Doc 11

IN THE COURT OF COMMON PLEAS

CUYAHOGA COUNTY, OHIO

JORDAN REAZE, etc., et al.,

Plaintiffs

vs.

UNIVERSITY HOSPITALS OF CLEVELAND, et al.,

Defendants.

No. 284973
JUDGE PATRICIA ANNE GAUGHAN

COPY

THE DEPOSITION OF GEOFFREY ALTSHULER, M.D., taken on behalf of the Plaintiffs, pursuant to agreement, on Tuesday, December **12, 1995**, at the Waterford Hotel, 6300 Waterford Boulevard, Oklahoma City, Oklahoma, before me, Julie Curry, Certified Shorthand Reporter within and for the State of Oklahoma.

Appearances:

For the Plaintiff:

WILLIAM J. NOVAK, Esquire and
PETER C. TUCKER, Esquire
Rubenstein, Novak, Einbund, Pavlik & Celebrezze
Suite **270**, Skylight Office Tower
1660 West Second Street
Tower City Center
Cleveland, Ohio **44113-1498**

For the Defendants:

ROBERT C. TUCKER, Esquire
Arter & Hadden
925 Euclid Avenue, **1100** Huntington Building
Cleveland, Ohio **44115-1475**

GEOFFREY ALTSHULER, M.D.,

having been produced and first duly sworn as a witness, testified as follows:

DIRECT EXAMINATION

BY MR. NOVAK:

Q For the record, Doctor, give us your name, please.

A Geo frey, G-e-o-f-f-r-e-y, Altshuler, A-l-t-s-h-u-l-e-r.

Q Historically, Doctor, I want to take you back to some medical legal consulting you did on Dalkon Shields cases back about 15 years ago. Could you tell me what the extent was of your work with respect to that consulting at that time?

A It was predominantly literally looking at slides and giving opinions to Harris Wagenseil, 4-a-g-e-n-s-e-i-1, as to the extent to -- which in my opinion, the Dalkon Shield probably would have or would not lave had anything to do with the case.

I don't recall that I ever went to trial. I vent prepared to go to trial on one occasion but didn't actually appear, And I can't even recall, because it is so many years ago, as to whether I would have done one leposition or five depositions; but, predominantly, it was

the capacity that I previously described.

Q Who is Harris Wagenseil?

A He had been with a firm in San Francisco, the name of which escapes me, and had been a specialist in litigation problems to do with mothers and babies and so forth so that my recollection was that the Robbins Company had attorneys who had referred those cases to this firm in San Francisco.

Q Dr. Sandmire, who is also an expert in this case for the defendant, did you ever have an opportunity to meet Dr. Sandmire during your work on Dalkon Shield cases during that period of time?

A No, I can't recall that I did because I think that you had mentioned -- I should use names obviously. Mr. Tucker had mentioned the name Sandmire to me. As I indicated, I don't particularly know Sandmire. So if I have met Sandmire, I don't even remember where I would have met him, So the same way when I walked in the door, I saw your colleague. I thought I recognized his Face, but I didn't.

MR. TUCKER: So the record is clear, I mentioned Dr. Sandmire's name to Dr. Altshuler just a few minutes ago in telling him why we were leaving tonight to fly to wherever we are flying, Chicago, because you are taking Dr. Sandmire's deposition tomorrow, He indicated he

didn't know who Dr. Sandmire was.

Q (By Mr. Novak) During the time that you worked on the Dalkon Shield cases, did you ever have an opportunity to meet Mr. Tucker, who is sitting next to you?

A I can't recall ever having met Mr. Tucker,

Q Were you paid by A.H. Robbins on those cases?

A I don't believe so. I don't believe that I have ever been paid by A.H. Robbins on any case. You know, it is so many years ago, please understand it is like, you know, if I would say to you, "What did you do 15 years ago?"

But, to the best of my recall, everything came through Harris Wagenseil. The reason I know Harris Wagenseil's name, candidly, is that he originally approached me on the basis that he had been to Dartmouth College, and I had been to Dartmouth College, and we Dartmouth men should stick together. I thought this is a guy whose name I won't forget.

Q **In 1991**, you did a significant amount of work with insurance carriers. Would you tell me about that?

A I would say that I have done quite a few cases that ultimately -- I don't just confine it to **1991**, would have been situations wherein insurance companies had

paid my consultant's fee through the attorney firm that had retained me.

I have never, per se, at any time directly done work for insurance companies. To the best of my recollection, there has not been a case other than that an attorney has contacted me. And clearly if an insurance company was paying the tab, potentially it could be an a insurance company's check.

Q Do you remember telling any lawyers in any depositions at any time that in **1991**, you spent a lot of time doing consulting for insurance carriers?

A Yes. Let me clarify this so that there should be no misunderstanding. I have looked, and I appreciate the opportunity to correct the wrong impression.

I have looked at cases for insurance companies where risk managers, the one that comes to mind most clearly is the St. Paul Company. Risk managers have sent me cases, no if's, no but's, no maybe's. **1991** is four years ago. I don't know that it was necessarily in **1991**; okay? But, absolutely, I have looked at cases for risk nanagers; okay?

In retrospect, at the least, the St. Paul Insurance Company was one such company. If there were other companies out there, I can't recall; okay?

Q I guess do you recall ever having a year,

let's say 1991 or '92, that was very chaotic as it relates to doing work for insurance carriers?

A I think you missed the point completely probably because I am failing to explain the situation; okay? I would say for six years, I have looked at many cases. That would be point number one, for six years; okay?

Please recognize I emphasize this because the Dalkon Shield cases were, I would believe, more than 15 years ago. I have been in Oklahoma for 20 years. I believe the Dalkon cases I did were more than 15 years ago.

So, my involvement in legal cases, I believe, started in large part six years to seven years ago at the most; okay? I would say about in those days, from anywhere from four to five times as many of the cases would have turned out to have been for patient providers, in other words, when people would call me, I would say, "Don't tell me which side you are on," et cetera.

So my point is it turned out that I was being asked either by attorneys or their paralegals or their secretaries to look at cases. And four times or so or four and a half times as often it turned out that those were for patient providers.

Q Doctor, I think you are missing the point of my question. My question really is -- I am not asking if

you did individual consultations on individual cases. I am asking you if certain insurance carriers had you come in and do consulting work for them on a general basis during the years 1991 and 1992?

MR. TUCKER: E don't think that was your question. If that is the question you want to ask him --

MR. NOVAK: At least that is what I understood.

THE WITNESS: If that is your question, my answer is to the best of my recollection, that did not happen, period.

Q (By Mr. Novak) Now, sometime in February of 1994 -- by the way, tell me who Mike Walsh is.

A Mike Walsh is the chairman of Fetal Developmental Evaluations. He is a pathologist by background who became a venture capitalist after obtaining a masters in business administration.

Q He started this company known as FDE?

A He did.

Q Do you have a contract with FDE; do you not?

A I have a contract as an independent contractor to the point of from 1994, I believe it was about February 1. And I have half of that amount of time that I did in '94 that I continue to do with FDE in '95.

Q You're paid on a yearly basis contract rate;

right?

A It is paid on a guarantee that if I would have committed to them, if they would need me, that they pay me on the guarantee that they will use me. In other words, I went half time at the University on the understanding that they would need me, so I said you would have to guarantee me, therefore, that you will use me.

Q They did use you?

A Yes. I did an enormous amount of work for them in 1994. I continue to contribute to their quality control programs in 1995.

Q Did you ever help prepare their brochures?

A Yes, I did.

Q In fact, there were two brochures; were there not?

A I would believe so. I couldn't swear to it. The brochures were actually in their draft form done by a sales promotion oriented person. His name was Bernie Ness, J-e-s-s, who was not with Fetal Development Evaluations at present. But, he was a promotion person who basically wrote that taking extracts of my publications and what I have written.

(Whereupon Plaintiff's Exhibit No. 1 was marked for identification.)

Q Let me hand you what we are going to mark as

Exhibit 1

A I am assuming that this is a photocopy of the final form. It certainly would appear to me to be a final copy of the final form as opposed to a draft form.

Q A lot of the language that is in here comes from you; isn't that correct?

MR. TUCKER: Object to that, as to a lot of the language in here.

Q (By Mr. Novak) You helped draft this; did *you* not?

MR. TUCKER: Objection to the form of that,

THE WITNESS: Yes, I helped formulate this. I can't swear to the fact that I wrote the verbatim iecessarily every sentence or paragraph, but certainly there are some pages here which were taken from my indications for placental examinations as a result of a committee that I chaired for the college of American Pathologists.

So, you know, 1 did not produce this document forth to a printer who then did it.

Q (By Mr. Novak) I understand. My question going back is: You took part in helping draft this; is that right?

A I have already indicated that I participated and as such accept responsibility for the validity of

statements that are in there.

Q You are the director, are you not, for Placental Evaluations?

A Not really. It started off as a venture capital arrangement wherein we thought that we would have many satellite branches which was the reason for the enormous amount of time and work and computer programs, integration of manuals and stuff like that and that purely as an operational thing that it would make a lot of sense to say that I would be the director, and there would be all these other colleagues.

I have forgotten the term that we use now. If it is still director, it is not in the same connotation of the original plans.

MR. TUCKER: Does it say in here he was the director?

MR. NOVAK: It says expert placental pathologist analysis, Geoffrey Altshuler, M.D., director.

Q (By Mr. Novak) Were you a director at least at one time?

A In the context of that, the direction of the quality control and the professional standards would be my responsibility. In other words, let me be quite sure that there is no misunderstanding of words.

I am not an employee or participatory

director on the FD board which was directors, okay, which has chief executive officer, which has chairman of the board and so forth. I am a director and was a director an this document only from the point of view of being responsible for the scientific standards of the program.

Q Your name is also on the back as a reference; is that correct, last page?

MR. TUCKER: As a reference or one of his papers?

Q (By Mr. Novak) One of your papers is used as a reference?

A That is correct.

Q Okay. Now, so I understand, when people put up money as a venture capital, they want to make some money out of a deal; right?

MR. TUCKER: Objection to the form of that pestion.

Q (By Mr. Novak) Well, I'll ask you. Did you know this Mike Walsh? I mean he was putting this money up front with the anticipation there would be some profit realized out of this venture; isn't that right, if you know?

MR. TUCKER: Objection as to asking this man as to what Mike Walsh' intention was.

MR. NOVAK: If he knows.

MR. TUCKER: Ask Mike Walsh that question.

MR. NOVAK: I'll ask him.

MR. TUCKER: I object to the question.

THE WITNESS: My opinion would be pretty much what I would assume would be your opinion. Mike Walsh told me that he had a two part component to his purpose in recruiting me.

One was that the PDE program, as he defined it, had a service role for which there would be fees for service. And it had a foundation that was available to it, and it is not appropriate for me to say how much money that the foundation supports for research. But, I can assure you it is a substantial foundation that is operational and a highly respected one with ultra highly respected people on its scientific advisory board.

I had always assumed that on the research side, it would lose in the sense that that is the whole purpose of research, but that on the service side, that it would generate monies. I did not imagine that Mike Walsh would want to be writing off every single expense to do with research and service. And the way that he does it, I can't answer.

I mean he is the venture capital guy. I am the medical, you know, scientist, if one can use that word.

Q (By Mr. Novak) Cleveland, Ohio is listed as

a satellite office there; is it not?

A Yes.

Q Was there ever an office in Cleveland?

A Well, I should correct language when one says office. It seems to me that, and you would have to check with Mr. -- at least Dr. Walsh. Dr. Walsh, by my understanding, had discussions with people in Cleveland who are medical people.

I don't know that it is appropriate for me to tell you, you know, the names and the discussions and all of that that Dr. Walsh would have had with medical folks who actually, university faculty type people, in different parts of the United States other than names that may appear on, by my recollection, documents other than what you have.

I believe in what we did with these documents is we named centers around the United States of America based upon letters of intent that he had from various individuals.

Q Fact of the matter is, there was never a Cleveland office; was there?

MR. TUCKER: I don't think he ever said --

MR. NOVAK: I was trying to ask him that. He went on rambling about something else.

Q (By Mr. Novak) Was there ever a Cleveland

office, if you know?

A There was no office.

Q Okay. Now, how did you first meet Mr. Tucker here?

A He called me on the telephone, same as I indicated many people call me. Be asked me to look at a case. I told him that I didn't remember him at all; is that true? Words to that effect, he said that is true, I said so don't tell me which side you are on and don't give me any clinical information. If you accept those terms and the fact that my fee is 400 an hour, I will look at the slides provided you redact any clinical information from the slides.

So what I have brought to you is a file which traces that in the sense that I have the original redacted surgical pathology report. So that was the background completely. I didn't know him from a bar of soap.

Q When you said you told him about $400 an hour, didn't you tell him about sending him a fee letter?

A Absolutely. That is a standard thing that I have been doing, I would say, for the last year and a half.

Q Your standard fee setup is, what, $2,000 a case?

A No, actually it has turned out to be less

than that at this point. What I have been doing in the last year or two is probably Substantially less legal cases than I did in 1993, 1992 and specifically prior to that. What I have tried to do is I tried to say to attorneys that if they can give me a core group of information when I call and I say, you know, my opinion is one, two, three, four. This is the perspective, and my opinion is, the perspective remains true, that I can counsel them on the telephone if they know a series of facts.

Doing it that way, I feel I can charge them a thousand dollars. And if I need on a complex case to go on and take photographs and so forth if I am not sure, then I will do that, and it will be 2,000. But I would say in the last year or two, most of the first consultations I do, such as I did for Mr. Tucker, end up being a thousand dollars and probably don't go on beyond that.

Q Do you have a copy of your fee agreement, your printed fee agreement, in your file here?

MR. TUCKER: I have a copy of the correspondence that he sent to me and that I sent to him. I have a copy of it.

Q (By Mr. Novak) But this is a standard fee agreement that you sent out to any lawyer that consults with you; is that right?

A It is one of them; it is one of them. The

one that he had was an initial one that does not include as much detail as I provide an others, if people want it. If they wanted to know what I charge for going to trial and what my policies are for things like that --

Q That is 5,000 a day; right?

A Depending -- you know, if it is a place where I think I can get in and out and it is not a stressful amount of work or time and so forth, it may be 4,000 a day. It is not rare for me to, however, anticipate on some of the cases, depending upon where they are, that if it is going to be a horrendous day, that I would probably say I will make it 5,000.

Q I guess are you telling me that you did not send Mr. Tucker the standard fee agreement with the up front 2,000, his agreement was a little different than the norm?

A No, that is not true.

MR. TUCKER: He didn't say that.

THE WITNESS: What I said is I have a tendency now to use just two formats. One, that does not include a whole bunch of rhetoric to do with trials, the other that has a bunch of rhetoric to do with trials.

The bunch of rhetoric includes things like if the case settles at the last moment, that clearly I have to be compensated for the work that is done.

Q (By Mr. Novak) You would agree the more you charge, the notion is that it is a big complex case, right?

MR. TUCKER: Objection.

THE WITNESS: Well, I think applying common sense, it is more probable than not that price matches complexity.

Q (By Mr. Novak) Did you ever tell anybody that price also means big?

MR. TUCKER: Objection.

THE WITNESS: What do you mean by big?

Q (By Mr. Novak) Big value case.

A I think it's --

Q Potential value?

A I think it is implicit that both cases that I have done for patients additional to and as well as patient providers, just so happens that attorneys are such that when there is an enormous amount of money, which to me is $10 million, $15 million across the table, the demands upon me are much more than if it is a different case which might be for $500,000. That to me, again, is an application of common sense.

Q Okay. So, in this case, so I understand, Mr. Tucker first contacted you on the phone; is that right?

A Yes.

Q Then he sent you a letter including the

materials that you reviewed?

A Yes.

Q Did you --

A Slides and redacted surgical pathology report.

Q Okay. Then you prepared your first report; right?

A Yes.

Q And then sometime later, he sent you records, and you prepared the second report?

A That is true.

Q Okay. Now, you do keep on a computer somewhere, do you not, your hours that you keep on each case?

A I keep track of how much I have billed to people. I keep little pieces of paper that I destroy after have put them into the bill on correspondence. I don't keep a running ledger or log.

Q In your initial conversation with Mr. Tucker, did he ever mention to you that he represented University Hospital?

A No. I made that crystal clear to you. That has been answered twice.

Q Now, you have testified on behalf of University Hospital in Cleveland in the past; have you not?

A I could be wrong, and I don't remember the cases in truth, but I think I have done that at least two or three times in the last six years. If not three time, certainly I would think twice.

Q None of those cases went to trial; did they?

A I can't recall in truth. It has been rare for me to go to trial in the sense that I doubt that I have done more than 15 trials in six years.

Q In those six years, you probably looked at maybe 250 cases?

A I can't be accurate because the truth is I can tell you this, that I had thought that I had been doing as many as 20, 24 depositions a year and, you know, one or two cases a week, that sort of thing. But in truth, I know just based upon the fact that I have gone to half time, that in the last whatever it is, from October, '93 when I First became active with the PDE program, I have done substantially less than that.

Q You would agree with me that less than half of your work is at the hospital; is that right?

A Oh, that is a ridiculous understatement. Let me explain to you. When I write chapters on things now, which I continue to do, I have a fairly sizeable publication coming out in February or so of next year, I have another one I am working on now. I have a major book

chapter in a major -- coming out. That work is done in my so-called off time.

When I do have time at the University, I am intensively doing surgicals throughout the day and autopsies and teaching residents and postdoctoral level people so that when I do my writing, that has to be done predominantly on the other two weeks during which time I do the bulk of my consultant stuff for cases such as this one.

Q Maybe my question was the wrong question. More than half of your income is from FDE and medical-legal consulting as opposed to the University work?

MR. TUCKER: Objection. I don't think he has to answer that.

MR. NOVAK: He has answered it in many depositions already.

MR. TUCKER: So he --

MR. NOVAK: You are not going to let him testify to that even though he said it before?

MR. TUCKER: You would not let your witnesses testify as to what kind of money they made in any other case. Dr. Tucker, Dr. Kaplan --

MR. NOVAK: I am not asking how much money they made. I am simply asking the percentage of income that he derives from medical-legal versus what he derives Erom pure university work. I am not asking what he makes.

MR. TUCKER: You are asking the sister question to the question of how much money you make.

MR. NOVAK: Are you going to tell him not to answer that? Is that what you're telling him?

MR. TUCKER: You can ask him what percentage of his time he spends on medical-legal matters. I think that is a pertinent and relevant question. What I am telling him, he doesn't have to answer that question based upon the rules that you have set.

MR. NOVAK: I didn't set any rules. I am not going to waste any time. Let's move on.

MR. TUCKER: When I asked those questions of your witnesses --

MR. NOVAK; Just let the record show Mr. Tucker has instructed this witness not to answer that question even though he has answered it in 1994, and the fact of the matter is more than half of his income is derived from medical-legal and FDE.

Q (By Mr. Novak) Now --

MR. TUCKER: So it is on the record. You know the answer. Why were you asking it anyway?

MR. NOVAK: Because I wanted to see if he would say the same thing twice.

MR. TUCKER: Trying to trick him.

MR. NOVAK: Oh, yeah. He is too smart for

that.

Q (By Mr. Novak) Anyway, Doctor, let me ask you: Is this your entire file on this case?

A Except for my correspondence with Mr. Tucker.

Q Now --

MR. TUCKER: By the way, I have it if you want it. You want to make the agreement that you will turn over your correspondence?

MR. NOVAK: My correspondence, you have.

MR. TUCKER: And what you sent to Dr. Kaplan?

MR. NOVAK: You will not get my work product which was done prior to the filing of this lawsuit.

MR. TUCKER: What in the world difference does that make?

MR. NOVAK: Big difference.

MR. TUCKER: None at all.

MR. NOVAK: Big difference.

MR. TUCKER: I will be glad to turn over --

MR. NOVAK: May I see this?

THE WITNESS: You are very welcome. In fact, let me -- before you start, let me just explain two things that will save time. One is that it has all been highly organized, so I appreciate if you would keep it in

the same sequence that you have it.

The other is to assure that some of these things for your convenience right now are for you to keep right now separate from whatever you want to put forth as exhibits in an official capacity; okay? What you are looking at right now --

MR. NOVAK: NO, Let me look.

THE WITNESS: All right. Okay.

Q (By Mr. Novak) By the way, you are not a pediatric neurologist; right?

A I am not.

Q You cannot read MRI's; can you?

A I cannot.

Q So if the MRI at the Cleveland Clinic or any subsequent MRI's demonstrated a profound total asphyxia, and that was put up for you to take a look at and give an opinion on, you wouldn't be able to do that; would you?

A I will not participate in anything to do sith that, nor to do with reading fetal heart monitoring. And I will not represent myself to be a hands-on baby doctor who puts my hands on babies and mothers.

Q Now, I see there is a thing that says Bill Novak said. What is that for?

A You can have that whole set right this minute.

Q So that is to educate me?

A Well, I think that is to provide you as a matter of discovery my opinions relative to this case, relevant to this case. Now, it is implicit that you can put any of this on as an exhibit, but I thought for convenience you might appreciate right now instead of having to go out and Xerox your own copies.

Q Did you make photomicrographs in this case3

A I did.

Q Are they in here also?

A I have a set. I provided a duplicate set to Mr. Tucker.

Q I assume if I ask you for a copy of the photomicrographs, you will give me those?

MR. TUCKER: Sure.

Q (By Mr. Novak) Now, all this additional dictating that I notice in your chart, appears that -- what do you do? You take portions out of the chart and kind of do summaries before you do your report; is that right?

A No. What all I did, which is not a big deal, is I basically took the same text out of a Word Perfect file and condensed some of it into smaller fonts to facilitate in the progress of the deposition. My understanding is you have seen the bulk of this already.

MR. TUCKER: That's correct. The reports

have been provided.

Q (By Mr. Novak) Just so the record shows, none of Mr. Tucker's cover letters to you are in here; are they?

A That is correct.

MR. TUCKER: As I said, I am willing. I am right here.

MR. NOVAK: Let's save time; okay?

MR. TUCKER: No. I want the record to reflect that we had this conversation at your expert, Dr. Kaplan's deposition. You refused to turn over what you had sent to Dr. Kaplan. I made the point there, and I am making it again, that I have no problem turning over my correspondence to Dr. Altshuler or anyone else --

MR. NOVAK: Are you done?

MR. TUCKER: -- with whom I have corresponded, but what is good for the goose is good for the gander. I am not going to turn over correspondence and materials that have been sent to the experts when you refused to do so.

MR. NOVAK: Are you done?

MR. TUCKER: Sure.

MR. NOVAK: Okay.

Q (By Mr. Novak) Do you have anyone help you prepare these cases?

A I'm sorry. Let the record reflect that, you know, the witness has laughed. No.

Q Obviously when you do your articles and your research, you have medical students help you; isn't that correct?

A No.

Q You don't have any residents help you?

A No.

Q Come on.

A No.

Q You got to be kidding me.

A No.

Q How many hours a week do you work?

A That is not an unreasonable question. I probably underestimate it. I would think it is reasonable to say in excess of 60 hours. I don't get into the competitive concept of is it 70, or is it 68, or is it 81, but I'm a workaholic, period.

Q About 25 of that is spent on medical-legal; isn't it?

A Well, since much of what I have written for the last 25 years relates to the relationship between the placenta and the outcome of the baby and since I am using my own papers, then it is obvious one could say 25 hours or 5 hours depending upon how you define it.

Anytime I do studies that I have published, that information, for the very nature of it, is say I have been doing this sort of stuff for 25 or more years is relevant to medical-legal but does not mean to say that those are billable hours.

Q Do you have a record of the phone calls that Mr. Tucker made to you?

A No.

Q Do you have a record in your computer of the phone calls he made to you?

A No.

Q Do you have -- I understand your wife is your bookkeeper?

A Well, what happens is my wife takes the hard copies of things that go to our accountant. She is not, per se, my bookkeeper. She is the person who maintains records that go forth to our accountant.

Q Do you have a computer program whereby you keep all of the files that you work on from a medical-legal standpoint?

A That is true. Now I have lost -- let me emphasize, I have lost some of that, so that I don't want you to think that I have have every single legal case that I have done. But I will state that I have a substantial amount of those cases that I still have on file. There was

a stage when I had not done backups properly and retained things properly, and I lost quite a lot.

Q How well do you know Dr. Redline?

A Not well at all unfortunately in the sense that if we have had different opinions on things, we have never had the chance to sit down and talk about them. I don't know the extent to which we basically differ in opinions in terms of what he has published and I have published until such time as we would sit down and, you know, define these things.

Q Have you ever talked to Dr. Redline about this case?

A No. In truth, to be honest with you, I can't recall that I have ever particularly spoken with Dr. Redline, period.

Q Have you had any conversations with anyone other than Mr. Tucker about this case?

A No.

Q Now, did Mr. Tucker report to you about Dr. Kaplan's deposition?

A Yes, he did.

Q Did he speak with you before her deposition so that he could prepare himself for it?

A Yes, he did.

Q How long a conversation did you have with

him prior to that deposition?

A Including as I recall, I am pleased to say I even have it in my pocket, I believe, because I told him what I believe I had accrued in terms of time that I had done, a total of one hour between a discussion of the interrogatories and Dr. Kaplan.

Q Did Mr. Tucker provide you with a copy of Dr. Kaplan's deposition?

A No.

Q You had listed records that --

A Excuse me, please. I do have a note to the best of my knowledge. This sort of thing will get torn up later after I send bills, but on November 14, I consulted with Mr. T re: Interrogatory and review of files Re: Cindy Kaplan's November 8, '95 letter. Then on December 11, I ;pent two hours, which was yesterday, discussing Cindy Kaplan's deposition.

Q With who?

A Mr. Tucker.

Q So you spoke with Mr. Tucker?

A Not about, per se, Mr. -- not about Cindy Kaplan's -- let me be sure there is no misunderstanding. On November 14, I spoke with him regarding the interrogatories and information that Dr. Kaplan had provided in the November 8 letter; okay? That was prior to

her deposition; okay? November 8.

Last night, I spent two hours with Mr. Tucker basically going over this case within which two hours he told me about Dr. Kaplan's opinions.

Q Okay.

MR. TUCKER: I tell you what I am going to do, so that dates and everything are clear, I am going to give you all of the correspondence that I sent to him with the understanding that you will give me the correspondence you have sent to your experts too.

MR. NOVAK: I want you to know you have that already.

MR. TUCKER: And anything you sent to them.

MR. NOVAK: No. No, you are not going to 3et my case summary that was done long before it had nothing to do with correspondence.

MR. TUCKER: But you will acknowledge you sent it to the expert?

MR. NOVAK: Absolutely.

MR. TUCKER: I will turn over my correspondence too with Dr. Altshuler because --

MR. NOVAK: Because you are a good guy.

MR. TUCKER: Because I am a very good guy.

MR. NOVAK: Yeah, right.

MR. TUCKER: It has all the dates of the

various things I have sent to him.

Q (By Mr. Novak) Do you know Dr. Kaplan?

A Very well indeed.

Q Would your opinion be of Dr. Kaplan that she is a well respected pathologist?

A Absolutely. I would probably punch anybody on the nose who would say otherwise.

Q Arter & Hadden used to have a law office in Oklahoma City; didn't they?

MR. TUCKER: No.

THE WITNESS: I really don't know.

Q (By Mr. Novak) How about Dallas?

A I don't know.

Q Do you remember Arter & Hadden working on any FDIC cases up here?

A No. I don't know them from a bar of soap.

Q You worked for Arter & Hadden prior to Mr. Tucker; right?

MR. TUCKER: Absolutely not.

THE WITNESS: Not to my knowledge.

Q (By Mr. Novak) I thought you said you worked on some cases in the past?

A I never said to you, nor can I recall ever saying in any other conversation that I have ever done anything with that firm. If I have, let me just say this,

I don't keep track of everything with any sort of passionate desire to this and that; okay?

All I am telling you is to the best of my recollection, I don't know that firm from a bar of soap prior to Mr. Tucker.

Q Let me just ask you --

MR. TUCKER: Let me state on the record I don't believe that my law firm has ever worked with Dr. Altshuler in the past, certainly not in any FDIC matters, but more than that, on any medical-legal matters.

Q (By Mr. Novak) Doctor, you have had your depositions taken by enough law firms that I assume you have a feel for who represents who. I guess my question is is when you see a law firm that has offices in Columbus, Dallas, Washington, D.C., Irvine, Los Angeles and San Francisco as well as Cleveland, is that going to be the kind of law firm that represents claimants or plaintiffs, or is that going to be the kind of law firm that represents hospitals?

MR. TUCKER: Objection to the question. Go ahead.

MR. NOVAK: The reason I ask that is because your introductory paragraph on every report you have ever written contains the same preface, that you don't know who is representing who.

MR. TUCKER: Robbins, Kaplan up in Minneapolis is one of the largest law firms in the country with law offices all over the place. They represent plaintiffs; right, Mr. Novak?

MR. NOVAK: I don't know.

MR. TUCKER: Well, they are 300 plus lawyers. They represent plaintiffs.

MR. NOVAK: I don't --

THE WITNESS: Is it now my time to answer?

MR. NOVAK: Sure.

MR. TUCKER: Go ahead.

THE WITNESS: There is a crude Navy expression which I won't use, but basically its message says never assume anything. And I long since learned having made one or two mistakes in my life on an assumption on what would appear to be logical that that is not true. And, in fact, you know, I think that Mr. Tucker said the rest of it.

Q (By Mr. Novak) Have you ever talked to Dr. Samdameyer about this case?

MR. TUCKER: You asked that question.

MR. NOVAK: No. I don't think I did.

THE WITNESS: The answer is obvious because I indicated to Mr. Tucker who put it on the record with me that I didn't even remember the name of Sandmire, so

obviously I hadn't spoken with him.

Q (By Mr. Novak) The fact that Mr. Tucker represented Dalkon Shield, the fact that Mr. Sandmire was paid by A. H. Robbins in the '80s and the fact that you had done consulting for this Law firm regarding Dalkon Shields is coincidental; is that right?

MR. TUCKER: Objection to the form of the question. Never did any consulting for this law firm for Dalkon Shield.

MR. NOVAK: Not yours, a law firm. He did consulting for a law firm regarding Dalkon Shield cases. He did it.

MR. TUCKER: Yes.

MR. NOVAK; That is --

MR. TUCKER: What is your point?

MR. NOVAK: My point is you have worked on Dalkon Shield cases, Sandmire was paid by A. H. Robbins in the '80s. He worked on Dalkon Shield cases. My question simply is: Is it just a coincidence that all three of you at one time or another had some contact with Dalkon Shield, and you never got to know each other?

MR. TUCKER: Objection as to what is coincidence or not. He has already told you he never met me before, He already told you he never met Dr. Sandmire.

MR. NOVAK: I just wanted to understand.

Q (By Mr. Novak) You don't know any of these guys except for the first time you met Mr. Tucker was by telephone conversation in August; is that right?

A I have said that repetitively.

Q Okay. In your definitions of hypoxia, I notice you use the words chronic versus acute. Would it be fair to state that whenever you use the word chronic, you are generally talking about 24 hours or more; is that right?

A In the context of perinatal litigations, wherein I am using clinicopathologic correlations in contradistinction from light microscopic changes, it would be within or greater than 24 hours that I would define acute meaning within or chronic meaning in excess of 24 hours.

Q When you talk about perinatal, you generally include that one month following delivery; do you not?

A That is correct.

Q Okay. Now --

A There is just one other statement which if you can type this in block letters that I would like to say, there is a huge difference between when I time something according to a histopathologic change from when I time it according to a pathophysiological change. So in

the event that I am misunderstood down the turnpike as we keep on going in this deposition, you know, I am requesting the opportunity to clarify that right here and now.

Q Whatever that meant. Anyway, you would agree with Dr. Benirschke that you cannot time an insult based on nucleated red blood cells; is that right?

A That is not what Dr. Benirschke said. Pew people understand Dr. Benirschke better than I. What Dr. Benirschke and I have both said is we cannot time it precisely. You left out the word "precisely".

Q But the fact of the matter is that you cannot time it precisely; is that right?

A That's right.

Q And the fact of the matter is that no one is an expert on the timing of the manifestation or fractionization of nucleated red blood cells either; is that correct?

A You would have to define the question. If you are basically saying nobody else in addition to Benirschke and Altshuler can define things very precisely, I would agree with you.

Q Including you?

A That's right. That is what I have just firmly indicated, including me, very much so.

Q So, in any given case, you could not tell us

when nucleated red blood cells would begin to manifest; is that right?

MR. TUCKER: That is not what he said.

THE WITNESS: That is absolutely not what I said. What I said was I am not able to give you a precise timing. By the word precise, one speaks of concepts of seconds, minutes, of very few hours, maybe two or three is when you start to be able to be precise as opposed to two or three minutes.

Q (By Mr. Novak) Doctor, I am simply looking at something you wrote entitled a conceptual approach to placental pathology and pregnancy outcome. There is a sentence there on page -- I guess it is in seminars and diagnostic pathology. Page 217 of that article, there is a sentence there that says, "I am not aware of anyone who knows the precise time course of nucleated red blood cells in the placenta and peripheral blood of the hypoxic human fetus in newborn.

MR. TUCKER: You want to show it to him? That is not inconsistent with what he just said.

MR. NOVAK: My question is --

MR. TUCKER: What is your question?

Q (By Mr. Novak) No one knows the precise time course of nucleated red blood cells in the placenta; isn't that correct?

A Yes. We have just spent three minutes reaffirming that. I don't know the precise time course. Dr. Benirschke doesn't know it. Basic scientists in hematology don't know it in the context of, again in block letters, seconds or minutes.

What we do know is that if there is a massive acute blood loss, one can get the response within two hours. Benirschke knows that, Altshuler knows that. I venture to say other people know that.

Q You would agree with me that you can have an acute hypoxic event superimposed upon chronic hypoxia; can you not?

A I agree a hundred percent.

Q You would also agree with me that you could have hypoxia sufficient to produce nucleated red blood cells without asphyxia?

MR. TUCKER: Without asphyxia?

MR. NOVAK: Uh-huh.

THE WITNESS: Well, I tell you, Bill Parer, P-a-r-e-r, wrote a wonderful paper probably within the last two or three years emphasizing the difficulties and the diagnosis of asphyxia. I can't second guess everybody else's definition of asphyxia, so I can't answer that question. The word asphyxia is an extremely complex entity.

Q (By Mr. Novak) What is asphyxia to you?

A Asphyxia to me is a situation of defining conditions which might be reasonably accepted by clinical colleagues saying what those criteria are and hoping that they will agree that the diagnosis is reasonable in the context of the usage.

And I know for a fact since you have read that paper, you have read my paper with Dr. Allen Herman in which I do believe I gave the criteria relative to less than or more than 24 hours and what the condition of the associated newborns would have been.

Q Can you have asphyxia without irreversible brain damage?

MR. TUCKER: Can you?

MR. NOVAK: Uh-huh.

THE WITNESS: We are running into the difficulties of two men pulling on the tail of an elephant. I have told you that you would have to define for me then what you mean by asphyxia.

Q (By Mr. Novak) I am using your definition.

A Well, by my definition -- what is your understanding, incidentally, of my definition?

Q I am not the one being questioned.

A Well, my point is I can't answer your pestion unless you be specific. And you just said to me

you are using my criteria. I have to know what criteria you are talking about, and do you understand my criteria? Because if you really do understand my criteria, it is impossible for **anybody** to answer the question as you framed it.

Q Just so I know, it is impossible to answer the question as to whether or not you can have asphyxia in a fetus and not have irreversible drain damage, it is impossible to answer that question; is that right?

A In the way you framed it because to be specific, I don't know what you mean by asphyxia. Then you turn around and you say, well, I am using Altshuler's criteria. I don't know which particular criteria you are talking about.

Q Do you understand there is a difference between partial and total asphyxia?

A Of course there is. Also when Ron Meyers used that expression partial and total asphyxia, it was substantially different from what terminology is in the 80s and the '90s.

Q What is your understanding of partial asphyxia?

A Partial asphyxia at this point has been so clouded over the years, that I don't think anybody can have a complete understanding in the '90s as to what that means.

Let me just say this, okay? Let's blow all the foam off the beer --

Q Let the horse out of the barn while we are at it,

A All right. Okay. Broadly speaking, in my opinion, there are three situations to do with a critical degree of hypoxia. One is a very, very prolonged period of low grade hypoxia, which over time, can become critical and implicitly to the point that it can kill fetuses. That is one kind.

Now, in as much as that is the cause of death, it would be naive to deny the word asphyxia, but yet it built up the best illustration being in the mountainous districts where 40 million people live in the world, chronic hypoxia built up over time.

Another is the overwhelming acute and sustained critical lack of oxygenation to the brain which can produce massive multi-system damage that is unrelenting that cannot be corrected by therapeutic intervention. There is that kind.

Unfortunately, the bulk of what I as a person who has been interested in these problems for 25 years see in cases like the problem and the tragedy of Jordan, would be the third kind, and you alluded to it earlier. The child who has had substantial major damage

over time and who experiences a period of superimposed acute lack of oxygen during the delivery process.

Q Would you agree with me there was a major acute insult sometime approximately three hours prior to delivery?

MR. TUCKER: Three hours?

MR. NOVAK: Uh-huh.

THE WITNESS: As I recall, there was a dehiscence of the uterus. There were problems in the delivery. If I understand the question, then I would say that there was a period of acute hypoxic damage within the delivery of Jordan.

Q Okay. So sometime during the delivery of Jordan, without pinning it down to time, would it be fair to state that there was a major acute insult?

A There was what I would consider to be an insult. I am unclear without having the benefit of the perinatologist giving me an opinion that it necessarily was major unless I understand from you or the perinatologist what is meant by major.

Q Let me take the word major out and use the words acute insult. Would it be fair to state that what you had here then was an acute insult superimposed upon, in your opinion, was some preexisting long standing chronic hypoxia?

A I have stated that in the last two to three answers. There was, in my opinion, in Jordan a period of acute hypoxia superimposed upon the preceding long standing hypoxic damage.

Q Now, you can have chronic hypoxia in utero, but it doesn't necessarily have to be clinically significant to the fetus; isn't that correct?

MR. TUCKER: Objection.

MR. NOVAK: Why did you object to that? That was a good question.

MR. TUCKER: Now you can have chronic hypoxia?

MR. NOVAK: I'll take the now --

Q (By Mr. Novak) Can you have chronic hypoxia in utero and not have anything clinically significant to the fetus?

How is that? Is that better?

A Actually, in my opinion, that is an error which probably is best clarified by the explanation to you of a concensus that 90 percent of cerebral palsy and mental retardation damage, most probably rather than more probably than not, results from chronic hypoxia that is clinically not recognized by the attending physicians.

Q Doctor, let me ask you: Do you remember ever telling anyone under oath that one can have a chronic

hypoxia in utero, and such may not be clinically significant to the fetus, and your answer was yes? Do you remember anything like that?

MR. TUCKER: Can you show him his --

MR. NOVAK: I am just asking if he remembers. That is my understanding of the rule.

MR. TUCKER: My understanding of the rule is that he is entitled to see the statement that you are confronting him with. My understanding of the rule and so is yours is that he is entitled to see the statement.

MR. NOVAK: You are giving me more credit in being a good lawyer than it is worth, I think.

THE WITNESS: Let me be sure that you are not misunderstanding; okay?

MR. NOVAK: Doctor, I don't misunderstand.

THE WITNESS: That is not true because I think when you will be introspective and read earlier parts of this deposition that you -- because you are not a pathologist, occasionally misunderstand the intent of what has been said.

Now, what I am saying to you is that hypoxia can produce damage. I have defined three broad pathogenetic problems. If you would say to me, "Doctor, is it possible that one can have chronic hypoxia without affliction of the associated newborn", then the answer is

of course that is true.

Q That was my question.

A But, let me finish, The question is the matter of degree. And it is so gracious of you that earlier in this deposition, if the court reporter was following it, that you complimented me that no one is going to trap me on being taken out of context, and you're not. So if you focus the question, I will give you a brief to the point answer.

Q I have a hard time focusing because I am relatively simple, so we understand each other --

A If you focus the question, then I can be much more brief in my answer. Otherwise, I have to explain to you exactly what I mean and what I probably meant in the item that you read from an earlier deposition.

Q If a fetus has chronic long standing hypoxia and you have superimposed on it an acute event of hypoxia, an acute insult, would it be fair to state that that would lead to irreversible brain injury?

MR. TUCKER: Objection.

THE WITNESS: Quite the opposite. I can't quote them for you, but I know I have said on several depositions quite the opposite, that chronic hypoxia has a protective effect against overwhelming multi-system acute cardiovascular collapse and organ injury. It has in

essence a protective effect in the same way that people who live at high altitude and who would experience a crisis in an airplane with lack of oxygen supply will compensate to that massive physiological alteration much better than somebody who lives in Cleveland on sea level.

Q (By Mr. Novak) Fetuses can adapt to chronic hypoxia because it is just like taking somebody to the Andes, they get used to the air; right?

A Yes. In the Andes, they have a significantly increased risk of death from fetal hypoxia. So my point is hypoxia is a matter of degree, and it can kill. But depending upon the evolution of the hypoxia and the adaptation of the fetus, it may kill or it may enable that fetus to sustain events such as the tragedy of Jordan.

Q Just so I understand in Jordon's case, you believe there was a chronic long standing hypoxia, and superimposed on that was an acute insult?

A I have not the slightest doubt about that whatsoever.

Q Okay. Now, in the materials that you reviewed, you indicated that you reviewed St. Luke's records. Do you know what records at Saint Luke's that you reviewed?

A Well, I provided extracts which you have read already. If I failed to identify them, I apologize.

I have here the records. And since Mr. Tucker provided you with our correspondence, you will have the entire itemization of what I have reviewed.

MR. NOVAK: It is not in these.

THE WITNESS: What I am saying is the only thing that I have reviewed by way of clinical information is what I brought with me and what has been forwarded.

MR. NOVAK: Let me try to make it a Little easier.

Q (By Mr. Novak) Did you ever see Jordon's brother's records?

A I don't believe that I have ever seen Jordon's brother's records.

MR. TUCKER: I take it back.

MR. WILLIAM J. TUCKER: I don't see it. Is it in there?

MR. TUCKER: There is in the notebook that I sent to him, which is in my correspondence in which you had a letter which says labor and delivery records from St. Luke's.

MR. WILLIAM J. TUCKER: I apologize.

MR. TUCKER: You misstated something on the record.

MR. WILLIAM J. TUCKER: I said I didn't see it in there. I didn't see it in there. Is that a

misstatement if I didn't see it in there; Bob? Come on, Bobby.

MR. TUCKER: Excuse me?

MR. WILLIAM J. TUCKER: I said come on,

MR. TUCKER: Bobby?

MR. WILLIAM J. TUCKER: Bob, whatever.

THE WITNESS: All I can say is that the only medical records that I have used that I felt were important to my considerations were what Mr. Tucker sent me. And I, in essence edited, meaning that I threw out and destroyed a bunch of them without using the items other than what I extracted.

Q (By Mr. Novak) You know, in your conceptual approach article, there is a statement here that says in referring to Fox, you then said this statement does not recognize that normal full term placentas never have readily identifiable nucleated red blood cells. Okay. Do you remember that statement you made in there?

A Sure.

Q Okay. So obviously, a normal baby shouldn't have any nucleated red blood cells in its placental, nor should he have any in his blood; should he?

A That is not true. The statement that I nade, again, I want to make it clear with you that you take the words literally. I said they never have readily

identifiable. Obviously, they are there. But if you will look at the data of Green and Mimouni just taking the postnatal blood of the babies, the 50 percentile term is zero. That doesn't mean to say that the technologist wouldn't be able to find a nucleated red blood cell. It just means that it is very, very difficult to find them.

Q Well, I guess so I understand, full term baby, it would be very rare to find a nucleated red blood cells either in the placenta or in the baby's blood immediately after delivery if you have a normal baby; right?

A That is true. What I am saying is one would have to count a very, very large number of cells and examine them with the eye to find a nucleated red blood cell. They are there, but they are so unusual that it is, in essence, a real effort to find them.

Q Since there is at least an 85 percent concordance with the placenta nucleated red blood cells and the blood of the baby, I mean you would agree with the concept that if we find nucleated red blood cells in the placenta, we should find them in the blood; right?

A Well, I have to caution you. The 85 percent term, meaning terminology, relates to the baby at term. It does not relate to being able to quantify precise numbers. Do you see what I am getting at?

Q I understand that, Doctor. But let's say in this case, in Jordon's cases, there were nucleated red blood cells found in his blood; right?

A In Jordon's case, they were blatantly obviously in large numbers to the point that if you look back in my original description, okay, in my original description, I believe I used language such as quote, a very large population.

Q Let me ask you: The percentage rate in his blood was 69 percent; is that right?

MR. TUCKER: No.

THE WITNESS: No. You see that is not true. Correct me if I am wrong. If you go to the facts, you will find that there was 69 for every one hundred blood cells that were present.

Q (By Mr. Novak) Right.

A That is why it is wrong in the pure sense, and this was Green and Mimouni's point, to say 69, or alternatively 89 or 49, unless you make it very clear what the number of white cells were in the per liter volume --

Q They are talking about 69 per 100 white blood cells --

A At a time when the white cells were, in fact, very large. The white cell population was very large. So that what they are really saying is there was

16.9 times ten to the ninth power per liter, which is almost 17 times the 90th percentile of sick babies in sick baby nurseries.

17 times the 90th percentile is what Jordon had literally one and a half hours after delivery,

Q Did you ever try to find out from Mr. Tucker what his brother Taylor's nucleated red blood cell count was?

A That question amazes me. I certainly -- I certainly did not do that. If you are implying some sort --

Q I am not implying anything, Doctor. I am just asking if you ever --

A Some sort of reason for me to do that, I am mystified. Why would I do that?

Q Wouldn't it be interesting to know if his brother Taylor had any nucleated red blood cells either in the placenta or in his blood?

A No. I would be suspicious that that was causing an unnecessary amount of work to produce an inflated bill for no good reason. I mean, it would take his time, it would take my time. It would just be -- to me to be totally irrelevant.

Q Would you be interested in whether or not since Mr. Tucker talked to you for a couple of hours

regarding Dr. Kaplan's deposition, as to whether or not Taylor might have ABO incompatibility?

MR. TUCKER: Objection to the form of the question.

THE WITNESS: It would be of absolutely no interest to me whatsoever because ABO incompatibility, in my opinion, is absolutely not the reason for this massive population of nucleated red cells either in the placenta or in the blood at one hour and 32 minutes postnatal life.

Q (By Mr. Novak) If Taylor had nucleated red blood cells and if he had ABO incompatibility, would it be fair to state that the logical extension of that would be that Jordan would have nucleated red blood cells and ABO incompatibility given the fact of his mother's blood type?

MR. TUCKER: I'm going to object to the pestion. You haven't given him all the facts for Taylor's delivery.

MR. NOVAK: I am asking him to assume some Eacts. I am assuming. This is a hypothetical question.

THE WITNESS: Let me accept the hypothesis. Let me get right to the bull's eye. The issue here of the ABO, whether or not Taylor had ABO, is totally irrelevant because the foreign protein of Taylor and/or Jordan or Jordan and/or Taylor just does not produce enough antibody in the mother to produce massive hemolysis in the baby.

And this is not just extremely well-known from my personal experience of 25 or more years, but exceedingly well-known in the very, very few papers that you will find on the subject, if you do a literature search.

And since I believe strongly in the concept of discovery deposition, you know, as to where is a witness going to come from, I have even provided to you, in my opinion, one of the extremely few scholarly papers that have been written to the subject and then other explanation as to why it doesn't make any sense to say that ABO would be a significant part of this case relative to the massive population of nucleated red blood cells.

MR. TUCKER: Relative to your hypothetical, Mr. Novak, I think the doctor is entitled to know that with Taylor's birth, there was chorioamnionitis as well as funicitis in that pathology report to the extent that that bears upon your, quote, hypothetical question about Taylor, the nucleated red blood cells and incompatibility.

MR. NOVAK: You are reading from the placenta; is that right?

MR. TUCKER: I am reading from the records that you are apparently asking him about.

MR. NOVAK: I am asking hypothetical questions.

Q (By Mr. Novak) I guess my question €or you, Doctor --

MR. TUCKER: Well, you are asking hypothetical questions about Taylor which don't bear any relationship to Taylor's circumstances.

MR. NOVAK: I don't know if they do or don't. That is why I am trying to find this out. I don't want to come back, if we don't have to.

Q (By Mr. Novak) If Taylor had nucleated red blood cells, and if he was ABO incompatible, do you disagree with the notion then that Jordon should also have nucleated red blood cells and also be ABO incompatible; is that right?

MR. TUCKER: Object to that because you are assuming if Taylor had nucleated red blood cells, that they were due to ABO incompatibility. Unless this doctor has the circumstances and facts of that placental evaluation before him, he can't make that determination.

MR. NOVAK: I am speaking strictly of the blood, the fetal blood; okay? Let's limit ourselves to that. Can we do that? Forget the placenta. I want you to assume --

THE WITNESS: Excuse me. Fetal blood --

Q (By Mr. Novak) Can you answer my question, please?

A Provided if it makes sense.

Q It makes sense to me. Et doesn't make sense to you?

MR. TUCKER: That is not the issue. It has got to make sense --

MR. NOVAK: He doesn't want to answer my question. That is what it is.

MR. TUCKER: Just one second.

THE WITNESS: May I correct --

MR. NOVAK: I am not yelling. He is laughing at me. I don't appreciate it.

THE WITNESS: Because you are not giving me the opportunity to explain the falacy of your point.

MR. NOVAK; Doctor, I'm not going to let this deposition be your soap box; okay? You are going to answer my questions the way I put them to you.

MR. TUCKER: Stop yelling at him.

MR. NOVAK: You stop yelling at me; got it, Buddy?

THE WITNESS: Let's all be friends and ask the question again. Then I will answer it.

Q (By Mr. Novak) Very simple question.

A Right.

Q If hypothetically Taylor is diagnosed as ABO incompatible and has nucleated red blood cells in his

blood, would it be fair to assume then -- I'm going to take the word assume out.

Would it be fair to state that one should expect that Jordan should also have nucleated red blood cells in his blood and also should be ABO incompatible?

MR. TUCKER: I'll object to the question, assumes facts which aren't true to begin with.

MR. NOVAK: I'm asking a hypothetical question.

THE WITNESS: It would not be fair to say that. That is the same sort of assumption style thinking that can get you into big trouble. What I have said is I accept opinion that some of the nucleated red cells in Jordan may have been present because of ABO incompatibility.

The issue is not the presence of the nucleated red blood cells. The issue is the massive presence of nucleated red blood cells. That is the issue, no if's, no but's, no maybe's, the massive presence.

What I am saying is one never gets this number in the placenta. My objection to your earlier point was you said let's talk about the fetal blood. Then you said let's forget the placenta. For crying outloud, fetal blood is in that placenta.

It has an incredible population. 16.9 was

at one hour and 32 minutes. You can bet you it was close enough to that at the time of birth.

Q So, you would agree with me --

A I mean 16.9 times ten to the ninth power, millions upon millions of nucleated red blood cells. You will never get that with ABO incompatibility.

Q So, you would agree with the statement, would you not, that some of his nucleated red blood cells, meaning Jordon's, may be attributable to ABO incompatibility?

A In my experience, and I believe the literature supports this opinion, a very small component thereof.

Q Are you familiar with the percentages of people of African American descent and whether or not they have greater presence of nucleated red blood cells and ABO incompatibility as opposed to Caucasians?

MR. TUCKER: Objection to the form of the question. There are two questions there. You asked about ABO incompatibility and people of African American descent and then nucleated red blood cells and people of African American descent.

MR. NOVAK: Let me break it down.

Q (By Mr. Novak) Are you familiar with studies demonstrating that African Americans, there is a

greater percentage of African Americans versus Caucasians who have children with ABO incompatibility; are you aware of that?

A I brought with me, as a matter of fact, some figures on differences between races. I am aware of differences. I am not aware of any study and in truth, you know, in the matter of discovery, I brought that with me.

I also brought with me papers from other authority which have totally different figures.

I am not aware of any authority who has ever done a study that has corrected for confounding influences. My sense is that explains why the very exhibits that I brought with me have discordant results between one authority and another.

Q Let me ask you this: If hypothetically Jordon's brother, Taylor, had nucleated red blood cells in his blood and Taylor is normal now, when he was discharged Erom the hospital, let's assume he was normal. He is iormal now. Can you attribute some of that to chronic iypoxia?

MR. TUCKER: Objection to the form of the pestion, assumes facts which aren't true.

MR. NOVAK: Hypothetically.

MR. TUCKER: It assumes facts that aren't ;rue. Go ahead.

THE WITNESS: You are asking me to answer that if I was hit by a General Motors vehicle, it would be irrelevant as to whether it was the smallest Chevette on the market going at ten miles an hour or whether it vas a ten ton truck going at 80 miles an hour with full impact.

In other words, the question is impossible to answer in the manner in which you framed it. The issue here is simply that Jordan had **16.9** times ten to the ninth power per liter. Now, I will tell you again, when I looked at the placenta, I had no doubt that it would be a very large postnatal count.

I had no doubt the first thing that got Mr. Tucker fired up was I want to tell you, this has an enormous population. There had to have been -- there had to have been either, you know, long standing chronic hypoxia or massive acute fetal blood loss.

Q (By Mr. Novak) He told you that?

A No, I told him.

Q But, you just said he got fired up.

A Look, I think you are not following the sequence.

Q No, I'm following. You said he got all fired up.

A Meaning excited because clearly that would help his case because he would have known there was no

massive acute fetal blood loss, which means that the other, the ultimate differential diagnosis had to have been true on the basis not of the nucleated red cells.

I mean, we are not talking here, you know, nucleated red cells. We are talking mega nucleated red cells. Let me tell you something, this is a massive population, 16.9 times ten to the ninth power.

Q Would it be fair to state -- I think you have answered this before. If Taylor has nucleated red blood cells in his blood --

MR. TUCKER: Today?

MR. NOVAK: No, when he was born.

MR. TUCKER: He didn't.

MR. NOVAK: If he did.

MR. TUCKER: But, you are making something up. It is not true.

MR. NOVAK: No, no. If he did.

MR. TUCKER: Well, you know he didn't, Bill. You can't make up stuff. There are no nucleated red blood cell counts for Taylor.

MR. NOVAK: Do you have his records?

MR. TUCKER: I sure do.

MR. NOVAK: Let me see.

MR. TUCKER: You want to see them?

MR. NOVAK: Yeah.

MR. TUCKER: So, you will then put on the record that you are making something up?

MR. NOVAK: No, I just like to see them. I'm just curious.

MR. TUCKER: I'll give you my copy of the records.

MR. NOVAK: Okay. How did you get these records, by the way?

MR. TUCKER: I subpoenaed them.

MR. NOVAK: You never gave me a copy.

MR. TUCKER: That is another issue for another day.

MR. NOVAK: No, I mean, did you ever send me a copy of these?

MR. TUCKER: I can't answer that question.

MR. NOVAK: I can tell you that you did not. Let me ask you a question.

MR. TUCKER: You don't have them?

MR. NOVAK: You never sent me these.

MR. TUCKER: I didn't ask that; did I, Bill?

MR. NOVAK: No, you never sent me these.

MR. TUCKER: I didn't ask you that. Do you have them?

MR. NOVAK: You never sent me these. You never did; did you?

MR. TUCKER: I can't answer that question. I don't have my file.

MR. NOVAK: Sure you can. If you looked at your file, you could tell me.

MR. TUCKER: I'm sure I will look at my file. I will determine how I obtained them. I either obtained them by subpoena or by --

MR. NOVAK: I'm sorry. I just want to see the rest of Jordon's records. I'm sorry.

MR. TUCKER: You want to see Jordon's records?

MR. NOVAK: I'm sorry, Taylor's. That is all you have?

MR. TUCKER: Yeah.

MR. NOVAK: Okay. Fine.

MR. TUCKER: I have the Saint Luke's records. Maybe this will tell me how I got these.

MR. NOVAK: All right. I'm sorry. I won't touch your stuff.

MR. TUCKER: You don't have these records? Why don't you put on the record --

MR. NOVAK: I don't have your set of records, I do not.

MR. TUCKER: I didn't ask that; did I, Bill?

MR. NOVAK: Let the record show that Mr.

Tucker never provided me with a copy of the records that he got pursuant to subpoena. In fact, I didn't even know he subpoenaed them.

MR. TUCKER: I will tell you candidly, I don't know whether I subpoenaed them or got them by authorization. I believe I had an authorization at one point in this case as well.

MR. NOVAK: Your duty, and I gave you the authorizations on the notion you would provide me with copies of everything you got. You obviously didn't.

MR. TUCKER: As I said, I can't answer that question, but it is all kind of irrelevant.

MR. NOVAK: Oh, really?

MR. TUCKER: Because I know you got them.

MR. NOVAK: Oh, really? How do you know I got them?

MR. TUCKER: I don't know.

MR. NOVAK: How do you know I got them?

MR. TUCKER: We will look into that.

MR. NOVAK: How do you know I got them? How do you know I got them?

MR. TUCKER: Because you do.

MR. NOVAK: How do you know I have them? Did someone from Saint Luke's call you?

MR. TUCKER: Absolutely not.

MR. NOVAK: Because I know you people represent Saint Luke's. They wouldn't do that, though; would they?

MR. TUCKER: No, they wouldn't.

MR. NOVAK: Okay. So you think I have the records because you gave me a copy?

MR. TUCKER: No, I believe otherwise you wouldn't be asking all these questions. You are making stuff up though, which I don't understand.

Q (By Mr. Novak) Let me ask you something, Doctor. I want to go to your report.

MR. TUCKER: By the way, Mr. Novak, can we have on the record there are no blood counts of nucleated red blood cells for Taylor?

MR. NOVAK: No. I am not going to do that.

MR. TUCKER: You're not going to --

MR. NOVAK: I'm not going to agree to anything with you. Let me tell you something. You haven't been square with me; you like that? Because when a guy tells -- takes an authorization from me and doesn't give me a copy of the records, you know what? That stinks. It smells real bad in here, Mr. Tucker; okay?

Q (By Mr. Novak) Doctor, would you please turn to your reports.

A Which one would you like?

MR. NOVAK: Let's just say that I don't entirely trust you. Do you like that?

MR. TUCKER: Your personal comments mean nothing to me.

MR. NOVAK: I know that. That is a sad commentary because they should mean something to you because I would be very upset if someone said to me that they didn't trust me; okay?

MR. TUCKER: I take the origin of the comment because I know you have the Saint Luke records. You know you have them too.

MR. NOVAK: How do you know I have them?

MR. TUCKER: Why don't you say --

MR. NOVAK: Why don't you put on the record that I know I have them because somebody told me.

MR. TUCKER: Why don't you say --

MR. NOVAK: Then you don't know; do you?

MR. TUCKER: Why don't you say on the record you have them, Bill.

MR. NOVAK: I'm not going to do anything.

MR. TUCKER: You see, that is my point.

Q (By Mr. Novak) Doctor, let's get to your first --

MR. TUCKER: I consider the origin of your comments.

MR. NOVAK: Good. At least I haven't said anything that wasn't a fact.

Q (By Mr. Novak) Let's get to the report, Doctor.

MR. NOVAK: You think that is real funny. It is a sad commentary, Mr. Tucker.

Q (By Mr. Novak) The amniotic epithelium in your first report refers to surface; does it not?

MR. TUCKER: Objection.

THE WITNESS: Correct.

Q (By Mr. Novak) Now, by the way, I want to get to the umbilical cord before we talk about placental membrane, Slide A. The Wharton's jelly has no obvious meconium laid microphage; isn't that right?

A None that I could appreciate.

Q You remember that article you wrote in the medical-legal imperative?

A I don't remember exactly what I said, but you tell me what allegedly I said. I will tell you if it is probable or not that I said it.

Q By the way, there was also no necrosis of the vascular media; is that right?

A That is true.

Q Now, on Page 694 of that article, do you remember saying that when meconium is in the fetal amniotic

sac for three or four more hours, it is simultaneously diffusing into the Wharton's jelly of the umbilical cord and into the placental sub-amniotic connective tissue. Necrosis of the umbilical cord vessels and of the vessels across the placental surface eventually ensues. When meconium has been present for many hours, the vascular damage is so severe that it is readily recognizable on hemoto --

A I understand what you are saying.

Q -- stain slides. I guess my question is: You talk about three or more hours, but the fact of the matter is you don't have any meconium in Wharton's jelly; is that right, in this case?

A I did not see meconium ladden microphages. That is why I said in earlier testimony I want to be very sure that people understand the difference between what I mean by pathophysiological processes and morphological or histopathologic functions.

So when I speak about diffusion through tissue, that is enormously different in its meaning from what does it mean to see cells at particular locations of particular parts of the placenta or of the bag of waters or of the Wharton's jelly in the umbilical cord. They are two different considerations.

Q Doctor, the fact of the matter is that if

there is no meconium that you saw in Wharton's jelly, it is an indication that this is not an instance where meconium has been present in the amniotic sac for more than three hours; isn't that correct?

MR. TUCKER: That is not what he said.

Q (By Mr. Novak) That is my question.

A No, that is not a valid statement for you to say that. I don't believe that it is reasonable to say that just because one can't see meconium laden microphages, depending upon the quality of the slide, the thickness of the slide, the staining of the slide, the triage and processing of the slide, the age of the slide, the amount of light that has been present in a room which has a photo therapy effect on pigment of slides.

There are so many variables that all that you can say is that if you see deeply situated cells with neconium in them, that you can make certain considerations. But, the absence of those features and the obvious presence at other locations does not deny pathophysiological events occurring at the two different sites, even though you only see the evidence at one of the two sites.

Q Doctor, the microscopic description which you have here for Slide A, we are talking about light microscopic; is that right?

A That is correct.

Q Okay. In your other article entitled the medical-legal imperative placental and epitheliology -- I can never say the word, but you know what I am talking about.

A I understand.

Q Under the heading of chronic meconium staining, don't you say light microscopic examination then shows numerous deeply located meconium laden microphages across the placental chorion and within the umbilical cord. You did say that in your article; did you not?

A That's right. And you are not really listening --

Q But, Doctor --

MR. TUCKER: Let him finish his answer.

THE WITNESS: You are really not listening. I answered the question already. You have a whole bunch of confounding influences that if court reporter would be kind enough to read back my answer --

Q Which one?

A -- would give you the answer.

Q Which one?

A Would you like to read that back, what I said?

THE REPORTER: You're talking about the --

THE WITNESS: I gave a long answer because I

anticipated what Mr. Novak's confusion would be.

MR. NOVAK: I don't think I am confused, Doctor.

THE WITNESS: Well, Let's see if I can respond in a way --

MR. TUCKER: Have him ask a question.

THE WITNESS: All right.

Q (By Mr. Novak) Would it be fair to state that in the microscopic description, which you have here, there were no meconium laden microphages within the umbilical cord; is that a fair statement?

A I have answered that already. I could not appreciate, I could not see them. That has been answered already.

Q Would you agree with me that in the Literature which you have written, chronic meconium greater than 24 hours, you should see meconium laden microphages deep within the umbilical cord; should you not?

MR. TUCKER: Objection, he has answered.

THE WITNESS: Okay.

MR. TUCKER: You can answer again.

THE WITNESS: No. Actually, I want to be fair to -- no, I appreciate this very, very much. I really do, because I want to be very fair to Mr. Novak and answer this is in a way I hope he will feel it is honest because

it is very honest, and Dr. Kaplan will know this is very honest; okay? Let me be sure there is no misunderstanding here.

I told you earlier an that when I use terms it relates to the clinicopathologic correlation of intrapartum or internatal events being acute less than 24 hours; okay? And more than 24 hours as being a pathogenesis of prenatal. I want to be absolutely fair to you. I hope that you can be fair to me by listening to me very, very carefully; okay? That was the context in which I answered the question. I wrote it down. I stand by it now.

Traditionally, most people, when they speak about an acute event of meconium staining, are talking about the slimy green stuff that is on the surface of the placenta; okay? And there is a consensus that that slimy green can even wash off.

And if there is staining, it is very, very superficial; you see? And the point is when you see it in the deep part of the surface there next to the chorion, it is three or more hours. Then by convention, I do believe that Dr. Cindy Kaplan as well as Jeff Altshuler would view that then as the concept of developing beyond chronic.

And so then you start to change from green to green-brown. So in the context of quote end quote acute

versus chronic meconium staining in everything I have written, and I do believe Dr. Kaplan would have phoned this to you. I do not mean that you can only have chronic meconium staining if the meconium was discharged 24 hours and one minute prior to delivery.

Now, that is the difference between that if I would talk about legal things, I wouldn't understand what on earth you are talking about because I am not an attorney. I am trying to clarify that I do believe Dr. Kaplan would understand exactly what I mean.

Q I want to be very specific then. In your article, the medical-legal imperative article, when you discuss meconium for three or more hours; okay?

A Okay.

Q That three hours meconium is the difference between what one would call acute versus long standing meconium; right?

A Acute versus chronic. In other words, if it has been there for three hours and one minute, now you are talking chronic.

Q Now we understand we are on the three hour --

A I apologize because, you know, I don't write these articles, believe it, for lawyers. I really don't.

Q So I guess my question then is: Since there

is no meconium laden microphages in the umbilical cord, okay -- just follow my question, would it be fair to state then that we are talking about something that is occurring less than three hours?

MR. TUCKER: Objection. That is not what he said.

THE WITNESS: No. Let's get right to it in the purpose of discovery. It would be my opinion, okay, irrespective of how much, we will use the term in potations, phototherapy there has been on the glass slide -- do you understand what I mean by this? If not, I'll explain.

Q (By Mr. Novak) Keep going.

A If you put a glass slide on a table, and there is a lot of light on it for a period of time, the pigment will fade; okay? Setting all of that sort of stuff aside, setting all of those confounding variables aside, the thickness of the tissue, the quality of the hemotoxin and die and everything, I would be prepared to agree with you and Dr. Kaplan that if I cannot easily see meconium microphages anywhere there, that the fetus must have defecated less than 24 hours prior to delivery.

I would believe that it is more probable than that just looking at that one issue alone. Now I don't think when you come to a final opinion, you can ever

go by just one criterion alone. But, if I were to use that and only that criterion, that criterion exclusively would indicate to me that the absence of appreciable meconium cells in the cord would mean that it is more probable than not from that criterion alone that the fetus had defecated less than 24 hours prior to delivery.

Q I want to go one step further. My question was on three hours since we had used three hours as the time for acute versus chronic with respect to meconium. Would it be fair to state then that since the Wharton's jelly did not have obvious meconium laden microphages and there was no necrosis of the vascular media, and there was no meconium laden microphages within the umbilical cord, that any meconium passage occurred less than three hours prior to delivery?

MR. TUCKER: Objection. He has answered that question.

MR. NOVAK: He didn't.

THE WITNESS: Let me -- I think I want to be fair to Mr. Novak here because I think he is asking a slightly different question in all fairness to him.

MR. NOVAK: Thank you.

THE WITNESS: In my opinion, you are asking would it be fair. I would say it would be grossly unfair because it has been my experience, okay, it has been my

experience that the reason it would be extremely unfair is this: In this particular specimen, there were a significant number of meconium laden microphages in the extraplacental membranes. Now, I'll stop if you like because you are reading something.

Q No, I am listening. I can do two things at once, believe me.

A In this particular specimen, I make the point that in Slide A, the extraplacental membranes have many meconium laden microphages, but there were numerically less of those microphages at deep locations sampled from the extraplacental membranes of Slide A.

Part of the reason that people should be very cautious about one observation made from one piece of tissue, for example, the umbilical cord, is that when you go to other sampling in Slide B, I put in bold font to draw attention to the fact that there were more meconium laden microphages deep in the tissue.

And based upon my experience, I would say that you are being very unfair to me in that earlier thing because -- let me finish, because in my experience, when I see meconium laden microphages in large number in both extraplacental membrane sections and in one of them including in deep locations and separately, separately that the first case has -- the first case that lacks the deep

microphages has degenerative epithelium with vacuoles, that particular part that has been sampled has been a repair area where there may not have been persistence of the pigment in there because it has been transported away from there.

To me, this whole picture represents easily as much as 12 hours' period of time from the event of defecation from the fetus.

Q Doctor, when you wrote these articles, you used the word "and", not "or". May I finish my question?

MR. TUCKER: I am sure he used the word "and" and "or".

MR. NOVAK: No, he used the word "and" and not "or"; okay?

MR. TUCKER: I don't know what you are talking about.

MR. NOVAK: I know you don't.

MR. WILLIAM TUCKER: Let him finish. That is fine.

MR. TUCKER: Why don't you show the doctor --

MR. NOVAK: I have read what I am talking about.

Q (By Mr. Novak) When you referred to three hours or more --

MR. TUCKER: Where does it say three hours here?

MR. NOVAK: In his article on placenta within medical-legal imperative on Page 694 archives pathology lab medicine.

THE WITNESS: You are looking at a different paper.

MR. NOVAK: You are looking at the wrong paper.

THE WITNESS: You know it helps if the witness has a chance to see --

MR. TUCKER: Give him a copy of it.

MR. NOVAK: Sure. Take a look.

THE WITNESS: Thank you.

Okay. That is why I told you in anticipation of your question from the outset, I said put it in block letters that there is a huge difference between pathophysiological activities and morphological features. If you take this sentence as you read it to me, the first sentence is talking about a diffusing process. Something dynamically is happening.

The soluble part of the meconium obviously not the particulate matter, you know, the soluble part is diffusing through. Then when I switch gears and talk about necrosis of the umbilical vessels, the common sense

implication is that the toxin in that soluble product has been there for a longer period of time if you have a histopathologic change such as necrosis.

So there are two different concepts. One is pathophysiological, dynamic action of diffusion, and the other is tissue change. That is where you are becoming greatly confused.

Q (By Mr. Novak) No. Do we have an agreement that when we talk about meconium, anything less than three hours is acute, anything more is chronic?

A We have that understanding, yes.

Q Okay. So let me get back to the article which Mr. Tucker has which is the one that came out of the volume. It is the other, medical-legal. Let me have that one back. If we talk about chronic meconium staining, this is the sentence that you wrote. It says: Do you have it there?

The sentence says light microscopic examination then shows numerous deeply located meconium laden microphages across the placental chorion and within the umbilical cord.

The fact of the matter is in this case, they are not within the umbilical cord; isn't that correct?

A Now, you see, unfortunately, I really do believe you are taking me terribly out of context.

Q No, Doctor, can you just answer my question? Are they in the cord or not? Is that that hard?

MR. TUCKER: Let him finish.

THE WITNESS: Now, look --

MR. TUCKER: Just one second, Doctor.

THE WITNESS: Yeah.

MR. TUCKER: Let him either finish his answer --

MR. NOVAK: Or what?

MR. TUCKER: Stop arguing with him. Don't tell him is it that hard --

THE WITNESS: Are you here to find out what the witness says or means, or are you here to try and manipulate by taking things out of context? Because I want the judge to know, and I mean it. I find this patently harassment because you have taken it totally out of context.

MR. NOVAK: Doctor, I am reading exactly what it says here.

MR. TUCKER: Just one second. Put a question to him.

MR. NOVAK: I read his --

MR. TUCKER: One sentence out of context.

MR. NOVAK: I'll tell you what. May I read the entire paragraph so it is not taken out of context?

THE WITNESS: Read the --

MR. NOVAK: Read the whole paragraph. How is that? Can we read the whole paragraph?

MR. TUCKER: Put a question to him, Bill.

Q (By Mr. Novak) Let's read the whole paragraph because while we are at it, let's talk about developing a brown-green color. This placenta did not have any brown in it; did it?

A You are really taking this whole thing out of context. Read the paragraph; read the paragraph.

Q Let's go sentence by sentence. After meconium has been present across its surface for a couple of hours, a couple of hours, less than three --

A Okay.

Q -- a placenta develops a brown-green color; okay?

A Right.

Q Is it brown-green here?

A I would have to check, but I doubt that it is. I would have to check.

Q Okay. Light microscopic -- you want to make -- check to make sure?

A No, let me just make this point.

Q Go ahead.

A This is in the context of fresh specimens,

which are my materials and methods, as opposed to whether it has been triage formal and fixed and being kept for a day or more beforehand, this whole thing is in the context of color changes. So let me just have that on the record because we can go into that, and all of that stuff is in my publications and not just made out of the air, So let's read the next sentence --

Q Let me ask you while you are at it. Bid you check to see what the triage was on this case?

A The triage on this case, I did not check because it is impossible. It is impossible for me to know how many hours it sat at whatever temperature before they put it into the refrigerator. Let's just continue because the answer is let me have the records. I do not believe that it was a brown-green color, I will double check that.

That is my understanding, that it was not a brown-green color. Now, the records say, even without clinical information, that it was received in saline. Any pathologist will tell you that it is exceptional to receive placentas in saline. That is going to radically alter factors right there.

So you can't take me out of context in your first question where you were talking light microscopic and where the sentence immediately before it says the longer the period of time between meconium discharge and fetal

delivery, the more brown the placenta becomes.

Now, if it has been received in formalin or if it has been refrigerated in a particular way or kept at room temperature in a different way in formalin for a little bit and taken out and then left on the table, I can't speak to confounding influences,

Clearly in this case, the first words in the report say received in saline. That is all part of my emphasis to you earlier in a long answer, it depends upon variable and confounding influences.

But, I stand by what I wrote on Page 252 in the paper to which you referred and in the context of the present case.

Q Are you telling us then that the way that this placenta was prepared for purposes of examination would have an impact then on your findings?

MR. TUCKER: On what findings?

MR. NOVAK: Well, he indicated he was not happy it came in saline. It wasn't formalin.

Q (By Mr. Novak) I am a little concerned, Doctor. Are you telling me you are not real happy about the way this placenta was prepared?

MR. TUCKER: Objection to the form of the pestion. He never said he wasn't happy about anything. rhose are your words.

Q (By Mr. Novak) It is not consistent with your triage; is that right?

MR. TUCKER: Those are your words about him not being happy. Those are not his words. I object to the form of the question.

Q (By Mr. Novak) It is not consistent with your triage?

A Do I get a chance to tell you what the witness has as an opinion or not? I mean, is that my purpose here tonight is to tell you my opinion?

MR. TUCKER: No, just answer his questions. If he doesn't ask questions --

THE WITNESS: He is not giving me an opportunity.

Q (By Mr. Novak) I guess my question is this: Was this placenta, for purposes of your examination, was this prepared pursuant to your logistics of placental triage?

A No, it was different; and, therefore, I would have to be even more careful not to depend upon any single criteria.

Q Okay.

A I have told you, and it is in my reports, and you have read the reports already. In my opinion, it is more probable than not that meconium was present in that

fetal sac for at least 12 hours prior to delivery. We could have saved all of that time if I could have just had the opportunity to restate that I wrote it before, I meant it then, and I mean it now.

Q Given the fact that there is nothing in the cord, could be less than 12 hours; couldn't it?

MR. TUCKER: Objection to the form of the question.

THE WITNESS: Anything --

MR. NOVAK: Is that a funny question? I didn't think it was funny.

THE WITNESS: Anything is possible. I am just telling you that based upon the features of the erosive change and the vacuolated degenerative change in that first slide that I described, based upon the fact that there were meconium laden microphages in that same first slide --

Q Slide A?

A Slide A, the extraplacental membranes, I explained that confounding influences may explain why I didn't see them in that particular slide deep down. But, I told you that there were both acute necrotic changes, that is to say necrosis and degenerative changes with vacuoles.

I separately emphasized that there were more of the pigmented cells that were deep in Slide B as opposed

to Slide A; and that at the time when I made that final judgment, and let me tell you, I had it yellow highlighted, and that is the joy of having theae things, I probably factored that thing in along with all of these considerations to say it is more probable than not that it has been there €or 12 to 18.

Now, I can't precisely time meconium, so I would be a pompous ass if I would have said 12 to 14. The 12 to 18 is simply to say that I don't really believe that it is anywhere near 24.

Q Possibly less than 12?

A Possibly, but unlikely €or the reasons given.

Q Now, in Slide A, when you talk about the necrosis and degenerative epithelium with vacuoles, that is on the surface; is it not?

A True.

Q You did not see any such cells in Slide A in deep locations?

A We have been through this five times.

Q You can either say --

A We did not.

MR. TUCKER: It says here there are numerically less cells at deep locations. Your question was he didn't see any cells in deep locations.

Q (By Mr. Novak) Greater the numbers of cells at deep locations, the longer the period of time meconium passage from time of delivery; is that a fair statement?

A No. You see that is the falacy before when you were assuming things because if the blood or any other means of resorption would have been different at that location, maybe there are all kind of considerations, including the thickness of the tissue at that location.

I mean there are so many variables that I can't count the percentage that is likely to this and the percentage that is likely to that.

Q None of the placental tissue you looked at had any meconium laden microphages in the decidua?

A I don't recall seeing it in the decidua to be honest with you. I do not recall seeing it in the decidua.

Q Now --

A But since it becomes an issue now by the hypothesis maybe it is an issue to you, maybe I should go back and do some special stains and see if I can actually show that it is there too, but I didn't see it there.

Q In the slides, I am going to look at A, at 3; okay? When you talk about a glutinated villi with numerically increased -- is it syncytial knots; is that the word? Is that how you say it?

A It is.

Q Okay. And when you talk about in Slide C of the villi being congested anh there are focally prominent perivillous investment by fibrinoid material, you are talking about some ischemia there; aren't you?

A I am talking about manifestations of what in my opinion had been an etiology of low utero placental blood flow.

Q Would you agree with me that there is not necessarily a correlation between those findings and chronic ischemia in the placenta?

MR. TUCKER: Objection.

THE WITNESS: I would not agree with you provided we can be sure of one another's terms. To me, the fibrinoid material is the consequence of damage to the superficial lining of that great white structure.

It is my opinion that in this case, in terms of the distribution of those ischemic changes, in terms of the fact that it was a thin placenta and a wide placenta in terms of the nucleated red blood cells which, in my opinion, result from low utero placental blood flow in substantial number and certainly far higher population here, I think quite candidly, anybody who would disagree with that is patently incorrect.

Far more of those nucleated red cells came

from chronic deficiency of utero placental blood flow than from ABO incompatibility. The precedent from that being not just my own expense, but what is in the limited amount of literature that is available. And because in my opinion this is unequivocally low utero placental blood flow, you have, in my opinion, a responsibility to look at things beyond just the ABO incompatibility, which in my opinion is a miniscule part of this case.

And that is why the consideration such as the length of time that the meconium has been there is important. I interpret this to mean that meconium had been in the fetal sac for 12 or more hours. I interpreted it to mean that because of the unusual increase of capillaries, occasional sites in one place and then in another place and another place to the point that I end up calling it multi-focal, tells me that more probable than not, from the later confirmation, from later confirmation of the clinical facts, that Deborah, until proven otherwise, has a real risk of having had gestational diabetes in this case, which is why I brought for you some literature that can explain to you why I feel this, you know.

I am delighted to discuss it with you at length instead of going over the same stuff that we have rediscussed ten times already.

Q In your discussion of those factors which

you found, that are consistent with placental ischemia, would it be fair to state that there is no absolute correlation between placenta eschemia and perinatal morbidity or mortality?

A Nothing is absolute, or few things are. I shouldn't say nothing, but few things are absolute. Nobody would ever claim that most things are absolute. You have a whole bunch of contributory issues. And in here many of them, in my opinion, are very bad.

Q On Page 2 of your report, you never did notice the directed Coombs positive test; did you?

MR. TUCKER: He never did notice?

Q (By Mr. Novak) In other words, you didn't write it down here; did you?

A Page 2, but I didn't have any history in this first report.

Q How about in the next report?

A I think in the next report, I addressed the immunohemolytic thing very precisely. I said the antibody screen was negative. That is the real issue. The presence or absence of Coombs test in ABO incompatibility is totally irrelevant because the truth is, and I brought this paper Eor you to, you know, read.

And I would challenge you or Dr. Kaplan or anybody else to do a literature search which diminishes the

importance of that paper and its observation, is that in the substantial bulk, probably at least 13 out of 14 of the cases of ABO incompatibility, you don't have a Coombs test positive situation.

The point about ABO is that the foreign antigen is not a strong potent antigen. The mother sent back IGG antibody into the baby. And that IGG antibody that she sent back to this weak foreign antigen of the baby more likely than not from what expert hemotologist will tell you, and I even brought, you know, a paper to that out of Mollison, M-o-l-l-i-s-o-n, weak antigens, which could have been diffused in tissues other than just the red blood cell.

But, the bottom line is you have got a negative antibody screen. By that, unless Dr. Kaplan or somebody else can educate me to the contrary, this is a typical situation of a weak foreign antigen, namely the A blood group of Jordan getting across into the mother's system, which then produces reaction antibody IGG that goes back across to Jordan.

This is such a weak system of antibodies that it explains why together with my later learned observation from the records, that this was not severe anemia in Jordan that Jordan had, that in my opinion, with appropriate respect to Dr. Kaplan, it would be ridiculous

for this to say this was a significant ABO incompatibility.

It doesn't shape up with my experience. It surely doesn't shape up with the clinical facts of **this** case, nor does it shape up with existent literature that is available to Dr. Kaplan and anybody else.

Q Let me ask you: Having written all of these articles on nucleated red blood cells and never mentioning the issue of ABO incompatibility, does it concern you now that perhaps this is a case that nucleated red blood cells are related to ABO incompatibility, and perhaps you have just never written about it?

MR. TUCKER: Objection.

Q (By Mr. Novak) I mean, does that personally bother you?

MR. TUCKER: Does it personally bother him?

Q (By Mr. Novak) Maybe that is why you are rejecting her concept here.

MR. TUCKER: I object to the form of the question.

A No. Actually many people present hypotheses that are reasonable, but the hypothesis, and I am telling you, I have a great deal of professional respect for Dr. Kaplan. And on a personal level, I have enormous respect for Dr. Kaplan. She is a tremendously honest ethical person. If she wrote that and submitted it to, you know, a

manuscript, you know, I would have to say to Dr. Kaplan, for the reasons one, two, three, four, five, six, seven, eight, nine, ten, you know, this is a totally invalid hypothesis; therefore, in a Missouri sense, you better show me a hell of a lot of evidence to prove your point; okay? Because the evidence in my experiences is not there, nor is it there in the literature. I am talking now so there is no misunderstanding --

MR. TUCKER: Let him put a question to you.

THE WITNESS: Let me put it in context because Cindy Kaplan may read this. I am talking now about a massive population of nucleated red blood cells. I am talking about the fact -- correct me if I am wrong, but the hemoglobin of the babe was **13.2** at one hour and 32 minutes after delivery. That is not a massive change. The degree of bilirubinemia was not all that significant.

The whole profile is not that, and the fact that the Coombs test is positive is the saddest thing. That is like the assumption that many names on a list of Lawyers means it is a defense firm because the fact is if you look at the best paper that I have on my files to do sith ABO incompatibility, almost all of those cases have negative Coombs tests.

So if Dr. Kaplan is going to present to me .hepositive test as sine qua non evidence, you know,

s-i-n-e q-u-a and then n-o-n, I think, evidence or strong evidence of ABO incompatibility of importantance, I am sorry. With due respect, I think she is way dead wrong on that.

Q Slide D, D-1 and D-2. Dr. Kaplan testified those were edges of placenta; do you disagree with her?

A I think that it is very valid for Dr. Kaplan to say they are near the edge. But there are two reasons that indicate firmly that Dr. Kaplan is being -- probably three reasons actually, a little bit unreasonable here.

Q Why? Tell us why.

A Firstly, if she wants to imply that one often sees the number of hypervascular villi with capillaries in this case, well, she is on sworn testimony. She would have to be able to say that she could show me, you know, 50 cases or a hundred cases where with ischemia or otherwise that it is common to see it at the edge. You know, patently unlike my experience, because in my experience, I have seen a hell of a lot of, you know, areas near the edge.

And I would say that it would attract attention to me if I would see that rather than to imply that it is common. The truth is if you go to my description of Slide A where I speak about some edge tissue that is present and I refer to the increase in syncytial

knots and the glutinated villi, I would a hundred percent agree with Dr. Kaplan that it is quite common to see a range of low blood perfusion changes at the edge, but not this kind of change; okay?

Secondly, Br. Kaplan would have to agree that it cannot be the very edge in Slide D, as I understand you're addressing, because neither of the two pieces of tissue in Slide D have an apex. So it either has to be, you know, four or five sonometers away.

So I am not going to nit-pick on whether it is the very edge or not. I am merely going to say that on the times when I am impressed with, and I want to be sure that this is said very succinctly in one sentence.

In the times that I am impressed with histopathologic evidence of low utero placental blood flow at the edge, it is not that I see the number, the number of villi that I saw here with increased capillaries.

It seems to me I even took three different photographs as opposed to saying that it is the same photograph at different magnifications. I took three different photographs. I believe in one of them, I might have even emphasized there that there were nucleated red blood cells in there.

In contradistinction from Slide C, where I show fibrinoid material and in Slide E where I show

fibrinoid material, and so the changes are quite different. There are three different pictures that I took of Slide D that have hypervascular changes.

They are photographed at 10 x, and they are absolutely, you know, a situation where many of the villi show those changes of either dismaturity. Slide D with the number 28 on the corner has a very unusual kind of pattern of the central villus.

That to me is a dismature feature. It is not a normal maturational change. That attracts my attention along with many, many other considerations to the consideration of maternal diabetes.

Q I am going to ask you a big favor. In about fifteen minutes, I am going to ask you some questions. I am going to really roll because I want to get done by 8:00 or 8:15. It is getting on about quarter to 8:00.

MR. NOVAK: What is the matter?

MR. TUCKER: I was going to suggest that we give our reporter a couple minutes.

(Recess taken.)

Q (By Mr. Novak) The reported weight of 540 grams, normal; isn't it, for term?

A Yes.

Q Okay. You had problems, and you referred to the configuration as abnormal. Why?

A The 26 sonometers is quite wide. The 1.7 sonometer is thin. My interpretation of this case and to get sight to why I think it should be considered diabetes as a possibility is, number one, you have a physically big disc, okay, 26 sonometers. That is a physically big disc; okay?

You have 20 sonometers in the other dimension, which is a legitimate good size. I mean it is nowhere near 26, but I mean 26 by 20 is big; okay? The 1.7 thickness combined with substantial evidence of low utero placental blood flow which exists, in my opinion, would account for a concept of a mother that has vascular disease in the uterine bed, b-e-d.

The large -- the very large number of nucleated red blood cells cannot be explained by ABO incompatibility. I have gone into that already. Now, let me just finish the point.

Q I am really trying to finish fast. All I asked you was why you thought the placenta was abnormal. That is all. I think you did.

A All right.

Q I am trying to get through this --

MR. TUCKER: Go ahead ask your next pestion.

Q (By Mr. Novak) The only other question I

have on that, and I think Dr. Kaplan addressed that, is when the measurement is made of the placenta, as it was here, the accuracy of the measurement with respect to its various components in a large part depends on the person who is doing it; is that a fair statement?

A Fair statement.

Q Okay. Now, the umbilical cord where it says was 61.5 sonometers, did you arrive at that by adding up the various components that were presented to the pathology department?

A That was my understanding. 20 plus 29 is 49, plus 12.5 is what I would have come to.

Q Okay. Once again, depends upon the accuracy of the measurements as recorded by the person who is there; correct?

A Yes.

Q Okay. I'm going to get to Page 2 your second report.

A Let me get to my second report then.

Q Okay.

A I have it.

Q Okay. Where you talk about I'm looking between Subparagraphs A and B under nucleated red blood cells.

A Yes.

Q Where you are referring to the combination of the gross features.

A Xes.

Q **Okay,** When you refer to the microscopically seen fibroid material and when you end that sentence with the and/or maternal diabetes; okay?

A Yes. I left one thing out here. In the matter of discovery, it will explain to you why I put it in the answer.

Q Let me ask you real quick.

A Right.

Q What you are talking about here are factors of ischemia; is that right? This -- you are talking about --

A Villus capillary hyperplasia is a different form of ischemia entirely. Most capillary hyperplasia is long standing several weeks of low perfusion.

Q Without trying to cloak this in general, the word ischemia --

A We are talking low placental blood flow in that tissue.

Q Would you agree with me that your caveat as written in your article on placental medical-legal imperative, that there is no absolute correlation between placental ischemia and parinatal morbidity and mortality

still stands? I mean, you stick by that caveat; don't you?

MR. TUCKER: Objection. I think you asked that question earlier.

THE WITNESS: Look, he is in a big hurry to get to a plane. This is a discovery deposition. This, in my opinion, is a perfect example of head spearing, head spearing of low utero placental blood flow for many, many days prior to delivery.

MR. TUCKER: Answer the question.

THE WITNESS: Okay. But, I mean I feel as though he is pressuring me --

MR. NOVAK: No --

THE WITNESS: -- to because he has got to leave.

MR. TUCKER: You are not under any pressure. All you have to do is answer the questions that he asks. If he doesn't ask questions, that is his business.

MR. NOVAK: Right. That is my problem, right.

THE WITNESS: Okay.

Q (By Mr. Novak) Now, with respect to the findings in the lungs, and you made comment on that on Page 4, where you say I opine that some of Jordon's neonatal problems were attributable to a predelivery intrapulmonary presence of meconium. The fact of the matter is neither

the x-ray reports, nor Dr. Martin, nor any of the neonatalogists describe any meconium pneumonitis in this case; do they?

A Oh, I think you are missing the point here. I am not talking here about particulate matter in there, which is what they would see, the consequence of particulate matter in an x-ray. Do you see what I am saying?

I'm talking about quote unquote -- where is it here, soluble and diffusible components. I'm not talking about particulate -- I am sorry to get to the point; okay?

Q So, this is -- there is nothing that can be seen on x-ray; right?

A That is right. I'm talking about that you would have a toxin that would alter the surfactant in that lung tissue because it is a chemical toxin. You would have to consider -- I am not saying absolutely a hundred percent, you would have to consider that if it has been there for 12 hours or more, as I contend in the sac, that some of the soluble products may have gotten there, period.

Q I want to emphasize you are very concerned about the use of words. "May" is the word you are using with respect --

A Absolutely. I have not made a big time

federal a hundred percent thing out of it.

Q Page 3 of your report on the intrauterine growth retardation. Why do you think that Babson and Benda is more applicable to Cleveland than Lubchenko?

A For two reasons, Because it seems to me that if you will pursue the literature, and there is an author by the name of Goldenberg, G-o-l-d-e-n-b-e-r-g, it is probably in cross references. In fact, I'm sure it is in my papers, that the point that would be made is that you can get a substantial difference in mean birth weight at term from one population to another. And the factors can include sociocultural demographics, can include height above sea level.

And the -- particularly the Colorado data, which is not popular in the '90s in comparison, you know, to the number of intensive care units that use that data in the '90s as opposed to the '80s because the Lubchenko, that is L-u-b-c-h-e-n-k-o, I think, you will have to check it later, Lubchenko data originated from many, many mothers' and babes from socioculturally derived circumstances let alone any consideration as to the effect of height above sea level.

But the fact is Benda data is more popular nowadays than those, I believe, in the literature for the reasons given.

Q Dr. Martin -- and I am sure you respect Dr. Martin, Cleveland, Ohio?

A I do.

Q In fact you wrote a chapter in his book, his and Dr. Fanaroff book, on neonataloly?

A Yes, I have a chapter in that same book, so I hope he would respect me.

Q Yeah. Me didn't anywhere, nor did any of his neonatalogists who worked under him, mention that there was any intrauterine growth retardation here?

A I myself would emphasize this is not symmetrically small for gestational age. What this is is if you go to the Benda chart, which 1 provided, it is at the 15 percentile for the head. And that to me atracts a enormous potential importance.

Why should the head be small in this case when the head typically would be expected to be bigger? I believe -- in fact, I need to check that. The head, yes, is at the 15 percentile.

Q But in the Lubchenko chart, it is -- what percentile is it?

A The Lubchenko chart, I do believe I brought with me. I would have to look to refresh my memory. As I say, I am of the school that believes that the Lubchenko zhart is less applicable than would be the Benda chart.

MR. TUCKER: You want me to show him the --

MR. NOVAK: Yeah.

MR. TUCKER: Let's pull it out.

THE WITNESS: The important issue here is this from a pathogenetic standpoint, for a moment, let's forget the charts; all right? Important issue here is that the head is usually the last of these factors to become small; okay? Here it is small.

It suggests to me that there had to have been significant compromises of flow to the head.

Q (By Mr. Novak) On Lubchenko chart --

A On the Lubchenko chart just now shown me, the length is potentially at the hundredths or 99.9 percentile. I mean, it is way up there.

Q What about the head?

A The head is at the 75th percentile. So, again, it is lagging significantly beneath the length.

It is an abnormal growth pattern is what I am getting at from Lubchenko.

Q You recognize in your second report that Jordan did have some slight anemia?

A I do believe I said that I thought it was 13.2 -- correct me if I am wrong. I brought you a paper which would indicate that that is not really all that much of anemia at 13.2. I think the paper I brought indicated

for hemolytic anemia 13.5 would be an acceptable normal.

Q Just a few more questions. Plaintiff's Exhibit 2, the second FDE folder, did you have any role, play any role in writing that one?

A You know, I don't believe that I did.

Q Let me tell you why I asked the question.

A I really don't believe that I did. I think this postdated the other one that you had. The words may include words that I have used over the years, but this is not the kind of stuff that I believe that I had written.

Q The reason I ask the question --

A Quite the opposite. In fact, I didn't think that this is mine.

Q The reason I ask the question is because it says here in the inner part, it says the placenta has a diary of gestational life. I have seen Dr. Benirschke use that. I have seen that --

A That is Altshulerism. I am sure Dr. Kaplan would tell you the same thing. The term the placenta is a diary of gestational life has been done and redone to death ever since the time that I first introduced it. That is an Altshulerism. They probably picked up on it and put it in there.

Q A couple of other questions. In your article on placenta within the medical-legal imperative,

you make a statement. You say when negligence is the proved cause of bad pregnancy outcome, monetary compensation has been as high as $15 million. Where did you get that?

A Experience, experiences.

Q I mean, do you stay in contact with the lawyers on cases; is that how you --

A No. I have read things over time. People have passed things to me and told me things orally. I stand by that statement. I believe it to be true. I have heard it from more than one source and probably seen it in print.

Q You also say here about settlements. It says settlements usually favor the defense?

A In a statistical sense, that is meaning if I reflect upon my own personal experience, again, and, you know, what I have heard from others, that is true in a numerical senses.

Q What is the medical-legal imperative that has thus emerged?

A Oh, it would seem to me to be obvious, that Eor whatever reason, that, you know, that I don't know in :oto; it is that clinicians more and more are pressuring pathologists to examine the placenta. And whether it is)ecause their risk managers have done that or whatever, you

know, I can't second guess everybody's reason.

But, it is clear that in an institutional sense, and just talking to obstetricians when they have a problem, they want it examined far more now. It is imperative that pathologists have to examine it because they want it than they did in the past. That doesn't mean to say that every obstetrician wants the placenta examined. But, if there is a real problem and their back is up against the wall, they want a placental exam.

Q But, it is because of physicians liability insurance companies pressure obstetricianss to have placental exams; right?

A I answered that already.

MR. NOVAK: He puts it right here. Physicians liability insurace company have pressured clinicians to perform placental examinations where there is perinatal --

A I have indicated by intent that that is part of it. But, you would have to go to the individual. I mean that is the intent of the answer that whether it is an institutional or, you know, a corporate thing or heaven only knows how you want to describe an insurance company.

Clearly there are all kinds of pressures. I can't second guess, you know, when, for example, if an obstetrician in our Health Sciences Center, you know, sends

me a placenta, and I give an opinion, and then I find from the history it is a pretty bad, you know, clinical circumstance, you know, I don't say to him, "Are you sending this because an insurance company told you to send it?" Clearly that is a consideration that he is probably thinking about.

Q Two last questions. Fetal heart rates, you are not an expert on fetal heart rates; right?

A Not in terms of reading them. I am very much aware, you know, of certain patterns that might mean certain things.

Q Okay.

A But, I don't read them. I don't represent myself to be an expert on them.

Q Second question, would you agree with the concept of fetal heart rates can be helpful in helping determine what the fetal wellbeing is?

A They can be helpful, but by no means would I or ostetricians, clincial obstetricians depend upon.

Q Absolute last question: Have you ever seen placenta pathology like you have here in a normal baby?

MR. TUCKER: Objection.

THE WITNESS: Oh, absolutely not. Relative to this nucleated red blood cell count, I mean I have been preaching for a while now if you see such a huge population

through the light microscope, that takes it out of the ball park of just being, you know, slight elevation. This is of course confirmed by the 16.9 times ten to the ninth in the peripheral blood of one hour and 32 minutes after delivery. That changes the whole complexion right there, the numerical extent of it.

MR. NOVAK: I have no further questions. This is our office card. Send me the bill.

MR. TUCKER: Send it to me.

THE WITNESS: I'll send it to him. I will send an authorization.

The bill from your point of view is when to when?

MR. NOVAK: 5:30 to 8:10.

THE WITNESS: 5:30 --

MR. NOVAK: We started just about on the dot.

THE WITNESS: Since I have given you all of those things, why don't we say 8:15. A quarter is easier than five minutes. 5:30 to 8:15 p.m.

MR. TUCKER: Off the record for a second.

(An off-the-record discussion was held.)

MR. TUCKER: We have got on the record now, we have got Plaintiff's Exhibit 1, which is this first -- a copy of this first FDE brochure.

Plaintiff's Exhibit 2, which is the brochure itself that has been updated, referred to.

Exhibit 3 is a manila folder within which is Dr. Altshuler's file per this case, And in there is literature to which he made passing reference on hemolytic anemia, ABO incompatibility, nucleated red blood cells, also nucleated red blood cells marker for asphyxia and gestational diabetes. I believe you have copies of all of those that he gave you and to which --

THE WITNESS: But, there were other things that I gave in this set. He has got them.

MR. NOVAK: I have got them.

THE WITNESS: I mean can I see that so that I know?

MR. TUCKER: Sure.

THE WITNESS: The ABO incompatibility has three different papers. And then this one; right? So in terms of the number of papers, we are talking four, five, six, seven different papers including diabetes.

MR. NOVAK: The next thing is extract from nedical records of Deborah and Jordan Reaze. Those are clipped. The next thing are letters.

MR. TUCKER: Well, before we get to them, the extracts include portions of the medical records.

MR. NOVAK: Right.

MR. TUCKER: The next is a copy of Dr. Altshuler's correspondence from counsel and to counsel. The next is several pages of records entitled summary of Reaze versus UH of Cleveland, dated December 11, 1995 consisting of two pages that are both-sided and one additional page.

MR. NOVAK: The next thing is his CV. And the last part are his photomicrographs. There are --

MR. TUCKER: 17 of them.

MR. NOVAK: Okay. That is it.

MR. TUCKER: Our understanding is that this will all be -- everything here will be copied, and I would like it attached.

MR. NOVAK: Except the photomicrographs.

MR. TUCKER: She is going make a copy of that on the copy machine. Just make a copy of this sheet with them. I would ask that a completed copy of Exhibit 1, 2 and 3 be appended to the original of the deposition and my copy as well.

MR. NOVAK: You want doctor to sign it obviously?

MR. TUCKER: Sure.

THE WITNESS: You have to number those pictures, or else the labels will get all mixed up.

(Witness excused.)

GEOFFREY ALTSHULER, M.D.

STATE OF OKLAHOMA)
) SS:
COUNTY OF OKLAHOMA)

Subscribed and sworn to before me this _____ day of _____, 199__.

Notary Public

My Commission Expires:

_____

CERTIFICATE

STATE OF OKLAHOMA)
) SS:
COUNTY OF OKLAHOMA)

I, Julie Curry, a Certified Shorthand Reporter in and for the State of Oklahoma, do hereby certify that the witness, GEOFFREY ALTSHULER, M.D., was by me first duly sworn to tell the truth, the whole truth, and nothing but the truth in the ease aforesaid, and that the deposition was reduced to writing by me by means of stenograph, and thereafter transcribed by me or under my supervision, aided by computer, and that the same was taken on the 12th day of December, 1995, in the City of Oklahoma City, County of Oklahoma, State of Oklahoma.

I further certify that the foregoing is a full, true and correct transcript of proceedings had in the aforementioned cause,

I further certify that I am not related to nor attorney for either of said parties.

Dated this 26th day of December, 1995.

Julie Curry, CSR, CP
Julie Curry
Oklahoma Certified Shorthand Reporter
Certificate No. 00191
Exp. Date: December 31, 1996