback Medical-Legal Consultants. And so what happens is, they're the intermediary and then she'll call me and say, I have a case, would you be willing to review it?
But other than that, I think it's word of mouth.
Q So you do work with, you said Rieback?
A Yes.
Q Any other types of expert location services that you work with?
A No.
Q Any other services you're listed with?
A Not to my knowledge.
Q Your CV or your professional resume has a list of some publications that you've authored.
Is that a complete list of all the articles that you -- let me see. There it is. So your CV or professional resume lists journals, book chapters and book chapters that you've submitted for publication, posters, and lectures that you've given.
Are those parts of your resume complete and up to date?

A Yes.
Q Have you ever worked with Mr. Baker or his firm in the past?
A I have.
Q How many times?
A I believe twice before.
Q Do you know the other -- have you worked with any of the other defense firms involved in this case?
A I hope they don't take it personally if I don't recall, but I don't think so.
Q Okay. Let me go through and name them.
A Okay.
Q The Hardison Firm in Memphis?
A No, I don't think so.
Q Let's see. Lewis Thomason, used to be -- I can't even remember their old name anymore.
MR. BAKER: Thomason Hendrix.
BY MR. SMITH:
Q Thomason Hendrix?
A Not that I recall.
Q Let's see. Rainey Kizer?
A No, I don't think so.
Q Baker Donelson?
A The name sounds familiar. I don't know

if I was -- if I was on a case where they were also involved, but I don't think I was ever hired by them.

Q We also asked you to bring copies of your 1099s, showing the amount of money that you've been paid for medical-legal work from 2012 to the present.

A Right. I did not bring those. If I'm required to, I will. You know, I don't like to give out all my financial -- personal financial information. I'm happy to tell you percentages and about how much I make, but --

Q And we will -- and we'll go through that in a little bit, but like I told you before, in this particular case, the judge is requiring that people turn those over.

A Okay.

Q So you do have access to the 1099s for your medical-legal work, at least for last year?

A Yes. In fact, I'm getting them together right now.

Q And then do you also have access to those from 2012 to the present?

A I should. You know, I'll have to check my files, but . . .

MR. SMITH: And so what we'll do is, we'll make that late filed Exhibit Number 18.

THE WITNESS: Okay.

MR. SMITH: And Mr. Baker will get back with you.

MR. BAKER: So we're doing that for all experts now, not just the ones the judge has specifically ordered?

MR. SMITH: In this case.

MR. BAKER: So we're going to get the same for -- what's his name? Dr. Schwartz? He hasn't so far. Whatever our stipulation wants to be, if you're willing to do that.

(Thereupon, marked for identification, Plaintiffs' late filed Exhibit Number P-18.)

BY MR. SMITH:

Q All right. Let's see.

All right. Let's move on to a different topic. Some of these things we can probably clear out.

Tell us a little bit about your medical education and training.

A Okay. So after medical school, I initially started out in surgery.

Q All right. Let's talk about, where did you go to medical school?

A Oh, sure. So I went to undergraduate at

University of California at Davis. After that, I went to Sackler School of Medicine, which is a New York State medical school with the physical campus in Tel Aviv, Israel.

Then I came back and did a year and a half of general surgery residency at Staten Island University Hospital. And then I did three and a half years of anatomic pathology residency at State University of New York at Stony Brook.

Then I did a year of pediatric pathology fellowship at New York University, NYU. Then I did a year of forensic pathology fellowship at the Office of Chief Medical Examiner in the City of the New York. And then I did a year of forensic neuro and forensic cardiac pathology fellowship, also in the Medical Examiner's Office in New York City.

So that's the extent of my education.

Q And training?

A Well, training is, yeah, included in that, yes. Education and training.

Q So you talked about you started out doing general surgery?

A Yes.

Q You said for two years?

A A year and a half.

Q A year and a half. And then why did you quit surgery?

A I had no life outside of the hospital. I loved the profession. I think it's a beautiful profession, but it was not the right lifestyle for me.

And so I was trying -- I was not asked to leave. In fact, I was asked to stay, but I made a decision I needed -- I wanted to leave the actual clinical world and go more into the laboratory world, and that's why I left.

Q So you said anatomic pathology. What is anatomic pathology?

A So anatomic is the basic pathology. And what I mean by basic is general pathology. Everybody who is a pathologist has to at least have done anatomic pathology.

So what we do is, we do -- if you have a biopsy or you have surgery, that gets sent to the anatomic pathology lab. We will look at it. That's the gross exam. We will dissect it, put pieces into a cassette, look under the microscope, make the diagnosis. So that's anatomic pathology.

Included in that training is autopsy pathology, and so it's at least three years. Since I came in the half year, I did three and a half years.

Q Okay. You said anatomic. What other -- I guess what other types of pathology are there?

A There's a lot. There's clinical pathology, which is instrumentation work like blood drawn, lab work, things of that sort.

Then you have a slew of subspecialties from what I did, pediatrics and forensics. There's neuropathology. There's GI pathology. There's breast pathology. There's renal, which is kidney, pathology.

I mean, there's pathology fellowships in almost any organ system.

Q Is there such a thing as an infectious disease pathology?

A I don't think there's an actual fellowship in infectious disease. You can focus and specialize in it, but I don't believe that there is an actual infectious disease fellowship, pathology fellowship.

Now, at the CDC, there's a branch -- but that's the CDC -- which is infectious disease pathology.

But in general pathology, I mean, that's part of what you do. You're looking for signs of infection in the tissues and you learn about Gram staining. You learn about studies to do to focus in

on different infectious diseases.

Q You said that you also did some training in pediatric pathology?

A Yes.

Q What -- tell me about that.

A So that was a year at NYU. It's basically like anatomic pathology residency, but now we're focusing in on childhood, and that's up to 21 or up to 20, childhood diseases, do all the fetal autopsies, any intrauterine fetal demises or stillborns.

In fact, I sit on the executive council for the Society for Pediatric Pathology and I'm the chair of the membership committee for them. So we look at trying to recruit people into pediatric pathology so we have pathologists that understand childhood diseases, because they're a little different than adulthood diseases.

Q Do you consider that training to be relevant in this particular case?

A Absolutely, yes.

Q Why?

A Because there are different etiologies for encephalitis between adults and children. And even within children, there's different etiologies

between newborns and older children, so I do think it's important.

In addition, while I was doing my fellowship in peds path, I had a couple of herpes encephalitis cases, which I didn't have when I was in my adult pathology because those patients really didn't come to autopsy.

Q Do you consider Holly a child?

A I consider her right at the top of the age of, quote, unquote, pediatric pathology. She's right at that border of pediatric pathology to adult pathology.

But the importance here from putting together what you're asking is that the etiology, I do believe my pediatric pathology experience during the fellowship helped me with my interpretation of what I saw.

Q Is that due to -- now, you said that when you were doing your pediatric pathology training, that you had a couple of cases of herpes?

A That's correct.

Q Encephalitis?

A That's correct.

Q How many?

A I believe it was two that we autopsied.

Q Since then, have you had any other cases of herpes encephalitis?

A I don't know if I've had more herpes encephalitis. I have had other meningoencephalitis cases, but I don't think I've had any more herpes.

Q You talked about forensic pathology. What is -- how does forensic pathology differ from anatomic pathology and pediatric pathology?

A So forensic pathology, now we take all of that knowledge base and we add in the interpretation of injuries, the evaluation of toxicology, and basically, we come -- the forensic pathologist determines the cause and manner of someone's death.

An anatomic pathologist, they may do that rarely, if they have an autopsy where they're not sure what happened. But within the code for forensic pathology, we examine all sudden unexplained deaths. So anybody who wasn't expected to die and dies, we will examine them, and so that's why I think it's relevant in this case.

Q And then you also went on to say that, I think as part of your forensic training, you also had some -- and I don't know if it was part of the forensic training or if it was separate, but you talked about neurologic or neuropathology and cardio

pathology?

A Right. So it's another year, so it's the year after the forensic pathology fellowship. And it's a very unique program to the New York City medical examiner's office.

And basically, during that year, we cut every brain that needs further evaluation, every spinal cord that needs further evaluation. And this is throughout all of New York City, all of the boroughs, as well as very difficult hearts that the forensic pathologist wants a better result, you know, someone who's more trained in it.

So during that year, I cut hundreds of brains, many spinal cords, many hearts and aortas, and gave presentations to the general forensic ME office.

The attendings for that were a cardiovascular pathologist who trained in Boston at, I believe it was Brigham and Women's, and a neuropathologist who had come from the AFIP, which is the Armed Forces Institute of Pathology.

They were our instructors and so it was an intensive year of brains, spinal cords, and hearts. At the same time, every four weekends or so, we would be doing general autopsies as well as an attending forensic pathologist.

Q Does that complete your medical education and training?
A Yes. My formal medical education and training, yes.
Q And then your experience is outlined in your resume?
A Correct.
Q Your training is in pathology?
A That's what I'm board certified in, anatomic and forensic pathology.
Q Do you hold yourself out as an expert in any area of medicine? And we talked about this. Let me kind of put this in context.
A Sure.
Q Because earlier, we talked about the fact that you're not a clinician.
A That's correct.
Q In other words, you don't -- you're not involved in evaluating, diagnosing, and treating live patients?
A There's only one instance where we do that and that is in injury pattern analysis. That has nothing to do with this case.
So we do have live consults on children who, unfortunately, have maybe been beaten versus

accidental injuries, so that's the live aspect of it. But no, I'm not in the hospital, treating live patients.

Q And so do you hold yourself out as an expert in any area of medicine other than pathology?

A I don't. But what I would like to add to that is that part of a forensic pathologist's training and expertise is taking all of the medical information, all of the circumstantial information, and including that into our causation of death. And that's a very important aspect of what we do.

We can't work in a vacuum. You know, if we have someone who dies of a gunshot, we know they died of a gunshot. But if you have someone who has a sudden death, we need to know what their past medical history is. If they have medical records, we always request those medical records and we'll review them to see if the death correlates with the clinical symptoms and signs.

Q All right. Anything else you want to add to that?

A I don't think so, no.

Q And I do understand what you said, but I just want to make sure that I got a clear answer.

So I know you take into account, I guess,

your general knowledge of -- or your general knowledge of medicine?

A Yes.

Q And disease processes?

A Correct.

Q But you don't hold yourself out as an expert in any area of medicine other than pathology; is that right?

A Correct. Anatomic and forensic and pediatric and cardiac and neuropathology.

Q Tell me how much you -- you didn't bring a fee schedule. Tell me how much you charge for working on a case like this.

A So -- and Mr. Baker will see that it's gone up a little bit since 2011 -- but currently, I charge $500 an hour for review of materials, $600 an hour for deposition, $4,500 a day for trial. And I believe that's essentially the main things.

Q All right. Now, this trial obviously would be in Memphis.

A Yes.

Q So if you had to travel to Memphis, I'm assuming you would come over the night before --

A Right.

Q -- and testify. Would you charge one day

or two days or a day and a half? How would you charge for that?

A If I just came up the night before, I would charge one day.

If I was asked to come up the morning and then if I sit for two days, then it would be two days. But if I come up the night before, just one day.

Q Okay. Do you advertise?

A No.

Q How many cases a year do you review?

A Well, in 2008 when I started, I reviewed one. And it has exponentially increased as the years have gone on.

We're in March. I would say I probably maybe reviewed about 12 to 15 cases so far this year. Like it's really -- my private work has increased quite a bit.

Q And I need to clarify that because you brought up a good point.

I'm not talking about, obviously, cases that you review for the medical examiner's office or part of your regular job. I'm talking about where you're involved in private consulting in medical-legal cases, where you are an opinion witness in a case in court.

A Exactly.
Q And you said so far this year, you reviewed between 12 and 15 cases?
A Yeah. That's a -- that's a rough estimate. And when I say that, it could be, I'm sent an autopsy report, I look at it for an hour, I tell the attorney my opinion, and I'll never hear from that attorney again, you know.
Q Sure.
A So it varies. And I do all of that -- other than today, where I took the day off of work, I do that at night or on weekends.
Q Sure. So that would be -- I mean, if we extrapolated that out for the year, that would be roughly between 48 and 60 cases this year that you would review?
A Yeah. Last year, I definitely did not do 60 cases. I would say last year, I probably did -- and again, this is an estimate -- but maybe 25 cases. So it's anybody's guess.
Q That's fair. I'm just trying to get an idea. I mean, hopefully business continues to be good for you, but you're saying it could -- if we carry that out for the rest of the year, it would be between 48 and 60 cases that you would potentially see this

year?

A Right. I would say that's probably on the high level, but --

Q Last year, you said it was maybe 25?

A Maybe, yeah. Again, I have to look. I don't recall.

Q What about the year before that?

A It was less, but I -- I don't remember the numbers. I would say in 2014 is probably when, all of a sudden, my name must have gotten out there and I started getting more and more cases.

Q Any reason why that sort of exploded in 2014?

A I have no idea.

THE VIDEOGRAPHER: Counselor, we're at five minutes.

MR. SMITH: All right. Let's wrap this up.

BY MR. SMITH:

Q What percentage of your income do you derive from private consulting as opposed to your regular day job?

A So I would say last year, because I just moved into a new position in November of last year where my salary increased, but last year, I would say

it's probably about 50/50.

This year, it may be about the same but probably a little bit lower, and that's just because my current job, I got a salary bump.

Q Let's make sure we're clear about that.

Your percentage of private consulting work would drop a little bit due to the fact that you got a bump-up in your day job?

A Correct.

Q All right. What percentage of cases do you review for plaintiffs versus defendants?

A I would say probably about 80 to 85 percent are plaintiff and 15 to 20 percent defense.

Q Has that changed over the years?

A It's become a little more on the defense over the last two years, but that's really maybe two cases or so added per year.

MR. SMITH: Let's go -- let's change out the tape.

THE VIDEOGRAPHER: End of tape number one. We're off the record at 1:08 p.m.

(VIDEO CAMERA OFF.)

(Thereupon, a recess was taken.)

(VIDEO CAMERA ON.)

THE VIDEOGRAPHER: This is the beginning

of tape number two. We're back on the record at 1:25 p.m.

BY MR. SMITH:

Q How do you -- how would you describe your role in this case?

A Well, I believe, as a pathologist, I -- my role is to look at the records that I reviewed, the slides that I reviewed, and come up with a determination as to what I believe is the etiology of what went on in her brain and, essentially, like causation of why she died.

Q In other words, come up with, as best you can from reviewing the records, what you believe the cause of death to have been?

A Right. What I can rule in and what I can rule out.

Q And do you see yourself as an advocate for either side?

A No.

Q You were hired by, obviously, the attorney for Dr. Wright. Do you see yourself as an advocate for Dr. Wright?

A No.

Q Do you think that your role in this case requires you to be fair to both sides?

A Absolutely.
Q Which means if you're going to be fair to both sides, you have to take into account the entire picture of what happened.
A Yes, absolutely.
Q You have to consider all the information; you can't leave out bits and parts of it.
A Well, I mean, that's a very general -- that's a very big statement. So I mean, from a pathologist's standpoint, yes, I need to take --
THE VIDEOGRAPHER: Hold on. We're off the record at 1:26 p.m.
(VIDEO CAMERA OFF.)
MR. SMITH: We had -- just for the written record, we had a technical difficulty with the video feed from Memphis.
(Thereupon, a recess was taken.)
(VIDEO CAMERA ON.)
THE VIDEOGRAPHER: We are back on the record at 1:30 p.m.
BY MR. SMITH:
Q All right. Before we had a technical difficulty with the video feed, we were talking about your role in this case. And you said that, correct me if I'm wrong, but you said you're not an advocate for

either side.

A That's correct.

Q And since you're not an advocate for either side, you have to be fair to both sides.

A Correct.

Q You have to look at all the evidence that's available --

A Yes.

Q -- before reaching your opinions.

A And my response to that is, it depends on what I'm -- what I'm asked to do. And what I mean by that is, in this case, the most important part, because we're looking to see what -- what pathology was in the brain and if that contributed to her death.

So yes, all of the information is important, but the most important for me in this case is the brain, both grossly, microscopically, and then the other studies that we spoke about earlier, the CSF and the PCR, and the immunohistochemistry. Those, from a pathologist's standpoint and what I believe my part is in this case, those are the most important.

Q I understand those are the most important, but you still need to take into account all the information that's available for it to be fair to both sides. You have to take into account all the

information before reaching a final opinion in the case.

A Well, it depends on what you mean by "all." Again, I can have absolutely no information on this case and look at the brain and I can tell you what I believe this brain shows me. So that's part A, and that's actually what I was asked to look at, is what went on in her brain and did it have any role in her death or not in her death.

All of the information, yes, that would be great. I don't know if I received all the information. I believe what I reviewed is more than adequate for me to opine as to what is in my disclosure.

Q So in your opinion, it would be okay to ignore certain facts and information in reaching your opinions?

A That's not what I said. I never said I would ignore facts. If more information became available, I am always open to looking at more information and then, if it changes my opinion, then I will tell you it changes my opinion. But I will never ignore any facts.

Q Okay. So that's what I was trying to get to. You would agree that it's important for you to

consider all the facts before rendering an opinion in the case if you're going to be fair to both sides?

A Well, and again, I want to answer that with the statement that it depends on what you're asking me to look at or somebody is asking me to look at or what my role in it -- in this is.

My -- my opinion as to what went on in her brain, because that's all I have to look at, I don't think I needed more information. If there's something out there that would change my opinion that I didn't receive, then I will look at it and if it changes my opinion, I will.

I don't think -- I don't think it's fair to say all the information because I don't know what all the information is. Maybe what I have is adequate, which is what I feel my opinions, as regards to her neurologic pathology, I believe I have all the information I need.

Now, if we're going to start talking about clinical and did, you know, did they do the clinical treatment right, well, that's not in my area of expertise so I'm not even speaking to that. So there may be more out there that I don't know, but that has no bearing on my opinion.

Q One of the things you said that you do as

a forensic pathologist is that you consider, essentially, the history. You go through all the medical records to try to get the background about what happened to a particular patient.

A Correct.

Q So I'm not asking you necessarily what you would have to look at in order to give comments about the standard of care or what the clinicians were required to do, what their jobs required them to do.

But you would agree that it's important to get an accurate clinical picture about what happened to the patient before she died?

A Right, and I agree with that. And what I received has a lot to do -- a lot of her clinical history, absolutely.

Q And you wouldn't want to leave information about the clinical history out. You wouldn't want to ignore information about the clinical history in reaching your opinions; would you?

A Well, it depends on what the clinical -- what other aspects of the clinical history is there, in all honesty.

If there's more out there that I don't have, would I like to look at it? Sure, I'd like to look at it. Will it have a bearing on my opinion? I

can't answer that because I don't know if there is anything more out there and if yes, what's in it.

Q Okay. Do you think it's okay to discount or ignore facts to reach an opinion?

A Well, again, that's a very general question. If the fact is that she, you know, stubbed her toe two days after she presented the first time, I don't care about that. Would it -- would I look at it? Of course I'd look at it, but I don't care about that.

If it's an important fact to the clinical history and to what my role in this is, well, then I think it would be wrong for me to ignore that. But again, that's such a general question, I don't know -- I can't answer that as a yes or no.

Q Do you agree your opinions have to be based on facts?

MR. SMITH: Can some -- somebody is ruffling papers on the other end. Could y'all maybe turn off the -- there we go.

BY MR. SMITH:

Q All right.

A I'm sorry. I didn't hear the question.

Q Do you agree that your opinions have to be based on facts?

A Yes.
Q In other words, you can't just make up stuff?
A Absolutely not, no.
Q And you can't weigh the facts. In other words, you're not here to make a determination, for example, if there's conflicting testimony about certain facts, you're not here to weigh who's telling the truth or not telling the truth?
A No. I don't do that. I'm here to tell you what my findings are.
Q You -- you understand that your deposition is being taken part -- as part of an ongoing lawsuit in Memphis?
A Yes, sir.
Q Do you understand your deposition is an important part of that lawsuit?
A I believe so, yes.
Q Because it's an important part of the lawsuit, you took it seriously?
A Absolutely.
Q You -- now, this is a little bit different, but you did prepare for your deposition because you took the deposition seriously?
A Oh, I always prepare for a deposition in

the sense that I'll review my file.

Q Because you know that when you give a deposition, it's an important part of a lawsuit?

A Yes.

Q Did you have a full opportunity to prepare for the deposition?

A I felt I had enough time to prepare, yes.

Q In other words, you weren't rushed or nothing came up in your life that prevented you from spending all the time that you wanted and you had ample opportunity to spend as much time as you wanted to or thought you needed to in order to be prepared for today?

A I believe so, yes.

Q And you're fully prepared today?

A Yes.

Q What did you do to get ready for today?

A I just reviewed my notes. And then in my notes, there are some, like, pages from depositions or from the medical records that referred me to, like, discharge summary or laboratory values and so I looked at those pages. And that's essentially it.

Q So we ought to be able to figure out what those are by going through the notes?

A That's correct.

Q Are you aware of anything that was missing, any information that you were missing that you felt like you needed to see in order to develop a full opinion in this case?

A No. I think for me, again, going back to the brain and the other studies and my review of the slides, I think that was adequate for me to come to my opinion.

Q Did you -- have you met with the lawyers in order to prepare for your deposition?

A Well, I met with Mr. Baker last night. We had dinner and just talked.

Q Where did y'all go?

A A very good steakhouse. I'll let you know.

Q How long did you spend with Mr. Baker?

A We were there maybe an hour. Really, most of it revolved around just saying hi to each other and having dinner. And I told him I was ready for today.

Q Did y'all discuss any particular aspects of the case?

A No. I just told him my opinions hadn't changed at all.

Q Did you discuss any opinions in

particular?

A No. Just my overall.

Q Any particular aspects of the case that Mr. Baker raised to kind of go over last minute?

A Not really.

Q Well, not really means maybe.

A Well, no. I'm sorry. I should have said no.

Q All right. Exhibit Number 17 is a copy of the disclosure of your opinions. You've been involved in enough of these cases that you know what a disclosure is?

A Yes.

Q You understand that the disclosure is put together by Mr. Baker or somebody in his office to give me notice of what opinions you intend to give at trial?

A Correct.

Q Were you involved in helping prepare the disclosure that we've marked as Exhibit Number 17?

A I'm sure that I was asked to look it over before it was sent out. It's been a while, I think, so I don't specifically recall, but I didn't write this myself.

Q And I understand that. I mean, I

understand you didn't write it.

A Right.

Q But typically, Mr. Baker or somebody from his office sits down and goes over it with you and discusses what opinions you have and then they come up with a draft.

You may review it to make sure it's accurate, make changes to it, whatever, and at some point in time, will approve it as being an accurate representation of what you intend to say at trial.

A Right. That's, in essence, that's what I was saying, is that I probably reviewed it, which I'm sure I did, and said it looks fine.

Q Have you reviewed it before the deposition today?

A I did.

Q Does it accurately reflect the opinions that you intend to give at trial?

A It does.

Q Does it fully describe the reasons that you have the opinions that you have in this case?

A I believe so.

Q I mean, in other words, what I'm asking is, is there anything that, when you went back through and looked at it to get ready for today, that you

thought was either missing or needed to be added for it to be a true, complete, and fair representation of what you're going to say at trial?

A No, I don't think so.

Q What is an autopsy -- and I may say this wrong. Correct me if I do. But what is an autopsy persector [sic].

A Prosector.

Q Prosector?

A That's the person who does the autopsy. That's the person who does the cutting of the body or basically opening up the scalp and the skull.

As an example, my office, we have medical residents, we have fellows that rotate through our office. They may be the person who does the physical cutting, but there's always an attending pathologist who oversees it.

Q What role does the attending have in overseeing the autopsy?

A The attending is the one who has to make the final determination. So they're the one who decides what, in my world, the cause of death was, what the pathology changes were, is there anything abnormal, not abnormal.

So the prosector will be doing the

physical work, but the attending will be watching and overseeing.

Q All right. Are you familiar with the difference between sensitivity and specificity of testing?

A I am.

Q Tell us what the difference is.

A So sensitivity is true positives, in a sense, and specificity is true negatives. So if you have a test that is -- you suspect or that you know, let's say you know that this is a disease and you test it and it comes positive. That's your sensitivity.

If you -- if you were to take my blood work and you know that I'm not HIV positive and the test comes back negative for HIV, that's specificity.

Q What are predictive values?

THE COURT REPORTER: I'm sorry?

MR. SMITH: Predictive values.

A So that's sort of a ratio of how good the test will be to predict the result, in a sense. You have positive predictive value is the main thing.

So, you know, if you were to do a CAT scan on somebody who you know fell and hit their head and had a subdural hemorrhage, what is the value of doing that CAT scan. How positive will it be.

Wow, I feel like I'm taking my boards again.

BY MR. SMITH:

Q All right. You're not a clinician?

A I'm not a clinician, no.

Q You don't diagnose herpes simplex encephalitis in live patients?

A Not in -- I don't, no. Not in a live patient, no.

Q You don't have any expertise in -- as a neurologist?

A Right. I mean, I'm not a neurologist.

Q You don't have any expertise as an ER doctor?

A No.

Q You don't have any expertise as an infectious disease specialist, treating live patients?

A Treating live patients? No, I don't treat live patients.

Q You don't -- in your practice, you don't clinically correlate laboratory testings to diagnose and treat live patients?

A In my practice, no, I don't. I use them to diagnose dead patients, but not live patients.

Q And you're not an epidemiologist?

A Well, not certified in the sense of board certified epidemiologist. We are very involved with epidemiology at -- as forensic pathologists.

Q Let's talk about some just general issues in this case. And I want to make sure because I've read through your report and I want to make sure that my understanding is correct and you need to correct me if I'm wrong.

A Sure.

Q And I want to -- I'm going to try to pull some things out and see if we can -- I think there are some areas we probably agree on.

A Okay.

Q And let's talk about that and then we'll move into some, maybe the harder issues.

A Sure.

Q So in this particular case, we agree that Holly died from an encephalitis?

A I agree that she had an encephalitis. She had an inflammatory response in her brain and that resulted in swelling of the brain and her death.

Again, my only issue is, I'd like to have seen the rest of the body. But from what I have, yes, I agree that she died of some form of encephalitis.

Q All right. So I think I understand but

let's make sure we're clear on this.

A Sure.

Q Because we talked about this earlier. This was a limited autopsy.

A Correct.

Q They did not do a full autopsy. All they looked at was the brain?

A Correct.

Q And some of the studies, testing that was done on either brain tissue or the cerebral spinal fluid?

A Correct.

Q They didn't do a full autopsy to examine the other organs of the body?

A Correct.

Q So based on -- and all we have now, after the fact, is that limited autopsy to look at?

A Right, which is still very good in this situation.

Q Based on the limited autopsy that was done, you would agree that Holly did die from an encephalitis?

A From what I have, yes.

Q And as I understand it, the encephalitis caused swelling in the brain which caused her brain to

herniate?

A Correct.

Q In other words, the brain was pushed down into the brain stem which was, I guess, the immediate cause of death?

A Right. So you don't -- within the skull, you don't have room to go outwards and so it pushes down towards the spinal cord and then it impinges on your respiratory and cardiac centers and that's how you die.

Q Now, there are different types of encephalitises.

A That's correct.

Q Based on the information that we -- that you have available to you, are you able to be any more specific about whether the encephalitis was viral in nature or some other type of encephalitis?

A Unfortunately, no, I can't be more specific. But there are a number of viruses that have been ruled out. So in general, I don't -- I can't tell you specifically which type of encephalitis it is, but I can tell you which type it's not.

Q And we're going to talk about that in a minute.

A Sure.

Q Can you say or do you have an opinion about whether or not this was a viral encephalitis?
A I can't because it could have been -- the appearance under the microscope could be certain viral, but it could also be certain autoimmune disorders and some other very rare. But no, I can't tell you if it was or was not a viral infection.
Q The best you can do is to say that this was an encephalitis that caused her death?
A Well, I think the best I can do --
Q Let me -- I understand what you're going to say. Let's leave aside for this, because we're going to talk about that in a minute --
A Okay.
Q -- the things that you think you can rule out.
A Okay. Fair enough.
Q And we're going to talk about some of the things that you think the testing rules out.
A Okay.
Q Because I do know that you have that opinion.
A Yes.
Q But I'm talking about a 30,000-foot view right now.

A Sure.
Q High level, you would agree that this -- her death was caused by an encephalitis?
A Correct.
Q And then to drill down into that further, you can't drill down on that further to say whether or not the encephalitis was viral or some other type of encephalitis?
A Right. I cannot give you the specific etiology of the encephalitis.
Q Would it be fair to say that because there's no testing that -- well, okay.
The findings that you reviewed from the autopsy are consistent with a viral encephalitis?
A That's one of the possibilities, yes.
Q You also went back and you reviewed the medical records?
A Yes. I reviewed those first, I believe.
Q And I'm not just talking about the medical records from the autopsy report and the testing. I'm talking about the medical records from the ER visits that she went to, as well as the hospitalizations and so on and so forth?
A Correct.
Q And based on those medical records, her

history would be consistent with a viral encephalitis?

A Yes, it would be --

MS. MALKIN: Object to the form.

THE COURT REPORTER: Who was that, please?

MS. MALKIN: That was Andrea Malkin.

A I would say it's consistent with any type of encephalitis.

BY MR. SMITH:

Q Including a viral encephalitis?

A Including a viral encephalitis.

Q Going back and reviewing the history, her encephalitis would have began sometime before September 17, 2007, which would have been the first time she went to the ER with seizures?

A I'm trying to remember. I think that she said her -- the symptoms had started, like she had fallen at school, I believe, and then that was like two days prior, I think. I'd have to look at my notes. But yes, her symptomatology appears to have started prior to that initial presentation.

Q So we know that -- we know that Holly died from an encephalitis.

A Yes.

Q And the history or her medical course was

consistent with a viral encephalitis?

A That's right.

Q And that that encephalitis, the symptoms associated with that encephalitis, started sometime before September 17, 2007?

A I would say that her neurologic symptoms started before that date. I would leave the -- the clinical diagnosis at that time to a clinician.

Q That would be -- you're talking about the difference between a clinician and pathology. As far as looking at the clinical course of the disease, clinicians may be able to weigh in on the symptomology and try to help maybe differentiate between what types of encephalitis it was?

A Yeah, they would probably be a little better at that or be better at that.

Q Now, let me see. And I -- I want to take a shot at, because I've gone through all of your disclosure and I'm going to try to boil it down. And we'll go through the details on this, but I think really, your opinions can be boiled down to, I think you got really one opinion, for the most part.

A Okay.

Q I think your opinion is, if I read everything correctly, that based on the autopsy and

the testing that was done, that you can definitively rule out herpes simplex as a cause of Ms. Simms' death?

A That's correct.

Q And then we can go through all the different reasons that you come to that conclusion, but when we boil down the disclosure, that's what I came up with. Would you agree with that?

A I would say that's, yeah, the depth -- the depths of it.

Q Okay.

A I believe there were other viruses that were ruled out as well, but herpes simplex seems to be the crux of the case from reading the Complaint.

Q And I'm going to jump around to some of the different reasons that you came up with your opinion; okay?

A Okay.

Q Let's start with, there's a sentence in here that says -- it's on page 17.

A I don't have page numbers.

Q Look at page three --

A Okay.

Q -- of Exhibit Number 17.

A Okay.

Q All right. At the top, it says, most cases of -- in most vases of viral encephalitis, the etiology is unknown.

A That's correct, but I'm trying to find the sentence. I think I might be on the wrong page.

Q It could be. Yours may have shifted a little bit.

Look at the bottom of page two.

A Okay.

Q Do you see that paragraph?

A I do.

Q It says that, (reading): In most cases of viral encephalitis, the etiology is unknown. As in this case, there are no distinguishing features to identify the source of the inflammation.

So explain to me what that means.

A Okay. So I'll give you -- I'll give you an example of how I approached this case and I think that will answer what -- a lot of questions and what you're asking here.

So when I look under the microscope -- excuse me -- when I look under the microscope, there's obvious chronic inflammation around vessels, a little bit in the other meninges overlying the brain, so I know I'm dealing possibly with an encephalitis. So I

need to go closer, or at least a meningitis at that point.

So I need to go higher power and look in closer to see if I see any distinguishing features that can tell me that this is CMV, this is herpes, is it bacterial, which would be a different type of inflammation, but to get the picture of what may be the underlying cause of it.

So as I got closer and I started looking around, with viral infections, especially herpes and CMV, you look for what are called inclusions, intranuclear inclusions. And so looking around through all the sections, there was absolutely no inclusions that I found.

Another example being rabies. You look at specific cells in the cerebellum and you look for what are called Negri, N-E-R -- N-E-G-R-I-I. Let me say that again. N-E-G-R-I bodies. Those weren't there as well.

So I'm going and looking around to see if there's anything that can say, this is what it is or this is not what it is. So I didn't see any of that. All I saw was the inflammation around the vessels, in the meninges, and then some changes just from lack of oxygen to the brain and the swelling.

So the sentence saying that, (reading): As in this case, there are no distinguishing features to identify the source of inflammation, that's true. I don't have evidence of intranuclear inclusions. And then I take the other studies in conjunction with that.

The first sentence, that most cases of viral encephalitis, the etiology is unknown, well, that's very -- that's a very well-known conclusion. That's in all the textbooks and literature.

Q So let me back up and ask you a couple of specific questions to sort of drill down on that.

A Uh-huh (affirmative.)

Q When you looked under the slides at the -- you did see evidence of inflammation associated with an encephalitis?

A Yes, what we call meningo. So that's the lining over the brain and the vessels come down from that lining and there was some inflammation around that. So that's like meningitis, but meningo. And then encephalitis is some inflammation going into the brain tissue itself, so she had both.

Q Okay. And you, based on your review of those slides, you could not rule out a viral encephalitis in a general sense?

A That's correct.

Q Now, the sentence that says, in most cases of viral encephalitis, the etiology is unknown, that means in most cases of viral encephalitis, the specific cause of the encephalitis is not known; is that fair?

A Right. So those are -- those are studies in the textbooks and things where they've done the workup, they've done a lumbar puncture, and they've sent it off for the most common, herpes being one that you're always going to send off for. The Western equine, Eastern equine. There's a whole litany, which I'm sure you know.

And after you've tested for all those, those coming back negative and then only seeing the evidence of the inflammation under the microscope, you're left with an encephalitis of unknown etiology.

Q Okay. In this particular case, there's no evidence of an epidemic outbreak of encephalitis in Memphis that you're aware of?

A Not that I'm aware of, but I would assume no, but I don't know. I mean, I'm guessing it's no.

Q It would be speculative to say that there was an epidemic outbreak of encephalitis in Memphis at this particular time?

A Probably, yes.
Q So the assumption is, is that this was a sporadic case of encephalitis?
A Yes.
Q Sporadic, meaning it just happened to --
A It just happened to this individual, that's correct.
Q Now, herpes simplex is the most common cause of sporadic viral encephalitis that results in death?
A That results in death, yes.
Q Let me ask you a couple of questions, and I told you I'm going to jump around.
A That's okay.
Q The autopsy.
A Yes.
Q You were not present for the autopsy?
A No.
Q To your knowledge, there were no pictures taken of the autopsy?
A Not that I know of, no.
Q So we don't have any pictures of the brain after it was taken out of Holly's body?
A That's correct. Just the description.
Q All we have is the description that's in

the report?

A Right, and then the slides which are taken from a whole bunch of different areas.

Q Do you -- now, I think it was Thomas Chesney that was the pathologist who signed the report?

A I would have to look. I don't remember.

Q Why don't we do this, because I'm sure you're going to want to look at it.

(Thereupon, marked for identification, Plaintiff's Exhibit Number P-19.)

BY MR. SMITH:

Q I'm going to hand you what I've marked as Exhibit Number 19 to your deposition.

A Okay.

Q Is that a true and accurate copy of the autopsy report that you reviewed in connection with this case?

A This is what I reviewed, yes.

Q And you will see on the front page, it says the attending pathologist was Thomas Chesney?

A That's correct.

Q Do you know Dr. Thomas -- Dr. Chesney?

A I do not.

Q Have you spoken with Dr. Chesney?

A No.
Q Do you know what type of qualifications or training Dr. Chesney has?
A I do not.
Q Do you know anything about Dr. Chesney?
A No.
Q There were two residents that were involved in the autopsy?
A Yes.
Q There was one, an Amanda Mullins?
A I see that.
Q Do you know Amanda Mullins?
A I do not.
Q Do you know anything about Amanda Mullins?
A I do not.
Q Have you spoken with Amanda Mullins?
A I have not.
Q Do you know what kind of training or background Amanda Mullins has?
A I don't.
Q And the other one was Heather Baldwin.
A I -- I'm sorry. Go ahead.
Q Do you know Heather Baldwin?
A I do not.

Q Have you spoken with Heather Baldwin?
A No.
Q Do you know anything about Heather Baldwin's background?
A I do not.
Q Now, obviously, when they did -- when they did the autopsy, they took the brain out and they did what we've already discussed, a gross examination of the brain?
A Correct.
Q You haven't been able to do your own gross examination of the brain?
A No, not of this brain.
Q Now, Dr. Chesney, Dr. Mullins, and Dr. Baldwin would have been in a better position than you to do -- to comment on the gross description of the brain?
A That's correct.
Q And they would have been -- they would actually have, from the standpoint of, they actually saw the brain and did a gross examination, they would actually be in a better position to comment on the cause of death in this particular case?
A Well, they can -- they can probably be in a better position to comment on what they saw and I

have my own conclusions.

I don't know if I would say that they're in a better position to talk about the cause of death, but they're definitely the ones who had their hands on the brain. So they can talk about the feeling of the brain, how soft or firm it was, what their findings were better than I could.

Q Would it be fair to say, in a sense, they had more information than you had because they had that personal first-hand observation that you don't have the benefit of?

A Well, if they put everything that they saw in their report, then I would hope that we would be at the same level of knowledge of what they saw.

If there's more that they didn't state in their report -- and we'll get to the slides later, but the slides support what my opinion is -- then if there's more that they didn't put in here, well then, yes, they would be more privy to determining the cause.

Q All right. Let's talk about -- let's talk about hemorrhagic necrosis that was discussed in your -- not your -- well, the disclosure that you reviewed and you say you have adopted and does summarize your opinions.

A Yes, sir.
Q So what is hemorrhagic necrosis in this particular setting?
A In this setting? Well, first of all, hemorrhagic means bleeding. Necrosis is death of the tissue.
So in a case of herpes simplex encephalitis where there is death associated with it, it's very common and it's in all the literature and textbooks, that the virus affects -- because of the way it gets into the brain, the virus affects the temporal lobes and can affect the base of the frontal lobes. And what happens is it kills off that tissue there and you get, basically, bloody dead tissue in that area.
And so that, when you see that, if you have an autopsy where you pulled the brain out and you see that, your very first thought is this is going to be a herpes simplex encephalitis.
Q How is -- what causes hemorrhagic necrosis?
A In this case?
Q In this particular case.
A Okay. So --
Q And I guess, let me clarify it. What

causes hemocratic [sic] -- hemorrhagic -- back up. Hemocratic?

A That's why we spend so many years and so much money, to learn how to speak another language.

Q All right. Let me back up.

What causes hemorrhagic necrosis associated with herpes encephalitis?

A So currently, there's two theories or two ideas postulated about that. One is the virus itself. The other is the inflammatory response to the virus. And what happens is, it comes in and it starts killing off the tissue itself. You have mediators that come in with the inflammation and that basically kills the surrounding tissue.

Q How is it diagnosed?

A Well, do you mean clinically or pathologically? Because it can be diagnosed on MRI. It can be diagnosed on CT. It can be diagnosed by a CSF. And then from a pathology standpoint, it's diagnosed when you're looking at the brain.

Q That's what I was getting at.

From a pathology standpoint, it's that gross examination? It's when the pathologist eyeballs the brain that they see the hemorrhagic necrosis?

A Well, that's the initial vision of it.

You'll see, when you take a -- when you take a brain out, at first you're looking at the top of the brain, and so you won't see it there. And then you pull the brain backwards and then you're looking at the base and that's where you see it.

So as you're taking it out, you'll see it, but that's also why we take slides to look under the microscope, because if you have true hemorrhagic necrosis, under the microscope, you are going to have hemorrhagic necrosis.

You'll see death of the tissue. You'll see bleeding. If it's been long enough, you'll see cavitation, which is forming of a cavity, with what are called macrophages. Those are the cells that come in and eat up all the dead tissue.

So you have a microscopic correlate to the gross finding.

Q Do you always have both?

A Both what? I'm sorry.

Q You've described to me what hemorrhagic necrosis -- two different ways to see it. One is eyeballing it when you do the gross evaluation of the brain. The other is when you look at slides under the microscope.

Do you always have both forms of

hemorrhagic necrosis when you have herpes encephalitis?

A I'm trying to put that more into -- because again, that's a very general question in the sense that you can have a herpes encephalitis where the person may not get to that point, but that's not in death cases. And if you have it grossly, you're always going to have it under the microscope.

If you have it microscopically, you should be able to -- any trained pathologist should be able to see it grossly. So if you have one, you should have the other.

Q In every case?

A Well, I mean, every case I've seen, yes.

Q You brought a picture with you. You actually -- and by the way, we're going to make this Exhibit Number -- late filed Exhibit Number 20, because you didn't bring it. It's on your computer.

A Right.

Q But on your computer, you have a picture of hemorrhagic necrosis of a brain?

A Yes, in a herpes simplex case.

Q And you've e-mailed --

MR. SMITH: And just for the record, he's e-mailed a copy of it to me, Darrell, that I

will print and send to the court reporter because they can't print it here in color.

MR. BAKER: And you can e-mail it to us, too.

MR. SMITH: Okay.

THE COURT REPORTER: I'm sorry?

MR. BAKER: I said he could e-mail it all the defense counsel too. That would be nice.

MR. SMITH: All right.

(Thereupon, marked for identification, Plaintiffs' late filed Exhibit Number P-20.)

THE WITNESS: Do you want to use this as an opportunity to use the restroom?

MR. SMITH: Sure, let's do that. And why don't we do this. Go to the restroom and when you come back, before we get started again, pull it up on your computer --

THE WITNESS: Sure.

MR. SMITH: -- so we can look at it.

THE WITNESS: Sounds good.

THE VIDEOGRAPHER: We're off the record at 2:10 p.m. This is the end of tape number two.

(VIDEO CAMERA OFF.)

(Thereupon, a recess was taken.)

(VIDEO CAMERA ON.)

THE VIDEOGRAPHER: This is the beginning of tape number three. We're back on the record at 2:21 p.m.

BY MR. SMITH:

Q All right. When we went off the record, we were talking about a picture that you had from the Internet that showed a -- grossly, what hemorrhage necrosis looks like with herpes simplex?

A That's correct.

Q You've got it on your computer. You've e-mailed it to me. I have e-mailed it to all the defense lawyers at the deposition, as well as the court reporter, and she's going to mark it as -- a color copy of that as Exhibit Number 20 later on.

But if you could, and this will be -- this probably won't -- this won't show up on the written record but -- you know what you could do is, you could turn your computer around and the court reporter -- or the videographer can kind of focus in on it and you can show us what we're talking about.

A That's fine. And what I'll say is that this photograph -- I apologize. I did not bring the photograph with me. But this is from a textbook. The editors are Ellison, E-L-L-I-S-O-N, and Love, L-O-V-E,

and it's a standard neuropathology textbook. And so this is the photograph from the herpes simplex chapter.

MR. SMITH: And if you -- and can you -- are you in on it?

BY MR. SMITH:

Q And you can kind of lean over maybe and point to the specific parts of the brain that, I guess, are indicative of hemorrhagic necrosis.

A Okay. I see myself, so I don't know if this is --

MR. BAKER: They're different cameras.

THE WITNESS: Oh, okay. Yeah, on top of the screen. Okay. So let me actually --

UNIDENTIFIED FEMALE ATTORNEY: The camera is not on the computer, it's on his head.

THE WITNESS: Yeah.

MR. SMITH: You'll see it on the video because the videographer is focused in on it.

UNIDENTIFIED FEMALE ATTORNEY: Okay.

MR. SMITH: I don't know how else to do it.

THE WITNESS: Do you want to bring that down?

MR. SMITH: Just do it.

THE WITNESS: Okay. We can also bring it up and so they can both see.

A Okay. So if we look at the top of the screen, that's going to be the front of the brain. And if we look at the bottom of the screen, that's the brain stem coming out between the cerebellum, and so that'll be the back of the brain.

And since we're looking at the inferior aspect, so we're looking at the undersurface of the brain itself, what we see is --

BY MR. SMITH:

Q So if I'm correct, then, we're looking at the bottom of the brain?

A That's correct. So that's as if we're looking from the neck up.

Q Right.

A These are the frontal lobes, which actually go all the way back here. This is the temporal and then the occipital is in the back.

If you notice here, you can see nice, sort of convolutions. These are the normal gyri, G-Y-R-I, and sulci, S-U-L-C-I. Those are the normal convolutions of a brain. And you can see how it's sort of a reddish, pinkish color.

But when we come back here, this whole

area, you don't see any of those convolutions anymore and it's red. That's the hemorrhagic necrosis. All of this tissue is dead and this is classic with the location of being at the anterior aspect of the temporal lobes, the posterior aspect of the frontal lobes, that whole area. Because again, the way the virus comes in, that whole area is dead and hemorrhagic.

Q Okay. And I know you said in your -- the disclosure that you were going to use a photograph, potentially, at trial to describe hemorrhagic necrosis or show hemorrhagic necrosis. Is that the picture you're going to use?

A Yes, I will use this picture.

Q And what you've described to us would be essentially what you would tell the jury?

A Absolutely.

Q Anything else?

A No, sir.

Q All right. We can put -- you can put that aside.

A Okay.

Q I think we're done with that. I'm going to ask you about another.

Now, on page one of Exhibit Number 17, it

says, (reading): The absence of hemorrhagic necrosis of the temporal and frontal lobes is undeniable proof that HSE was not the cause of this patient's death.

A Right. So she, from the -- as you stated, from the time of her initial symptomatology to the time of her death, in that period of time, there would have been hemorrhagic necrosis.

Q And you say undeniable, meaning that nobody should be able to disagree with you?

A Well, I mean, I don't feel that somebody could disagree with me on this.

Q In other words, let me -- if I understand your opinion, let me see if I can -- your opinion is that the absence of hemorrhagic necrosis in the autopsy report that you relied -- that you reviewed rules out herpes simplex encephalitis as a cause of Holly's death?

A Well, I think that what it should really say is that it's very unlikely that it would have been her cause of death. But then, in conjunction with the other studies, it's undeniable that it was not her cause of death.

So I know that's a little different than the wording in here. This, just being alone, would make it that maybe undeniable shouldn't be the word.

It should be that extremely unlikely, and then to make it undeniable is the -- are the additional studies.

Q All right. Let's just focus in on the hemorrhagic necrosis. And I understand what you're saying.

Would you say -- so you're saying that, stated another way, the absence of hemorrhagic necrosis of the temporal and frontal lobes in the pathology report makes it highly unlikely that Holly's death was due to herpes simplex encephalitis?

A Correct. By taking just that alone, that's correct.

Q And would it be fair to say that you would expect every reasonably-trained pathologist to agree with you?

A Yes.

Q And it would be unreasonable for a pathologist to disagree with you based on that evidence alone?

A I think that you may be able to find someone who would, but I don't think that that's -- let me go back.

No, I don't think -- I think that the -- a well-trained pathologist, looking at this brain with the time frame of the onset of symptomatology to

death, I don't think that they can say that this is a herpes encephalitis death.

Q Based on that alone?

A Correct.

Q Now, do you have any literature that supports your opinion that the absence of hemorrhagic necrosis of the temporal and frontal lobes excludes the diagnosis of herpes simplex encephalitis?

A Well, no. That's why I changed that undeniable to highly unlikely.

So when you look at the differential diagnosis, if you see the hemorrhagic necrosis, herpes is number one. If you don't see the hemorrhagic necrosis, especially in the time frame, it drops all the way down to almost the bottom.

Q So again, let me ask my question again.

Is there any literature that supports your opinion that the absence of hemorrhagic necrosis of the temporal and frontal lobes excludes the diagnosis of herpes simplex encephalitis?

A I don't know if there's anything that says it 100 percent excludes it.

Q Now, what's the basis for your opinion that there was no hemorrhagic necrosis?

A Well, the autopsy report or the

neuropathology autopsy report doesn't give any evidence of it. And under the microscope, there's absolutely no evidence of it.

Q Let me go back. You keep saying neuropathology report. You're not -- you don't know what Dr. Chesney's training was?

A Well, no. But again, he's a pathologist and in your training as a pathologist, you do autopsies and you look at brains. And so any -- I don't know what his training is, but any pathologist can look at a brain and see that there's hemorrhage there. The whole structure changes.

So again, the neuropathology report doesn't state that it's there. In fact, it only states an area of hemorrhage that he's not even sure if it's a Duret, which is D-U-R-E-T, hemorrhage, and that's in a different area of the brain.

And then my review of under the microscope, there's no hemorrhagic necrosis anywhere.

Q When you say neuropathology report, you're not implying that Dr. Chesney has some special training in neuropathology?

A Oh, I see. No. I'm sorry. I'll say brain autopsy from now on.

Q Okay. That was -- that was my confusion.

A Understood.
Q All right. So the basis for your assumption that there's no hemorrhagic necrosis is because it's not in the report dictated by Dr. Chesney, as well as your review of the slides?
A That's correct.
Q We've gone over this, but you haven't grossly examined the brain?
A I have not.
Q And you haven't seen any pictures of the brain after it was taken out of the body at all at the time of autopsy?
A That's correct.
Q You haven't spoken with Amanda Mullins, Heather Baldwin, or Thomas Chesney?
A I don't know them and I have not spoken to them.
Q And so this is -- other than the slides, this is based on your interpretation of Dr. Chesney's report?
A Yes, those two.
Q Anything else that we need to talk about with regard to hemorrhagic necrosis in order for me to fully understand the -- your opinions as it pertains to that particular issue?

A No, I don't think there's anything further.
Q Let's talk about PCR of the spinal fluid.
A Okay.
Q All right. What is a PCR?
A That stands for polymerase chain reaction, and it's a molecular type study where what you're doing is, you're taking a sample of some sort, you're amplifying the organism, if you're looking for organisms, that you're trying to identify to make it easier to identify.
And then you get a result of if it's present, if it's not present, at what ratio, or at what level, and then it's reported out as a positive or a negative.
Q Do you perform PCR testing?
A No.
Q Are you trained to perform PCR testing?
A No. That's a clinical lab.
Q Do you ever order PCR testing of the spinal fluid?
A You know, in the last number of years, I haven't. Not of the spinal fluid. I don't recall if I did when I was in New York.
I have requested PCR on heart tissue

before and that's to try to determine the type of myocarditis that we have. But on spinal fluid, I don't believe I have. And even if I have, it's been a while.

Q It would have been back in your residency training?

A My fellowship training, yes.

Q When you said you were in New York, we talked about the times that you had treated herpes simplex, you had --

A Well, not treated, but diagnosed.

Q Fair enough.

The times that you were involved in an autopsy of a patient suspected of dying of herpes encephalitis?

A Well, at the same time, yes, but not necessarily those cases.

Q You don't use PCR testing of spinal -- you don't use the results of PCR testing of spinal fluid in your practice?

A Well, again, we do -- I don't recall if I've done it in spinal fluid, but we absolutely do send specimens to the CDC.

It's, in all honesty, it's rare that we have to do that, but when we do, we're trained to look

at the PCR results, which they're pretty straightforward.

Q All right. We talked about sensitivity and specificity?

A Yes.

Q What is the sensitivity of PCR testing of the spinal fluid?

A Well, it's changed over the years. Actually, it's very sensitive nowadays.

Q All right.

A It's gone up into the 90 percentile.

Q All right. Why has it changed over the years?

A Because of methodology.

Q So the tests have gotten better over the years?

A That's correct.

Q What was the sensitivity back in 2007?

A I don't recall. Actually, I don't know what it was in 2007.

Q What was the specificity in 2007?

A I don't know the specific numbers.

Q What was the predictive value of PCR testing of spinal fluid back in 2007?

A In 2007? I don't recall.

Q Again, if we're talking about the PCR testing of the spinal fluid, if I -- and I don't want to put words in your mouth, so you tell me if I'm wrong about this.

A All right.

Q But if I distill what I've read in the disclosure, again, we've got the big opinion that, based on the information you reviewed in this case, you believe that herpes simplex is -- has been ruled out or can be ruled out as a cause of Holly's encephalitis. Fair?

A That's fair.

Q And we've talked about hemorrhagic necrosis being one part of that?

A Correct.

Q And now we're talking about the PCR of the spinal fluid. And you would say that would, in your opinion, be another piece of the puzzle that would help rule out the herpes encephalitis?

A That's correct.

Q Do you have any literature that you have reviewed or relied on or can you point me to any literature that says that PCR testing of the spinal fluid -- a negative PCR result for testing of the spinal fluid back in 2007 rules out herpes enceph --

herpes as a cause of encephalitis?

A I mean, I haven't specifically reviewed anything like that. We're taking things -- we're taking in a vacuum here. We're taking individual tests and not putting them all together, which is --

Q We're going to do that at the end.

A Oh, we'll do that at the end. Okay.

So can I point you to literature that says that in 2007, no, not that I know of. I may be able to find it, but I don't know it off the top of my head.

Q Have you made any attempt to find it?

A No.

Q And we also covered this, but you also -- you don't know what the sensitivity and specificity of PCR testing on spinal fluid was back in 2007?

A I can't recall, no.

Q So what is the basis for your opinion that the PCR testing of spinal fluid excludes the diagnosis of herpes simplex as a cause of encephalitis in this case?

A Well, again, it's an additive thing. We have lack of gross findings that suggest herpes. We have lack of microscopic findings --

Q We're going to get to that in a minute.

A Right, but the thing is is that, again, you can't take things in a vacuum and we're starting to put them in their individual wheel well or in their individual tests, and a negative PCR is suggestive of -- is highly suggestive of that virus not being there.

The lack of hemorrhagic necrosis is highly suggestive of the lack of herpes simplex. And then we haven't gotten to the other testing, but . . .

Q Okay. And I understand we're going to get to the overall picture, but I'm talking about right now PCR testing of the spinal fluid.

What is the basis for your opinion that the PCR testing of the spinal fluid rules out herpes simplex as being a cause of the encephalitis in this particular case?

A Again, it's a piece of the puzzle. So the fact that it's negative, in addition to the others, tells me that it's not herpes.

So by itself, it being negative, moves it into the more likely than not category, that it was not herpes, and then we'll get to what we're going to get to later.

Q Let's talk about PCR testing of the brain tissue. What is PCR testing of brain tissue?

A It's the same thing but you're now using brain tissue instead of fluid.

Q How is it different from -- well, is that how it's different from testing the cerebral spinal fluid?

A Pretty much. I mean, there's -- there are processes. The way they go about getting it prepared is probably different because you're going from a fluid to a tissue, but the actual study is the same.

Q And today -- today and back in 2007, they don't do or take tissue samples from live patients?

A Not brain -- they really prefer not to take live -- excuse me. They really prefer not to take tissue of the brain in live patients in a situation like this.

Q So PCR testing of brain tissue generally -- probably even more than generally, but PCR testing -- let me ask it a different way.

PCR testing of brain tissue is not done in live patients today?

A I can't speak to what the clinicians actually do, but I know that with the invention or the advent, I should say, of PCR, biopsies of the brain for situations like this are at least extremely rare,

but I can't tell you if they do or do not at all.

Q And that would be true back in 2007, as well?

A Again, you would much rather just stick a needle in the spinal fluid than stick a big bore needle into the brain, so yes.

Q And beyond that, what they do on the clinical side, you don't really know?

A I prefer to leave that to a clinician.

Q What experience do you have with testing -- doing PCR testing on brain tissue?

A Well, I don't do the testing. I review the results.

Have I done that? I've done it a few times maybe over the years, mostly when I was in New York. I don't -- I don't believe I've done PCR testing on the brain.

Ah, there may have been one case that I've done since I've been here in Georgia, but it's not a common test.

Q All right. We talked about the two cases where you were involved in autopsies of patients with herpes encephalitis when you did your pediatric training.

A When I -- yes.

Q And then you said since then, you hadn't been involved in any other cases.

Was the case you're talking about now, is that more experience that you've had with the herpes or is that a different cause?

A I'm going to be honest. I can't remember.

Q Is there any -- any records you could look at that would help you remember?

A Oh, no. That's way in my past and I don't have any record of that.

Q Anybody you could talk to that would help you remember about that particular case?

A I highly doubt it.

Q So as we sit here today, the only -- the experience that you -- you've already told us about the experience that you've had with herpes encephalitis?

A Correct.

Q Do you order PCR testing of brain tissue?

A We can. I don't -- I don't think I have in many years.

Q Can you think of -- since you finished your residency and fellowship training, your formal training, can you think of a time when you have used

the results of PCR testing on brain tissue in your practice?

A On brain tissue? Not that I can think of.

Q What is the sensitivity for PCR testing of brain tissue?

A The sensitivity? It's less than in the CSF, but I -- I believe it's in the mid 80s to upper 80s, but I honestly can't remember the specific percentage.

Q What about back in 2007?

A I can't tell you about 2007. I don't recall.

Q What is the specificity of PCR testing on brain tissue back in 2007?

A I would -- I would be speculating. I'm not sure but, you know, if you have a piece of brain tissue -- well, no, I'd be speculating, so I don't recall the exact percentage.

Q What about the predictive value of PCR testing on brain tissue back in 2007?

A Well, those go hand in hand so I can't give you exact number.

Q In your disclosure, you said that, obviously, there was a positive PCR, and I think

there's a typo?

A There is a typo, yes.

Q It says blood tissue, but I think that should be brain tissue?

A That's correct. I noticed that last night.

Q All right. So you said you're aware that there was one test involving a positive PCR of brain tissue that you said was a false negative?

A Correct -- no, no, not a false negative.

Q I'm sorry. A false positive.

A Yes.

Q All right. Let me back up and ask the question again so it's clear on the record.

A Sure.

Q There was one -- you're aware of the fact that there was at least one positive PCR of brain tissue that was reported?

A That's correct.

Q And it's your opinion that was a false positive?

A That's correct.

Q What's the basis for that?

A If you actually -- if we pull out the report, at the bottom, it even states -- so this is

Exhibit 4, which is the Vanderbilt Medical Center Encephalitis Project. And Bates stamp 47 on that, at the bottom, there's a comment and it says, (reading): Positive HSV PCR on brain tissue not confirmed by PCR testing in second laboratory or by immunohistochemistry on fixed tissue at CDC.

I won't read the rest, but basically, what we're talking about here is, it's well known that in laboratories that do PCR, you can have cross-contamination. That's what brings the specificity -- let me get the right one down.

Right. That the specificity is -- it's well known that there's cross-contamination, that it can happen. And so that brings the specificity down in the sense that, as you're doing the studies, you can have the viral capsid or the part of the virus itself move from one specimen to the other.

And that's what they're essentially saying here is that, okay, we've got this positive, but then we look at the entirety of the case and we see that the CDC was negative for their immunohistochemistry, that the other PCR was negative, so we can't tell you that this is a true positive.

Q Let me back up.

So we're talking about, there was the

positive PCR on the brain tissue?

A Yes.

Q So where was that positive -- which laboratory did that positive result come out of?

A I believe that came out of the TUES laboratory in Memphis.

Q Or Vanderbilt?

A Or Vanderbilt. Yeah, Vanderbilt.

Q Nashville.

A And I'm sorry. I don't know Tennessee that well. I apologize to everybody.

Q I'll help you out on that one.

A Okay.

Q So the positive PCR testing on the brain tissue, as far as you know, came out of the laboratory at Vanderbilt University Medical Center?

A Well, I have to look because the notes on the side say California Department of Health. Oh, that's the CSF. I'm sorry.

It's within the -- within the Vanderbilt Medical Center grouping of papers and it says the Encephalitis Project Test Report Form. I believe that's where the test was done.

There's notes about the California Department of Health next to it, but if I recall

correctly, that's where it was not confirmed at, but I'd have to look at my notes. I honestly don't remember.

Q (Handing.)

A That's correct. So the California Department of Public Health was negative for HSV-1 and 2, as well as a number of other viruses. So I believe that it came out of the Vanderbilt study.

Q So let me ask you a couple of other questions.

Going back to my initial question was, what's the basis for your opinion --

A Uh-huh (affirmative).

Q -- that the positive result on the brain tissue was a false positive. And you read me a sentence out of part of what we've marked as Exhibit Number 4, in particular, the page Bates stamped 47.

A Right.

Q Is that the basis for your opinion?

A No, that's only part of it. I mean, they have that there. They also say that PCR tests reported here are investigational assays, so they're not CLIA, which is C-L-I-A, certified.

We also have all the other evidence or lack of evidence in the sense of, we're going to go

back through it, but the no hemorrhagic necrosis, the immunohistochemistry being negative, the other PCR being negative.

So when you have such -- and under the microscope, no viral inclusions. When you have such overwhelming evidence from multiple etiologies and multiple -- or I shouldn't say etiologies -- multiple specimens, you can't pull out that one and say the one that is reported as positive, where they even have a note saying they don't believe that it's true or that they're not sure that it's positive because of all the other negatives, I mean that's --

Q Where does it say they're not sure?

A Well, that's why I changed my words. They say they're not confirmed by PCR testing at a second laboratory or by immunohistochemistry on fixed tissue at CDC.

So they're not confirming that. That's terminology that's saying, okay, we got a positive result in our HSV-1 brain PC -- excuse me. Yeah, brain DNA PCR, but then they say California Department of Health was negative. CDC, which is a pretty good lab, was negative for their immunohistochemistry.

I add on my review of the slides, my review of the autopsy, the brain autopsy report,

there's no way this is a true positive. It's got to be a false positive. Even the laboratory that did it has that disclaimer there, so that's how I'm basing it, is on all of that.

Q Anything else?

A No.

Q All right. Let's move on to -- well, let me -- now, in part of the disclosure it talks about the -- and it's the very last paragraph -- talks about the PCR testing on the brain tissue.

A Yes.

Q Is there anything else we need to talk about in order for me to fully understand how the PCR testing of the brain tissue fits into this -- your review of this case?

A No, sir.

Q All right. So let's talk about immunohistochemical staining.

A Okay.

Q What is immunohistochemical staining?

A Okay. So that's when you take a block that you've taken of the tissue and you make a slide of that block and you stain it with a specific marker that will go to whatever you're looking for.

So in this case, it's a marker that is

looking for herpes simplex. And it's different -- like you'll see with the photographs that I have, they're pink and blue and red, the photograph -- the slides in the normal studies.

In these studies, they're brown. And the brown part is where that immunohistochemical stain is going around and if it finds what it's looking for, in this case, herpes, it will connect and it will turn brown.

And so we look under the microscope to see if we see evidence that the stain we used has lit up, meaning it was attracted by a virus or the herpes virus, and that will tell us, hey, it's here.

And if we don't see the brown in the right place, it can be a little dirty in the background, but that's okay. From training, we know how to look at it. If we don't see it, then we say the herpes virus is not here.

Q Okay. Where was the immunohistochemical staining done?

A At the Center for Disease Control.

Q And how was it done?

A I don't know if I can tell you the specific methodology they used, but it's pretty much what I just told you. It's standard for -- we'll make

it easier -- IHC. It's a standard procedure.

Q All right. Do you do IHC staining yourself?

A We don't -- I don't physically do it myself. I've reviewed plenty of IHC stains.

Q Do you know how it's done?

A The actual physical hands on? No. I don't do them. It has been many years since I've been in a laboratory.

Q What is the sensitivity of IHC staining for herpes?

A So the exact numbers, the sensitivity is not that high, and I can't -- I don't recall what the exact number is. But the issue for that is because herpes simplex has a number of different ones and focusing here on HSV-1 versus HSV-2, the immunohistochemical stain, and I'll be honest, I don't know if at this time it was separated into 1 and 2.

It used to be you're just looking for herpes so that's why the sensitivity was lower, because it will just stain herpes, but it won't tell you if it's 1 or 2. So that brings down the sensitivity of, if you're looking for HSV-1, you may actually be seeing HSV-2.

Q When did that change?

A I don't know.
Q All right. So let's talk about, what is the sensitivity or what was the sensitivity for IHC staining of brain tissue for herpes simplex back in 2007?
A I would be speculating. I don't remember what the sensitivity was.
Q Let me ask the same question about specificity.
A Sure.
Q What was the specificity for IHC staining of brain tissue for herpes back in 2007?
A Well, the specificity is different. The specificity is high. And if I recall, it's up in the high 80s to low 90 percentile because if it's not there, it's not going to light up, as opposed to what I was mentioning about the sensitivity. So the specificity, actually, IHC specificity is higher than PCR sensitivity [sic] -- specificity.
Q All right. So can you give me a number for what the specificity was for IHC staining of brain tissue back in 2007?
A Oh, I don't recall. I'd have to look to see if I can find a percentage. But it's -- the specificity in IHC has always been fairly high, but I

can't give you a specific number.

Q Without speculating?

A Without speculating.

Q And I know we're going to go back and we're going to tie all this in at the end, but what is the basis for your opinion that the diagnosis of HSE, herpes simplex encephalitis, can be ruled out based on the absence of herpes antigen on the IHC staining?

A Right. So first of all, the CDC is the foremost laboratory that does this. They have the infectious disease pathology lab.

And looking at that report, it's exactly what -- they look at the normal slide, the normal stain first, and then they do the IHC.

Their description in the normal stain is exactly what my findings were. And then you add onto that the IHC, which was negative, the virus is not there. It's just not there.

Q But my question was, what is the basis for your opinion that the diagnosis of HSE, herpes simplex encephalitis, can be ruled out based on the absence of herpes antigen on the IHC staining?

A From the review of their report and then the lack of everything else.

Q Can you point me to any literature that

says the absence of herpes antigen on IHC stains rules out the diagnosis of herpes simplex encephalitis?

A Again, from a pathologist's standpoint, we can't -- I can't pull -- I don't recall or know of the literature that I would be able to say specifically just this alone.

But again, it's the greater picture. So when I have a negative IHC, the virus is not there. And so to me, yes, that rules it out, unless for some crazy reason, something else shows up or the test was done wrong. But I trust the CDC and Dr. Zaki and his team there.

Q Okay. But can you point me to any literature that supports you on that?

A Well, I don't know if there is any literature that goes straight down that route.

Q All right. Anything else we need to talk about as far as the IHC staining, as it pertains to your opinions in this particular case?

A No.

Q We've covered it?

A Yes.

Q All right. Let's talk about the MRI.

A I'm not going to get into the radiology. That's for a radiologist and a clinician.

I mean, the thing is is that all I can tell you is that the MRI was -- did not show any evidence of frontal or temporal necrosis, so the MRI plays a role in my overall review. There was, I believe it was the second MRI, I'd have to look again at my notes, that showed that there was evidence --

Q By the way, you're welcome to look at your notes any time you want to.

A Right.

-- that there was evidence of the encephalomyelitis, but there was no findings on the MRI that would lead me to say, this is again going towards that hemorrhagic necrosis of the frontal lobes and the temporal lobes.

Q How often do you order MRIs?

A I don't order MRIs. I review -- I look at them through the medical records, but I don't order them.

Q You don't -- and you don't use the MRI results in a clinical setting? In other words, to diagnose and treat patients in a clinical setting?

A No. I use it to see if there's anything that leads me down a path for the autopsy that I've done.

Q Have you reviewed the films themselves?

A No, sir.
Q Do you intend to review the films themselves?
A If I'm asked to, I will. But again, I'm not a radiologist so I have to go off of what the medical records show me.
Q What's the factual basis for your opinion that the MRI does not show any damage to the temporal or frontal lobe?
A The report of the MRI.
Q What is the sensitivity of an MRI for herpes simplex encephalitis?
A You'll have to ask a radiologist.
Q What is the specificity for an MRI in the diagnosis of herpes simplex encephalitis?
A Again, that's for a radiologist.
Q What's the -- and I guess I'm having a little bit of a hard time because you've said you're not a radiologist. The MRI, you're not -- that would really be for the radiologist to comment on.
A Well, to make an interpretation of. But as I said before, I look at the medical records. And so from what I reviewed in the medical records, it's just another piece that's added to everything else, that the MRI does not show what would be shown in a

frontal-temporal herpes encephalitis death.

Q And that's what we need to focus on.

So what would -- in your opinion, what would an MRI show in a patient who had herpes encephalitis?

A Well, in a -- with a death and the hemorrhagic necrosis, it would show necrosis of tissue in the temporal lobes and the base of the frontal lobes.

Q What's your basis for that opinion?

A Well, it's well known in the literature that if you have necrosis of the tissue, that you're going to see that on an MRI.

Q Can you point me to any literature that supports you on that?

A Well, I'm sure I can pull out plenty of textbooks to show that, but --

Q What textbooks would you look at?

A Oh, I'll pull -- I'll go look at a neuroradiology textbook. I'll pull out some radiology textbooks.

I mean, that's the whole point of doing head radiographs, whether it be MRI or CT, is to look to see if there's a lesion within the brain.

Q What -- can you give me -- well, let me

ask it this way.

If you were going to go look for literature to support your opinions in this case, is there a textbook or textbooks that you would go grab?

A I mean, there's individual books in different fields where you can go look. But I mean, this is such a, in my opinion, a very straightforward pathology diagnosis that's not there.

So I mean, I could pull out -- like we showed you Ellison and Love for the neuropathology. I could pull out -- I'm sure there's infectious disease books that can talk about herpes simplex encephalitis. I'm sure that there's neurosurgical books. I'm sure there's neuroradiology books. I can't give you the specific names. If you want me to go look, I'll go look.

Q I'm asking you, as you sit here today, can you give me the names of any books that we can go to that would support your opinions in this case?

A Oh, yeah. You can go to Ellison and Love.

Q All right. Any others? You've told us that one, Ellison and Love. Anything else?

A Well, I'd have to look to see what chapters in which books. I can't --

Q I'm not asking for specific chapters. I'm talking about textbooks that you would go that would -- we could go to that would support your opinions in this case. You've given us Ellison and Love. Anything else?

A I don't think I need to give you anything else. This is right in my wheel well. This is a very obvious case to me. So I don't -- I mean, this is experience and training and education that takes me down here.

Q Okay. I understand that. But I'm asking you, if it's that obvious, there ought to be some textbooks that we could go to that would support you on this. You've given us Ellison and Love. Can you give us any others as you sit here today?

A Okay. So as Dr. Schwartz said in his deposition, his pictures he pulled out, you can go to Robbins and Cotran, C-O-T-R-A-N. That shows you the real findings microscopically.

I haven't pulled out specific textbooks recently so I would have to get back to you on that.

Q Robbins and Cotran, would you consider that to be a reliable textbook?

A Yeah. It's a -- it's a basic pathology textbook.

Q Would you consider to be -- would you consider the people that -- the editors and the people that contribute to that particular textbook to be authorities in their particular fields?

A I think so, yeah.

Q All right. The other one you talked about, Ellison and Love?

A Yes. That's one the big neuropathology textbooks.

Q That is neuropathology textbook considered to be reliable?

A Absolutely.

Q Are the people that contribute to that textbook considered to be authorities in their field?

A I assume so, yeah.

Q Would you consider that textbook to be a reliable authority in the area of neuropathology?

A Yes.

Q Same thing with the other book that we talked about, Robbins and Cotran?

A Well, we just -- we did that already.

Q Yeah, but that also would be considered to be a reliable authority in the field of pathology?

A In pathology, that's more of a basic general book. Then you also have Greenfield's

Pathology, which is a standard textbook in neuropathology.

Q Would that also be considered to be a reliable authority?

A Yes.

Q One of the things in your report, when it talks about the MRI, it talks about the advanced disease. What do you mean by advanced disease?

A I'm just trying to find -- where is that? Okay.

Right. So within the first 24 -- so you have the initial infection and then, as it continues and as we have here, her first symptomatology started two days or even a day before or even the day of her initial presentation.

She would have advanced to an advanced disease, meaning that she's left the acute phase, she's gone from acute to subacute, and that is where she would die, is in advanced disease, not just an infection that stopped and went away. And that's when you get that hemorrhagic necrosis and that would be obvious on radiology.

Q When were the radiology films done in her particular case?

A The MRIs were done, I believe -- so we

have an MRI done on September 24th and an MRI done on September 30th.

Q All right. The 24th, would that be considered to be during the advanced stage of the disease?

A If she was dying of herpes simplex encephalitis, yes.

Q Was she dying of herpes encephalitis on September 24th?

A I don't think she was.

Q All right. Well, was she dying on September 24th of whatever type of encephalitis she had?

A I'm sorry. Ask again. I didn't hear it.

Q All right. On September -- you said -- let me see the two dates.

A They're right here. (Indicating.)

Q All right. So the two -- the two MRIs were done on September 24, 2007. Well, the first one was done on September 24, 2007; right?

A Yes.

Q Was Holly dying on September 24, 2007?

A It appears so because she already has herniation of her brain.

Q What about -- okay. So then on

September 30, same thing?

A Yes. Yeah, she didn't recover.

Q All right. Anything else we need to talk about in order for me to fully understand your opinions as they relate to the MRI findings?

A No.

Q All right. Let's talk about --

MS. STEINBERG: Object to the form.

THE COURT REPORTER: Can you identify yourself, please?

MS. STEINBERG: Sorry. Jill Steinberg. Object to the form.

BY MR. SMITH:

Q All right. Cowdry Type A inclusion bodies.

A Yes.

Q What are they?

A So those are viral particles that have replicated within the nucleus of a cell. It can actually be any cell in the brain. It can be an astrocyte. It can be a neuron. But when you see those inclusions, you're now moving down a herpes type infection.

Q Okay. Why are they called Cowdry inclusion bodies?

A I think that was the person who identified them, but I don't recall why it's Cowdry.
Q In your report or the disclosure that you've adopted, it says that the presence of Cowdry inclusion bodies are plentiful and obvious when the death is from herpes simplex encephalitis.
A Yes.
Q All right. What's the basis for that opinion?
A My training and experience.
Q Can you point -- is that 100 percent of the time?
A It's the majority of the time. I won't say it's 100 percent.
Q Can you point us to any literature that supports your opinion that when someone dies from herpes encephalitis, that Cowdry Type A inclusion bodies are plentiful and obvious?
A Not off the top of my head, no.
Q Can you point us to any literature that says the absence of Cowdry Type A inclusion bodies rules out the diagnosis of herpes simplex encephalitis?
A Going specifically solely into that route, no, not off the top of my head.

Q You, in your report, talks about you did a thorough exam -- examination of the slides that you were given?

A I did.

Q All right. Why do you consider it a thorough search?

A Because I looked at them closely.

Q Where did you do it?

A I did it on a microscope at my house.

Q What type of microscope?

A A microscope that has two little lenses and I look through it. I don't -- I can't tell you the make and the model off the top of my head.

Q What type of magnification properties does the microscope in your house have?

A I went through multiple magnifications. 4X, 10X, 100X. I used oil. So I did a very thorough exam.

Q Tell me all the steps you went through as part of your exam.

A So I took the slide and I put it on my microscope, turned the light on, looked through the objectives. I always do a full scan first at 4X. Then I go to 10X and I do another scan, and then I go higher and higher.

I write down or document what I see or what I don't see, and if I see something of importance, I'll photograph it. And that is essentially it.

Q Where are the notes that you wrote down where you write what you see?

A They're right here. (Indicating.)

Q This would be on -- so let's see here. This is part of Exhibit 13, page -- on the fourth page, that says 17 -- under the heading 17 autopsy slides received from Dr. Schwartz?

A Yes.

Q Those -- that's your notes of what you see?

A Yes. And if there's nothing additional on subsequent slides, I don't write anything down.

Q How long did you take?

A Can I see my invoices?

Q (Handing.)

A I took eight hours.

Q Was anybody with you?

A No.

Q Other than your invoice, is there any other evidence about how long you took or what you did during -- to document what you did during your

evaluation or examination of those slides?

A I'm an honest person and I stated exactly how long I looked at the slides and I documented exactly what I did.

Q Anything else?

MR. BAKER: And photographs.

A And the photographs, that's correct.

BY MR. SMITH:

Q The four photographs that we have?

A Right.

Q Okay. Anything else?

A No.

MR. GILMER: Can we take a quick restroom break. I've got to go.

MR. SMITH: Sure.

THE VIDEOGRAPHER: This is the end of tape number three. We're off the record at 3:14 p.m.

(VIDEO CAMERA OFF.)

(Thereupon, a recess was taken.)

(VIDEO CAMERA ON.)

THE VIDEOGRAPHER: This is the beginning of tape number four. We're back on the record at 3:22 p.m.

///

BY MR. SMITH:

Q When we went off the record, we were talking about the MRI and -- I think.

A No, we had passed that, but --

Q What were we up to?

A We talked about my invoices, how long I looked at the slides.

Q Oh, you're right. We were talking about the slides.

THE VIDEOGRAPHER: (Inaudible.) Your microphone.

MR. SMITH: Thank you.

BY MR. SMITH:

Q You're right. Your absolutely right. I guess I put that in the wrong pile. That's my fault.

A That's fine.

MR. BAKER: Don't put them back on the bottom of the pile.

MR. SMITH: We'll just come back to those and redo it.

BY MR. SMITH:

Q So let's talk about -- have we fully discussed your review of the slides from Dr. Schwartz and how they fit into your evaluation and opinions in this case?

A Well, I don't think we got into the specifics of what I did and did not find. But we -- we did talk about that I did not find -- well, you brought up Cowdry A bodies and I did not find those.

That's essentially what we talked about with the slides.

Q Okay.

A But earlier in the deposition, you had asked me about the hemorrhagic necrosis and I think it's important to mention that I didn't see that under the microscope either.

Q Okay. Anything else? We probably need to talk about these pictures at this point in time too.

Anything else we need to talk about in order for me to fully understand how your review of the tissue slides from Dr. Schwartz, how they played into your evaluation of this case?

A As far as the tissue slides themselves, no. I think we've gone over everything.

Q So let's talk about -- because you did take some pictures?

A Yes.

Q So this one we've marked as Exhibit Number 9. If you will tell us what Exhibit Number 9

shows and why you took the picture.

A Okay. This is actually a higher power of what the next exhibit's going to be, which is -- these are the -- what are called the leptomeninges, which is the overlying -- it overlies the brain. So that's how you get meningitis as a terminology.

And this shows that we have a chronic inflammatory infiltrate around a vessel.

Q I tell you, why don't you -- could you hold it up and maybe he can zoom in on it and you can kind of show -- show us what you're talking about.

A So this is all out in the leptomeninges and -- which is the covering of the brain. This is a vessel with chronic inflammation around it. And really, all that shows me is that there's a meningitis component to this. It doesn't get any more specific than that.

Q All right. Meningitis versus encephalitis, tell us what the difference is.

A Meningitis is inflammation of the meninges, the overlying of the brain. Encephalitis is inflammation of the brain tissue itself.

So if you look at the reports that are out there in the records, they call it a meningoencephalitis, and that's what it is. This is

the meningo portion.

Q I'm assuming, from what you said earlier, that this doesn't help us differentiate between any specific type of viral encephalitis?

A This just tells me that there's --

MS. MALKIN: Object to the form. It's Andrea Malkin.

BY MR. SMITH:

Q Go ahead.

A This just tells me that there is a -- this picture itself just shows me that there's a meningitis portion of it. It doesn't help me differentiate.

It's not a bacterial, let's put it that way, but it doesn't help me differentiate any further from that.

Q Still where we were at the beginning of the deposition, as far as --

A Yeah.

Q -- we know it's an encephalitis, but going further than that, other than the things that you've ruled out, we can't go any further?

A Correct.

Q This is what we've marked as Exhibit Number 10. If you will just tell us what -- and I

think I see this in there?

A That's correct. So this is a lower power image of what we just looked at. And this right here is the vessel that we see in Exhibit Number 9.

And this is all just leptomeninges. You can see that there's inflammation around some vessels. It's chronic inflammation. It's not pus or acute inflammation, meaning it's not bacterial, but it's some other nonspecific meningitis type picture so far.

Q Anything else you can tell or any other reason you took the picture that we've marked as Exhibit Number 10?

A No. Just to show the inflammation.

Q Does Exhibit Number 10 show anything other than the inflammation that you discussed?

A And the rest of the normal meninges, but that's it.

Q I hand you what I've marked as Exhibit Number 11, and if you'll tell us, that's a picture that you took?

A Yes.

Q And why did you take that picture?

A So again, this is actually a higher power than this. We got them in the reverse order.

So basically, what I did is, after I went

through all the slides and I was unable to find any Cowdry bodies, I was unable to find any obvious necrosis or hemorrhage, I focused in on the findings that I did have.

And on this one, you'll see in the next exhibit, this area has inflammation in the parenchyma. This is the encephalitis picture. So this is the chronic inflammatory cells in the parenchyma that show that it's an encephalitis. It's not specific.

But what else we have here is these more pinkish dots. These just show that there's a hypoxic episode. It's what we call hypoxic-ischemic encephalopathy. That's a secondary reaction to any time that the brain loses oxygen or blood supply, since the blood carries the oxygen.

But the reason I went higher power on this as well is because, in my opinion, the pictures that Dr. Schwartz took are showing astrocytes. They're not showing Cowdry bodies. Those are not viral inclusions. So I try to show pictures that are similar to what he claims are viral inclusions.

Q Okay. So again, this doesn't -- Exhibit Number 11, the picture we've marked as Exhibit Number 11, shows encephalitis?

A Yes.

Q But it doesn't specify the type of encephalitis?
A No.
Q You can't differentiate between a specific type of encephalitis with this particular picture?
A That's correct.
Q And then if I understand, Exhibit Number 12 is another picture that you took, but it's a lower power picture of the same thing that you show in picture Number 11?
A That's correct. And there's nothing new in that. It shows the same exact findings.
Q Let's look at Exhibit -- well, let's do it a different way.
Exhibit Number 8, I'm assuming this doesn't help us with anything; does it?
A Not at all.
Q This is just -- this just shows what you took possession of?
A Yeah. I think he did that for chain of custody reasons.
Q No diagnostic significance or we don't get anything out of any of the pictures on Exhibit Number 8; true?

A That's true.
Q All right. So let's talk about Exhibit Number 7, which are some pictures that were provided by Dr. Schwartz?
A Correct.
Q All right. The top picture is from the -- it says it's from the University of Rochester Medical Center.
What does that top picture on the first page of Exhibit Number 7 show, in your opinion?
A Right there is a viral inclusion.
Q Can you --
A Yes. I'm sorry.
Q And can you zoom in on that and show us what a viral inclusion is?
A Okay.
MR. BAKER: Is that Exhibit 7?
MR. SMITH: Exhibit 7, right.
A I'm sorry. I'm going to have to stand up.
So if you see here, we have a cell that there's a thin rim of darker tissue around the outside, and that's the nucleus. And inside the nucleus, it's all filled with this hazy pink material. That's a true intranuclear viral inclusion.

BY MR. SMITH:

Q Okay. What about the picture below that?

A So the picture below that, you see the cell here. You see a dot in the center. That's a nucleus.

Do you see how this nucleus in the prior picture, which is taken from the University of Rochester, how it's all expanded and it takes up almost the entire cell? This is a normal -- a normal neuron that's a little pink because it's hypoxic, with a nucleus. There's nothing inside that nucleus. Well, there is stuff inside the nucleus, but not viral -- not virus.

Q Okay. Let's go to page two of Exhibit Number 7. Same thing.

There's a top picture, which is from Rubin's and -- Rubin's Pathology. That's another book we didn't talk about.

Is Rubin's Pathology considered to be a standard pathology textbook?

A It may be. I don't -- I don't use Rubin's so I can't really answer that. I don't even know -- I don't recall Rubin's.

Q Okay.

A But basically, what he's showing here is,

again, you see how this cell, the whole center of it has that hazy pink material in it. That's the virus.

And the outside is that little dark line. That's the nucleus that's been pushed out to the side. So it's not just a little dot in the center like we have on the Simms picture that Dr. Schwartz took.

Then if we go to the bottom, this is extremely easy to see that the entire nucleus has been pushed out. This actually has what we call an owl eye appearance to it. So this is obviously also from a neuropathology, either Web site or textbook or something, and that's a real inclusion.

Q All right. So the two pictures on page two of Exhibit Number 7 show viral inclusion bodies?

A Yes.

Q Okay. Go to the third page.

All right. So the top picture on page three of Exhibit Number 7, what does that show us? And it's from Pediatrics Red Book Online.

A Right. Many of these pictures are from Web sites that I don't know. They're not actual textbooks, so this is an online. And my assumption is is that what he's showing here is that -- here's a perfect example of looking at two cells right next to each other.

See how the whole center portion of that cell is filled with that pinkish material, but this cell has the dots inside and this center part is much smaller than that? So that is most likely filled with a virus and that's normal.

And then if you go to the next one, which is from Studyblue.com, which I don't know what that is either, you see here again, the whole center of that cell is filled with pink stuff pushing that little blue part out to the side. So this again is going to be, most likely, a viral inclusion.

Q Okay. So let's go to the next page, which I guess would be page four of Exhibit Number 7, and what do those pictures show?

A Okay. So the top picture here is from Holland Simms' autopsy, which in all honesty, I didn't even really need to look at that part because, do you see there's that dot in the center? That dot in the center is not expanded by anything. This is the whole cell. The dot in the center is the nucleus. It's a normal cell. There's no virus in that.

Now, if you were to take that blue dot in the center and spread it out and have that little line of blue around the outside with the center all filled with that pink hazy stuff, then you'll have a virus.

That's a normal cell. Maybe a little hypoxic.

In comparison to that, do you see how the blue line of the nucleus is on the outside with the whole center portion of that being filled with hazy stuff? And that's from Surgical Pathology Atlas Image Database.

So again, not a virus. Not viral inclusion from Holland Simms. Virus inclusion from whichever database he used there.

Q All right. Go to the next page.

A So this is from something called Cram.com. I'm assuming that means that you're cramming for a test. But this is a -- this is a smear, so it really won't even help us in this case because when you take a slide and you just push it down and you get a smear, you can look at it. It doesn't always look the same.

But to me, in all honesty, I'm not 100 percent sure what he's showing here. This may be a virus that's pushing it out. That looks like a neutrophil. So I'm not 100 percent sure.

I'm guessing he's trying to say that that's the virus, but I don't want to talk about cytology. That's a different field and so I'm going to leave that one.

Q All right.

A The bottom one is from Quizlet.com. And again, this is sort of a blurry picture, but I think what they're showing here is the nucleus of this whole cell here that is spread out.

But this one does not look like a virus to me. I don't know what he was trying to show here. To me, this really sort of looks like a neuron that may be hypoxic as well. So I don't want to guess as to what he's trying to show there.

Q What do you see there?

A What I see there is, I see some clear space around the neuron which goes along with a hypoxic change. I call that -- well, it's in the -- I won't get technical. It's a hypoxic change.

So to me, that may be a hypoxic neuron because you don't have -- if you recall from the prior pictures where the whole center is this hazy pink, here you have some dots inside. To me, that's the nucleolus, the smaller part of the nucleus, has some dots that move around. So to me, that's maybe a hypoxic neuron.

Q So the next page of Exhibit Number 7?

A I'm sorry. My back is a little sore.

So the top one is from the Department of

Pathology at VCU for medical students. And again, do you see this big, pink fuzzy sort of thing inside, pushing the darker blue around the outside? That's an inclusion inside of a nucleus.

And again here, this is from neuropathology-web.org. And do you see how this cell here, again, pink on the inside pushed the blue all the way to the outside. That's an inclusion.

(Indicating.) That's not an inclusion because you have the nucleus and the cytoplasm. That is an inclusion.

Is there one more? There's one more.

Q I think two more pages; right?

A Two more pages, you're right.

Okay. This is from -- I'm going to try to sit down. I'm getting a little older and my back doesn't stay up as long.

THE WITNESS: Are we good?

THE VIDEOGRAPHER: Yes.

A So this is from something called Meducation.net. And again, we see that cell with the pink on the inside pushing the blue out. That's an inclusion. You see those in at least two of those cells.

Okay. So now we've moved away from the

inclusions and what we're doing is, this is just like the photograph I took. You see the inflammation around a vessel that's gone down into the parenchyma with some --

MR. BAKER: Stop. We lost our people.

THE VIDEOGRAPHER: We're off the record at 3:39.

(VIDEO CAMERA OFF.)

(Thereupon, a brief recess was taken.)

(VIDEO CAMERA ON.)

THE VIDEOGRAPHER: We are back on the record at 3:43 p.m.

A Okay. So now we've moved away from the inclusion pictures and we're down at the inflammation pictures. And this just shows that there's inflammation around the vessel.

So again, it's a nonspecific chronic inflammation that's leeching out into the parenchyma, so it's a meningoencephalitis.

And then here again, he's taking a picture from Rubin's Pathology and a picture from Holland Simms' autopsy and it just shows the perivascular inflammation, which I agree with.

BY MR. SMITH:

Q Okay. All right. Let me ask you, in

your disclosure, it says that Dr. Schwartz returned with photographs that were so badly focused that they are useless for diagnostic purposes.

What does that mean?

A So that means that the photographs he submitted, if he's trying to say that those are viral inclusions, then you need it much more -- much clearer than that.

Me, looking at it, I think they're bad pictures. I think they're blurry and that they're out of focus. But at the same time, I can look at that and I can tell you that those are not viral inclusions, one of the reasons being is, I looked at the slides myself.

So I tried to find what he -- he dotted. He used a dotting pen on one of the slides. I tried to find what she's showing here. I found plenty of what he's showing there, but those are not viral inclusions.

Q Let's back up.

What does it mean when you say that the pictures that he provided are useless? I mean, if I read that, useless for diagnostic purposes means they're just -- they're no good whatsoever because you said they're too blurry?

A Right. I don't think they're in focus enough to say that there's any viral component in there.

Q But, if we back up, when -- the diagnosis that you made and that Dr. Schwartz has made were made from the slides, not the pictures?

A That's correct.

Q Okay. And the pictures were taken to try to, in some form or fashion, to show what -- I mean, I assume they're going to be used at trial for demonstrative purposes to try to explain things to the jury, but the ultimate diagnosis was not made from pictures. It was made from looking at slides?

A Sure. Fair enough.

Q All right. So we've gone through and we talked about Cowdry Type A inclusion bodies, your review of the slides from Dr. Schwartz.

Maybe I need to go back through here and just make sure that we go through your notes so that I know exactly what you mean by the notes.

So for Slide A, you have perivasc and parenchy CI?

A Let me -- these are my little -- perivasc means perivascular.

Q So tell me what -- so if we're going

through your notes, you have an A with a dash next to it and some notes.

A Right.

Q So I'm assuming that means those are things that you saw on Slide A?

A Correct.

Q All right. So tell me what you -- your notes indicate that you saw on Slide A.

A So I saw perivascular and parenchymal chronic inflammation. So that's the meningoencephalitis.

I saw microglia, and that means that there has been hypoxic -- that's a reactive cell that is like a scavenger within the brain. I saw reactive astrocytes. That goes along with a hypoxic-ischemic encephalopathy, but I saw no necrosis.

Q All right. Let me see if I can summarize somewhat.

A Uh-huh (affirmative).

Q So the things that you noted that you saw on Slide A are consistent with encephalitis?

A Correct.

Q But they don't specify what type of encephalitis it was? They're general findings?

A Correct.

Q Okay.

A And essentially, B, C, and E -- I don't have D written down. I don't know why.

Can I see that picture of all the slides he gave me, because I know that I did not get Slide P, as in Paul. I think I may have just accidentally forgot to put D down.

They're completely out of order.

Yeah, I didn't get Slide D either. So there's a few slides that I did not get from him. But essentially, B, C -- all of the rest of the slides essentially either show the same thing or nothing.

There's diffuse areas of this perivascular inflammation. There's diffuse hypoxic changes. But there are absolutely no Cowdry bodies anywhere. There's no necrosis anywhere. And even his Slide G, as in -- well, I should have thought of something before I said that. G. There was a -- that's what he dotted with. And there was -- I don't know what he was dotting. Probably trying to say it was an inclusion, but in my opinion, there was not.

The only other thing that is here would be on Q, which is the cerebellum. That's the bottom back part.

In addition to what we have in the other

slides, there's some slight necrosis of the granular layer. That's a different type of necrosis. That's a hypoxic-ischemic necrosis. Again, no inclusions.

Slide S was of the pituitary gland. Nothing of importance there.

I will say also, with the cerebellum, that's an important one to look for rabies. I didn't see that.

And then Slide T, as in Tom, is meninges dura. And there was the patchy chronic inflammation around the vessels, but nothing more.

Q Okay. Anything else that we need to talk about for me to fully understand how your review of the slides factors into the opinions you have about this case?

A Just the lack of certain findings is extremely important in this case.

Q And the lack of what specifically? Necrosis and Cowdry Type A --

A Yes.

Q -- inclusion bodies?

A That's correct.

Q Anything else?

A Those -- those are the two main things.

Q All right. You say main things. I want

to make sure we cover everything.

So anything else? You say the absence of findings. Are there any other absent findings that are significant for the opinions that you have in this particular case?

A Well, we can go out into a greater extent if we want to move from herpes. You know, like I said, there's no rabies. There's no bacterial infection. There's no tumor. There's no metabolic disorder. There's no stroke, as in hemorrhage.

And then we have the no Cowdry bodies. We have the no hemorrhagic necrosis. And in essence, that rules out a whole slew of diagnoses.

Q Okay. Anything else?

A Not that I can think of off the top of my head.

Q Have we now covered all of your opinions as they relate to your review of the slides you received from Dr. Schwartz?

A I believe so.

Q By the way, do you know Dr. Schwartz?

A No. The only time I've ever met him was when he gave me the slides through -- well, through an intermediary, but he was there. He gave them to her; she gave them to me.

Q Let's talk about Acyclovir. What is Acyclovir?
A It's an antiviral medication.
Q And have you ever -- well, have you ever diagnosed herpes simplex encephalitis in a live patient?
A If I have, it was probably in medical school, so I don't think so.
Q Have you ever treated a patient with viral encephalitis -- a live patient with viral encephalitis?
A I don't think so.
Q Have you ever prescribed Acyclovir to a live patient?
A Possibly, but I can't recall. I did a year and a half of surgery and then during that time, we had clinic. But in all honesty, if I did, it was rare. I honestly don't remember.
Q So to say you did would be speculative?
A Yeah, I guess so.
Q And if you did, it would have been back during your residency before -- your first year, when you were doing general surgery?
A That's correct.
Q Have you reviewed any information about

Acyclovir?

A No.

Q Do you know how it's given?

A I believe it can be given intravascular or IV. I'm not going to go any further. You might be able to give it intrathecal. But I don't give it, so I'm not going to go into more than that.

Q Do you know what the side effects of Acyclovir are?

A Not off the top of my head.

Q Do you know if there are any complications associated with Acyclovir?

A Not off the top of my head.

Q Can you tell us what the contraindications of Acyclovir are?

A No. I don't prescribe it.

Q Can you give us how an effective -- a percentage rate on how effective Acyclovir --

THE COURT REPORTER: I'm sorry. Can you repeat that?

BY MR. SMITH:

Q Can you give us a percentage rate on how effective Acyclovir is in the treatment of herpes encephalitis?

A No. You're asking me a lot of clinical

questions that are clinically oriented.

Q Are there any things that you can tell us that interfere with the effectiveness of Acyclovir in the treatment of herpes encephalitis?

A That, again, is a clinical question.

Q Is Acyclovir -- can you tell us, is it -- does the effectiveness of Acyclovir depend on how quickly it's given?

A That is -- that's more of a clinical question about if it's given a day before or after. Well, I'll let you continue.

Q Can you tell us?

A No.

Q Okay. You don't know how -- you don't know how the timing of the Acyclovir factors into its effectiveness; is that fair?

A If it's given to somebody with the correct -- with HSV? I don't know about that.

Q What's the basis for your opinion that patients with herpes simplex encephalitis respond favorably to Acyclovir?

A Well, Acyclovir is the treatment of choice for herpes and so there's -- from my education and training, you give Acyclovir and it treats the herpes. But I mean, that's just from years.

Q Can you point me to any literature that supports your opinion about patients with herpes simplex encephalitis, how they respond to Acyclovir?

A Not today. I can go find some for you if you want.

Q You do have in your disclosure some information about Acyclovir. And in particular, the disclosure says, (reading): It's well known that patients suffering HSE or herpes simplex encephalitis respond favorably to the antiviral Acyclovir.

Ms. Simms did not respond.

So tell me how that factors into this overall picture.

A Well, number one, first of all, I don't believe she had herpes, so the Acyclovir wouldn't have done anything.

If she had herpes and she was given the right treatment, then if it was given at the appropriate time, hen she would have responded appropriately.

This is going back to my medical education about giving Acyclovir to people who have herpes in that they, more often than not, respond to it.

Q Do you know if -- but that assumes that

it was given in a timely manner?

A Right, and -- yes.

Q And you can't give us an opinion on whether or not Ms. Simms received Acyclovir in a timely manner?

A Well, no. But I can give you an opinion that she didn't have herpes encephalitis, so the Acyclovir, in my opinion, wouldn't have mattered.

Q All right. Have we gone through all the factors that -- that go into your opinion that herpes simplex encephalitis can be ruled out in this particular case?

A Yes, I believe so.

Q All right. And I want to go through it and make a list of them. The fact -- just in a general sense.

The factors that you've given us are, the absence of hemorrhagic necrosis?

A Correct.

Q The negative PCR of spinal fluid?

A Correct.

Q The IHC stains or the lack of herpes on the IHC stains?

A Correct.

Q The MRI?

A Correct.
Q The lack of Cowdry type inclusion bodies?
A Correct.
Q And her failure to respond to Acyclovir?
A Correct.
Q Are there any other factors that you considered in reaching the conclusion or being able to rule out herpes simplex encephalitis as a cause of death in this particular case?
A The fact that there's no pathologic evidence of herpes. I mean, that's essentially it.
Q Anything else?
A Everything else we talked about.
Q So we've covered all the reasons that you say herpes simplex encephalitis can be ruled out?
A I believe so, yes.
Q All right. Dr. Chesney would have done a gross evaluation of the brain?
A Yes.
Q If there was no hemorrhagic necrosis, he would have been aware of that fact?
A I would hope so, yes.
Q Dr. Chesney, are you aware -- do you know whether or not he was involved in or had conversations with the people at Vanderbilt?

A No. I don't recall.
Q Do you know if he was aware of the PCR testing of the spinal fluid?
This is yours.
A Oh, okay.
Q I'd give you mine but it's got some highlights on it.
A No, that's okay.
Q I don't really care, to be honest with you, but --
A No. No worries.
I don't see in here that -- I do know that he mentions the immunohistochemical staining.
Q Okay.
A That it was all negative.
Q Okay.
A He did not identify any inclusions.
Q Okay.
A I don't see anything in here about a discussion with anybody else.
Q Presumably, Dr. Chesney would have also had medical records or would have gone through medical records from Holly's admission to the hospital?
A I don't want to presume that because I don't know. Sometimes yes; sometimes no.

Q Okay. So at a very minimum, Dr. Chesney would have had information from the autopsy that you would have reviewed?

A Right.

Q In addition, he would have done a gross examination of the brain itself?

A Correct.

Q He would have known about the immunohistochemical staining?

A Correct.

Q And he would have looked at the slide or some slides and not seen any Cowdry Type A inclusion bodies?

A That's correct.

Q Do you see anywhere in his report where he excluded the diagnosis of herpes simplex encephalitis?

A He states, (reading): While herpes virus encephalitis remains a leading cause of this sort of devastating encephalitis in young adults, we have not been able to establish that as the etiology.

MR. SMITH: That's an exhibit. It's Exhibit Number 19.

BY MR. SMITH:

Q All right. In the autopsy report at the

beginning, it has some diagnosis coding; correct?

A Correct.

Q And it says -- read this one right here.

A This one?

Q Yes.

A (Reading.) Etiology unknown, despite extensive in vivo and in vitro studies, presumed herpes simplex virus etiology.

Q That would seem to indicate that, despite the fact that they didn't receive any confirmatory tests, that it was still presumed to be herpes simplex encephalitis?

A That is 12/7/2007.

Q Okay.

A I don't know if that's the printed date.

So that's at 2:44 and then this is at 3:47. I don't know if that hour makes a difference to him or not, but this is the final comment and what you're looking at here -- what you're looking at here is a listing of what was done.

You would have to ask him why, at 2:44 p.m. on December 7th, he says, presumed herpes simplex virus etiology, if that means it was presumed clinically.

But then, what is it, an hour and -- an

hour later, he states that they've done all this testing, but they were unable to establish that as the diagnosis. That, you'd have to ask him.

Q All right. I'm just talking about this report that you've relied on.

There's nowhere in here does it specifically say that they have ruled out or excluded, in other words, excluded the diagnosis of herpes?

A He may not have. I'm using what all the tests were. But I don't know what -- I'm not going to speak for him. There's two sentences there that are semi-contradictory.

Q Okay. Because one says that his conclusion is presumed herpes simplex virus etiology.

A Well, again, I think you need to ask him. I don't know if that's his impression or if that's the presumed diagnosis as it came to him, and it could be one or the other. I honestly don't know.

Q But I'm talking about you -- part of, at least, your opinion is based on your interpretation of this report?

A Right, but not his opinions. My interpretation is of his gross description of the brain.

Q So you don't agree, if he says -- if his

opinion was presumed herpes simplex virus etiology, you disagree with him?

A I absolutely do.

Q Are you aware that TUES -- and so the TUES program, which was Vanderbilt?

A Yes.

Q A well-respected university?

A Yes.

Q Well-respected medical school?

A Yes.

Q Presumably, the Vanderbilt University has good labs?

A Presumably, yes.

Q Do you know Karen Bloch?

A No, I do not.

Q Do you have any idea what her qualifications or background is?

A I do not.

Q You are aware, though, that they did additional testing after Holly's death?

A Yes.

Q And after the autopsy?

A Yes.

Q They're the ones that did the PCR testing in their laboratory and then sent things out to the

CDC, as well as the California Encephalitis Study?

A Correct.

Q Do you know anything about the California Encephalitis Study Program?

A I do not.

Q We talked about all the things that factor into your opinions. And I want you to assume that Dr. Bloch and her group spoke wit Dr. Chesney about the autopsy and they had the autopsy report.

A Okay.

Q That would mean that they would know, presumably, that there was no description of hemorrhagic necrosis in the autopsy report on the gross examination.

A Okay.

Q Right? Right?

A Maybe. I mean, I don't know what they would know.

Q Well, if they had the report --

A Oh, if they had the report. Yeah, if we're making the assumption that they had the report, then they should know, yes.

Q And they would have the same information that was available to you?

A Yes. If they had the same report, yes.

Q And they would -- they would see on the autopsy report that there was no description on the gross examination of hemorrhagic necrosis; right?
A I presume, yes.
Q They're the ones that sent the tissue off to the CDC?
A Right. The ones that came back -- the IHC that came back negative.
Q Right. So they would know about the results from the IHC, the negative IHC stains; true?
A Once it came back, yes.
Q They would know that Dr. Chesney did not find any Cowdry Type A inclusion bodies when he examined the slides, if they had the autopsy report?
A Yeah. I mean, you're asking me to assume things, but sure.
Q They would also have known about the PCR testing of the brain tissue?
A Correct.
Q They would also have known about the PCR of the spinal fluid?
A I would assume so.
Q If they -- assuming that the people at Vanderbilt --
MR. ALEXANDER: Excuse me. This is John

Alexander. I'm going to object to this line of questioning with regards to the assumptions or the assumption of information that was conveyed. I don't think that it's an accurate description and it's assuming facts not in evidence.

MR. SMITH: You can object to the form, John. I'm going to object to your speaking objection. If you want to make a form objection, that's fine.

MR. ALEXANDER: Well, now I'll add to that. If I am correct, I'll add that it's misleading. Thank you.

BY MR. SMITH:

Q All right. Assuming that the TUES program had medical records, they would also know what the MRI findings were?

A If they reviewed all of them and they had them all.

Q And they would also know that, presumably, that Holly received Acyclovir at Baptist?

A If they reviewed all the medical records, yes.

Q Are you aware that there are additional records from the TUES study that you have not

received?

A If I haven't received them, I'm not aware of them.

Q Would it change your opinion at all if their conclusion in e-mails back and forth between members of that team was that, at the end of all this, they -- their diagnosis was probable death from herpes simplex encephalitis?

A I would like to see all that documentation and when those e-mails were sent back and forth.

MR. ALEXANDER: This is John Alexander again. I'm going to object to the form. Assuming facts not in evidence. Again, misleading as well.

A I would definitely like to take a look at that. I would like to look at the timing of those conversations or e-mails, when the reports came back in relation to that, and I would take it into account.

But I'm still confident that there is no evidence of a herpes encephalitis here from a pathologic standpoint. We have one positive test, which was confirmed to be negative on multiple other specimens.

///

BY MR. SMITH:

Q That they would have known about as well?

A Maybe. I don't know. I'd have to see what they -- what they've seen.

Q You don't think they knew about the PCR testing that they ordered?

A No, no, no. You asked me about other stuff. So I don't know -- of course they would know about their own testing, but I don't know about all of the other testing, what they were privy to prior to these e-mails you're talking about.

That's a lot of assumptions that I don't want to make without actually looking at the documentation.

Q But you haven't seen that?

A No, I have not.

Q Let me ask you -- let me ask you some other questions about your publications.

A Sure.

Q Have you had any publications accepted dealing with herpes simplex encephalitis?

A No. I haven't submitted any.

Q Has anybody -- okay. Fair enough.

Have you had any publications accepted in -- on the topic of encephalitis in general?

A I don't believe I've even submitted any either.

Q Have you been asked to submit -- has anybody asked you to submit any articles on the topics of encephalitis in general or herpes encephalitis?

A Publications, no. I've lectured on encephalitis and that's in my CV on the lectures. It doesn't say specifically encephalitis, but I'll show you which lectures.

Q (Handing.)

A I should say meningoencephalitis.

Do you want to try to keep them in order?

Q It doesn't matter. They've got numbers on them. We'll figure it out later.

A Okay. So off the top of my head, I've lectured, actually, overseas at the main medical school in Nairobi, Kenya. And part of that lecture revolved around tuberculosis, meningoencephalitis, and its differential diagnosis.

Q Is that on your list?

A Yes, it is. It is right here, October 11th of 2005.

I've lectured on the neuropathology of HIV at the chief medical examiner's office in New York. And the neuropathology of HIV is almost all

about encephalitis, a lot of CMV, opportunistic infections. And I believe those are the two -- yeah, those are the two main lectures.

Q All right. The one on HIV --

A Yes, sir.

Q -- was not specific to herpes simplex?

A Well, no, it talks about what -- what is the neuropathology of an individual who has HIV and you have a number of possibilities. And this was back in 2005.

You can get infections, most often viral. CMV is one of those. Those have viral inclusions. You can get parasitic infections. You can get lymphomas. So it doesn't specifically say HSV, but that's within the realm of viral encephalitides.

Q Okay. The other one -- do you have materials for that lecture?

A Oh, gosh, no. That was 11 years ago.

Q What about the other one that you gave in Kenya?

A That was around the same time, so . . .

Q Any materials from that one?

A I don't.

Q Have you written any chapters on encephalitis?

A No, not on encephalitis.
Q Have you written any chapters on herpes simplex?
A No.
Q Or the herpes virus?
A No, sir.
Q Have you been asked by any editors to submit a chapter on herpes?
A No.
Q Have you been asked by any editors to submit or to write a chapter on herpes simplex encephalitis?
A No, I've not been asked.
Q Have you been asked by any editors to write a chapter on encephalitis in general?
A No, I don't believe so.
Q Have you received any competitive grants to study herpes simplex encephalitis?
A No.
Q Have you received any competitive grants to study encephalitis in general?
A No. I don't really apply for grants.
Q Have you ever applied for a grant to study -- to conduct a study on encephalitis, herpes encephalitis, or the herpes virus in general?

A No. I have never submitted a grant for anything.
Q Have you worked with any federal agency to organize any type of medical study?
A No.
Q For example, have you worked with the CDC?
A I was about -- I was about to go back. There was a point where we didn't submit anything and there was no grant, but we follow -- I do a lot of death in the young because of my training, and I think there was a point where we were considering trying to publish the epidemiology around sudden death in the young, but it never went anywhere.
Q Would that be SIDS?
A Well, no. SIDS is one part of -- it's a lot more than just SIDS.
Q All right. But you never actually -- that never came to fruition?
A No. There was no time. We just said forget it.
Q Sort of talked about it, but then nothing ever came of it?
A That's correct.
Q Okay. Have you ever -- have you edited

any textbooks?

A Edited, no. I have a book chapter, but I've never edited.

Q And your book chapter was on what?

A Forensic pathology in a textbook called Pediatric Pathology.

Q Is that the only chapter you've written in a textbook?

It looks like you have some that you submitted for publication. What about -- what happened with that?

A Right. So the main editor of that textbook -- there's about 30 authors and it's supposed to -- it was supposed be the new tome of forensic pathology, probably in the area of 3,000 pages.

The main editor has sort of let it lapse and there's many of us who are not happy about that. So all of those chapters have been submitted and they were just waiting for final review.

Q But nothing ever came of them?

A Not yet. We're all hoping.

Q What does "in press 2013" mean?

A That's when it went into press. And then the -- there's the -- you have the main individual. There's three individuals that were supposed to be the

main editors.

It got sent into the publisher. The publisher accepted them all and said, okay, they're going to go -- they're starting in press. And then the main editor just did not do his job.

Q Who were the editors?

A Well, the main editor who was supposed to do this, his name is -- I can't believe it. I have so much on my mind, I just blanked on his name.

Give me a minute and I'll remember his name.

Q Okay. I'll tell you what. If you don't remember it, when you go back and read and sign your deposition transcript, you can just put it in the notes at the end.

A Oh, sure. That's easy enough.

Q If you think of it today, just give it to me.

A Sure.

Q All right. So then -- but it's fair to say that you haven't written any chapters on herpes, herpes encephalitis, or encephalitis in general?

A That's correct.

Q You have written one book chapter in Pediatric Forensic Pathology?

A Yeah. The chapter is Pediatric Forensic Pathology in the book Pediatric Pathology.

Q What's that chapter about?

A Investigation of childhood death, SIDS, sudden unexplained infant death, sudden death in the young, trauma analysis, et cetera.

Q All right. And then the other book chapters that you've submitted, you've submitted but the project is stalled out?

A It's on hold until this one guy gets his act together.

Q Have you sat on any editorial boards of -- any editorial boards?

A No. I don't have time.

Q Have you been asked to sit on any editorial boards?

A I have.

Q Which ones?

A Well, I sit on the executive committee for the Society of Cardiovascular Pathology. And I was asked to sit on their editorial board for their journal. I don't have time. I think that's really it.

Q All right. You have had some faculty appointments?

A Yes, in the past. And we're -- I'm sorry. Go ahead.

Q Go ahead.

A I was going to say, and we're in the process, now that I've taken over as the chief medical examiner, we are trying -- in the process of getting a fellowship program. And that fellowship program will be in conjunction with a university here in Georgia, a medical university, and that will put me on as a faculty member.

Q Who? Which university?

A So it used to be called Medical College of Georgia. They changed their name to Georgia Regents and then they just changed it again to Augusta --

THE COURT REPORTER: I'm sorry. Georgia --

THE WITNESS: I'm sorry, ma'am. Georgia Regents.

A And they've just changed it again to Augusta University.

BY MR. SMITH:

Q Have you had any faculty appointments -- well, have you traveled to lecture on herpes simplex encephalitis?

A No, I have not traveled to lecture on that specifically, no.
Q Have you been asked to?
A I don't think so, no.
Q Do you have any peer acceptance or acknowledgment of expertise in infectious disease pathology?
A No, I don't think so.
Q Peer acceptance or acknowledgment of expertise in -- well, scratch that.
A Can I ask what you mean by peer acceptance? I mean, I'm the chief medical examiner for the state ME's office. I review hundreds of cases every year. Many of them involve infections. I believe my peers accept me, quote, unquote.
So, you know, I -- I don't know what to say about that. I mean, within forensic pathology, we do a lot of infectious pathology. So my peers, I believe, accept me in that capacity.
Q Have we -- have we discussed all the opinions and the reasons that you have those opinions?
A I beieve so.
Q Is there anything as we sit here today that you can think of that we have not talked about?
A No.

Q And that's probably too general of a question. Let me drill down a little bit on that.

Is there any opinion that you intend to give at trial that we have not discussed?

A I don't think so.

Q Is there -- have we gone over all the bases for the opinions that you do have at this point?

A I believe so, yes.

Q I want to ask you about this Exhibit Number 14. Obviously, the first page of it is a cover letter from Mr. Baker's office, where they sent you information about the case.

A Right.

Q The second page is a summary of, it looks like a 15-minute conversation that you had with Mr. Baker's office on June 14, 2011?

A Yes.

Q Does this summarize your thought process at the time, based on the information that you had reviewed?

A At the time, yes.

Q All right. DD means differential diagnosis?

A Correct.

Q What is aseptic meningitis?

A It basically -- well, it should say meningoencephalitis.

Basically, I didn't see any evidence of herpes, but talking about the long laundry list of meningoencephalitis, you know, we talked about the possibility of -- you and I talked about the possibility of other viruses, of the autoimmune phenomenons.

So there is a laundry list of differential diagnoses, but I didn't see anything that would put me down the herpes route.

Q And we talked about this earlier, but based on everything that you reviewed and the information that you have, it's your opinion it was a encephalitis?

A Yes.

Q Cannot rule out viral encephalitis?

A I cannot. I can rule out a number of them, but I can't rule out all of them.

Q You can rule out a number of encephalitises, in your opinion, including herpes?

A That's correct.

Q But you can't rule out viral encephalitis, in a general sense?

A That's correct.

MR. SMITH: Let's take a quick break and give me a few minutes.

THE WITNESS: I remembered his name.

MR. SMITH: Oh, wait a minute.

THE WITNESS: I'm sorry.

MR. SMITH: Don't go off the record yet.

THE WITNESS: It just hit me. Evan, E-V-A-N, Matshes, M-A-T-S-H-E-S or S-C-H-E-S. I can't remember.

Don't let him know I'm saying that we're all waiting on him.

MR. BAKER: No, this is all a big secret. Nobody will say a word.

THE WITNESS: That's it.

THE VIDEOGRAPHER: We're off the record at 4:22 p.m.

(VIDEO CAMERA OFF.)

(Thereupon, a recess was taken.)

(VIDEO CAMERA ON.)

THE VIDEOGRAPHER: This is the beginning of tape number five. We are back on the record at 4:30 p.m.

(Thereupon, marked for identification, Plaintiffs' Exhibit Number P-21.)

///

BY MR. SMITH:

Q I want to hand you what I've marked as Exhibit Number 21. Have you seen that before?

A I may have. I don't -- I'd have to look at my notes. I don't recall if I've seen the death certificate or not.

Q All right. The final diagnosis was death due to viral encephalitis. It says unknown etiology for three weeks' duration.

A Right. Acute viral encephalitis, unknown cause.

Q You don't necessarily disagree with that?

A That fits into --

MS. MALKIN: Object to the form.

THE COURT REPORTER: Who said that, please?

MS. MALKIN: Andrea Malkin.

A That falls into the overall category. I would have taken out the viral part because I think there are other possibilities, but it falls within the umbrella.

BY MR. SMITH:

Q You don't disagree with that?

A Well, I don't know if it's viral or not. We don't know the cause, so I would say acute

encephalitis, unknown cause, in essence.

Q Well, let me ask it a different way.

You're not saying that's wrong; you're just saying you don't know if it was viral or not?

A Okay, right. I don't know if it's viral or not.

Q You told me that you had worked with Mr. Baker's office, how many --

A Twice before, I think.

Q Twice? You're saying two or three, I think, maybe?

A Yeah. I recall twice. This may be the third. I don't know if -- I really think it was only twice.

Q Twice before this time?

A Before. Before this time, yes, sir.

Q We talked about the other attorneys and firms. You don't remember ever working with any of the other firms involved in this case; true?

A Not off the top of my head.

Q Have you ever been the subject of any disciplinary action at a hospital?

A No, sir.

Q Have you ever had to give up your hospital privileges in order to avoid disciplinary

action?

A No, sir.

Q Have you ever been the subject of any disciplinary action by a state licensing board?

A No.

Q Have you ever had to give up a state license in order to avoid disciplinary action?

A No.

Q Have you ever been disciplined by any government agency?

A No.

Q Have you ever had to resign in order to avoid disciplinary action by a governmental agency?

A I've never resigned, no.

Q Have you ever been charged or convicted with a crime?

A No.

Q Have you ever been sued before?

A No.

Q You gave us a list of all your depositions?

A Yes, sir.

Q And trial testimony, I'm assuming?

A That's correct.

Q We've gone through the deposition. I

think, for the most part, you've answered all the questions that I've asked. Have you understood all my questions.

A I have.

Q You're going to get a chance to go back and read the deposition and make changes to it if you need to.

And I know that you can't sit here today and tell us that there's -- you know, sometimes you read the transcript and you don't recognize that there's a mistake or something that needs to be changed until you read the transcript.

Setting that aside for now and leaving open the possibility that when you read the transcript, there may, in fact, be things that need to be changed or updated, as we sit here today, is there anything that you need to change or add to any of your testimony to make sure that it's accurate and complete and truthful?

A I don't think I have any changes right now, no.

Q If you come up -- if -- two things. If you review new materials, would you let Mr. Baker know?

A Absolutely. I mean, he would be sending

it to me, so . . .

Q And the reason I'm asking that is because, even if you don't -- even if they don't change your opinions, I may still want to either get on a videoconference or phone conference to ask you what you've reviewed and how it factors into your evaluation of the case.

A Sure. Fair enough.

Q So if you look at anything else, Mr. Baker will know so that he can let me know?

A Absolutely.

Q If you come up with new opinions or you revise your opinions or you change any of your opinions, will you likewise let Mr. Baker know?

A Absolutely.

Q And will you do so in a timely manner, meaning not the day before trial?

When I say timely manner, I mean enough time for me to get back on the telephone with you or a videoconference or fly back down here if I need to, to go over any changes or updates to your opinions?

A If I receive more information, I will look at it as quickly as possible and immediately let Dr. -- not Dr. Baker -- Mr. Baker know.

Q He's not -- I promise you, he's not a

doctor. He's not that smart.

MR. SMITH: That's all that I have right now.

MR. BAKER: No questions.

MR. GILMER: No questions.

MS. BENNETT: No questions.

MR. ALEXANDER: No questions.

MS. STEINBERG: No questions.

MS. MALKIN: No questions. Thank you.

MR. SMITH: You're done.

THE VIDEOGRAPHER: This is the end of tape number five. We're off the record at 4:34 p.m.

(VIDEO CAMERA OFF.)

(Deposition concluded at 4:34 p.m.)

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C E R T I F I C A T E

I hereby certify that the foregoing transcript was reported, as stated in the caption; that the witness was duly sworn and elected to reserve signature in this matter; that the colloquies, questions and answers were reduced to writing under my direction; and that the foregoing pages 1 through 195 represent a true, correct, and complete record of the evidence given.

I further certify that I am not disqualified for a relationship of interest under O.C.G.A. 9-11-28(c); that I am a Georgia Certified Court Reporter here as a representative of D'Amico Gershwin, Inc.; that I/D'Amico Gershwin was contacted by the party taking the deposition to provide court reporting services for this deposition; that I will not be taking this deposition under any contract that is prohibited by O.C.G.A. 15-14-37(a) and (b) or Article 7C of the Rules and Regulations of the Board; and by the attached disclosure forms I confirm that I/D'Amico Gershwin is not a party to a contract prohibited by O.C.G.A. 15-14-37 or Article 7C of the Rules and Regulations of the Board.

The above certification is expressly withdrawn and denied upon the disassembly or photocopying of the foregoing transcript, unless said disassembly or photocopying is done under the auspices of D'Amico Gershwin, Inc. and the signature and original seal is attached thereto.

This, the 15th day of April, 2016.

STEPHANIE K. FEEN, CCR-2573
Certified Court Reporter

E R R A T A S H E E T

Pursuant to Rule 30(e) of the Federal Rules of Civil Procedure and/or O.C.G.A. 9-11-30(e), any changes in form or substance which you desire to make to your deposition testimony shall be entered upon the deposition with a statement of the reasons given for making them.

To assist you in making any such corrections, please use the form below. If supplemental or additional pages are necessary, please furnish same and attach them to this errata sheet.

- - -

I, the undersigned, JONATHAN EISENSTAT, M.D., do hereby certify that I have read the foregoing deposition and that said transcript is true and accurate, with the exception of the following changes noted below, if any:

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JONATHAN EISENSTAT, M.D.,

Sworn to and subscribed before me,

_____, Notary Public.

This_____day of_____, 20_____.

My Commission Expires:

B

D

N