IN THE COURT OF THE COMMON PLEAS

CUYAHOGA COUNTY, OHIO

GLORIA MASLANKA, Individually
and as Parent and Natural
Guardian of Shane Maslanka,

Plaintiff,

vs. No. CV-05-552424
JUDGE McDONNELL

METROHEALTH MEDICAL CENTER,

Defendant.

CONTINUED DISCOVERY DEPOSITION of MICHAEL PARKER SHERMAN, M.D., taken in the above-entitled case before Tricia L. Gudgel, a Notary Public of Menard County, acting within and for the County of Sangamon, State of Illinois, at 10:00 o'clock A.M., on September 1, 2006, at 107 East Allen Street, Springfield, Sangamon County, Illinois, pursuant to notice.

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I N D E X

E X H I B I T S

NUMBER MARKED FOR IDENTIFICATION

(None.)

S T I P U L A T I O N

It is stipulated and agreed, by and between the parties hereto, through their attorneys, that the deposition of MICHAEL PARKER SHERMAN, M.D. may be taken for discovery purposes before Tricia L. Gudgel, a Notary Public and Certified Shorthand Reporter upon oral interrogatories, on the 1st of September A.D., 2006, at the instance of the Defendant at the hour of 10:00 o'clock A.M., 107 East Allen Street, Springfield, Sangamon County, Illinois;

That the oral interrogatories and the answers of the witness may be taken down in shorthand by the Reporter and afterwards transcribed;

That all requirements of the Civil Practice Act and the Rules of the Supreme Court as to dedimus, are expressly waived;

That any objections as to competency, materiality or relevancy are hereby reserved, but any objection as to the form of question is waived unless specifically noted;

That the deposition, or any parts thereof may be used for any purpose for which discovery depositions are competent, by any of the parties hereto, without foundation proof;

That any party hereto may be furnished copies of the deposition at his or her own expense.

(Whereupon the Deponent was sworn by the Notary Public.)

M I C H A E L P A R K E R S H E R M A N, M. D. having been first duly sworn by the Notary Public, deposeth and saith as follows:

EXAMINATION

BY MS. REID:

Q Good morning, Dr. Sherman, how are you?

A Fine.

Q All right. We are here for your continuation on the deposition on the Maslanka case, and I'm hoping we will not take as long as we did the initial time, all right?

A I doubt that will be the case.

Q Why is that?

A I think you're going to hear some additional testimony today.

Q Okay. What makes you say that? Have you reviewed additional information?

A No. I just don't think you ever gave me the opportunity to go through the report by Richard Martin and respond to it.

Q Oh, okay. All right.

Let me take this step-by-step. First of all, you have not reviewed any additional materials

since we took your deposition on August 3?

A That is not correct.

Q That is not correct?

A That is not correct.

Q All right. What have you reviewed since August 3?

A I reviewed -- I was sent the ultrasound images. I think the complete set from the first one to the last one.

Q These are the ultrasounds of the brain of Shane Maslanka?

A And kidney ultrasounds.

Q Okay.

A And I was sent four volumes by Mr. Kulwicki of hospital records. We had discussed the nursing notes in my previous testimony, and I've gone through those notes with particular attention to nursing notes during the first days of life and other vital sign records and entries related to the infant's care.

Q Okay. Have you received any other additional materials?

A I received my deposition.

Q Okay. Have you reviewed your deposition?

A I have.

Q All right. Let me just ask you a couple questions about what you've received. The four volumes of hospital records that you referenced, are those subsequent records regarding Shane Maslanka after his discharge from Metro?

A Let me go through them, please.

They're in four bound volumes. And the first one has the nursing records, including flow sheets. It starts on the 1st. And I'll see if I can give you the final date, although it's difficult to always identify the timing of the records.

I'm towards the end of this and I'm seeing a date of 10-9 towards the end of these records, 10-9-01.

And then there's a small section called graphic charts towards the back. So that was the first volume, and the one that I spent the most time reviewing, okay.

The second volume has the Cole Eye Institute, it has EEG's and it has office notes from the Cleveland Clinic Foundation. And that's the bulk of those records, are from the Clinic -- Clinic -- Cleveland Clinic Foundation, okay.

Q Okay.

A The third volume is a smaller volume, continuing care records. And this has the Metro Health Center entries, and it has a small section, Cleveland Clinic, okay. But for the most part, this is Metro Health, okay.

Q What's the time frame of those -- the Metro records in that volume?

A Well some of them are reproductions of items that were in the original medical record, like the eye examinations that were in the record. And then there's -- I'm just quickly leafing through it but there's 4-25, 2002, there is a 6-20, 2002, a 7-16, 2004, etc., okay.

Q Okay.

A And then the final volume, I think they're a little bit out of order because I reordered them for the depo according to importance. This one -- the final volume is quite extensive, and I'll go through the dates.

It has a surgery record for 1-23-02. It has an ER record for 5-27-03. It has records from 6-6 to 6-7, 2002. It has records from 7-10 to 7-14, 2003. It has records from 7-10 to 8-2, 2003.

It has records from 9-17 to 9-21, 2003.

It has an ER record from 9-29, 2003. It has records from 2-5 to 2-10, 2004. It has records from 3-15-03 to 3-18-04. It has records from 5-5 to 5-11, 2004.

It has records from 8 -- I mean, excuse me, 5-22 to 5-25, 2004. It has records from 6-28 to 7-14, 2004. And records from 11-23 to 11-30, 2004. And finally 2-15, 2005. Tonsil and adenoid removal is the last one with anesthesia records, clinical notes.

Q Am I correct, Dr. Sherman, that that last volume you described are Cleveland Clinic records?

A Yes. Well at least some of the headings on the entry say Clinic Cleveland Foundation (sic), correct.

Q Okay.

A And it's labeled, the face page is labeled Cleveland Clinic admissions because all of them have face pages. The third volume that I cited for you, which includes the cover letter from August 8, okay, has medical records of Shane Maslanka continuing care records.

And the second volume that I cited to you, the heading on the face page is Clinic -- Cleveland Clinic outpatient records. And then the

very first volume is the Metro Medical Center nursing records, which is from the original first admission.

Q All right. Did you receive all those records at one time?

A Yes, I did. They came in a large box.

Q On August 8?

A I believe that's correct.

Q And am I correct, and this is based on what you just told me, that you focused primarily on the Metro Health nursing notes?

A Well mainly on that part of the record, that's correct.

Q All right. Now, Doctor, what I'd like to do today, because my whole purpose today in continuing this deposition, is to make sure I know of and understand what your opinions are in this case. So what I would like to do is kind of divide them up.

One is talk about the opinions you've come up with as it relates to your review of the medical records in this case, and then separate from that your opinions or thoughts about Dr. Martin's report. Can we do that just for simplification?

A That's correct.

Q All right. Now as it relates to your opinions that you've come up with based on your review of the record, are there any -- is there anything additional you need to add to what you told me at your prior deposition?

A Well I guess the only thing I would emphasize is the preventive nature of the baby's problems, based on knowledge of the ultrasound of July 12, 2001. That's probably the most crucial.

As I indicated, that's a system failure that they did not know the accurate assessment of the gestational age, and therefore they took actions that resulted in a preterm birth without the benefit of betamethasone therapy.

And that that would have more likely than not either prolonged the pregnancy and/or resulted in substantial reduction in complications of preterm birth.

Q You're not saying that the betamethasone itself would have prolonged the pregnancy are you?

A No. But had there been at some point after the appearance of the mother -- the betamethasone, had there been at some time, and this is hypothetical, to delivery within perhaps a

week of presentation, the betamethasone would have reduced the complications of prematurity, or extreme prematurity in this case.

Q I think you told me before that you can't give me an opinion to a reasonable degree of medical probability because it's outside your specialty as to how long they may have been able to extend Gloria Maslanka's pregnancy, correct?

A That would require the opinion of an obstetrician or a perinatologist.

Q Fair enough.

Now aside from what you've just told me about the system's failure, the rest of your opinions, I assume based on your review of the medical records, we covered during you're initial deposition on August 3?

A I don't believe that is correct. We didn't look specifically at laboratory values, such as the hemograms in the first week of life, which would have been a response to, you know, conclusions drawn by Dr. Martin about the presence of infection.

And we also didn't look at various aspects of the record as it relates and is better amplified in the nursing records on the first days

of life about laboratory values related to metabolic acidosis.

And physical measurements of heart rate, blood pressure, ventilator settings, blood gases. We never covered in any detail those aspects in the volumes -- the first volumes of records that I had been sent or in the nursing records that I've been subsequently sent.

Q Well then, let me put it to you this way. The way I understand it is these subsequent records, the nursing notes, provide further support for the opinions that you've already given me; is that fair?

A That's fair.

Q All right. But the opinions themselves, and this is just what I want to be clear about; the opinions themselves, you provided in a very lengthy answer during the initial deposition we took on August 3, right?

A There was a lengthy answer, however, if you remember in the text of the deposition, I gave you the opportunity to talk after I had been talking for some considerable period of time. And at that point, we had not gone into the exploration of what aspects of the medical record drew me to --

either maternal or newborn, drew me to those conclusions.

Q All right. I understand and we are miscommunicating here. All I want to make sure before I move on, and I'm going to ask you some specific questions, is that based upon the answers you gave in that initial deposition and then this -- your further reference to the system failure that you provided again today, that I know what your opinions are?

A I think that you have an incomplete assessment on my opinions but I think for the most part, the major opinions were stated. I would not say that all were stated.

Q Are there --

A Because as you remember, we closed the deposition, you know, and that's why we're here again.

Q All right. Well I mean, is there -- I mean, as we sit here today, and I'm not talking about further support for the opinions you gave me back on August 3, but are there other opinions that you want to list for me? Other deviations from the standard of care that you saw or issues?

A Well, there has -- yeah. I think a major

one is this assumption that neutropenia was present and therefore because there was neutropenia present, there was in fact sepsis present. And I do not believe that you heard my opinions to any extent on that issue, or to any extent on the issue of why I believe this baby was not infected at the time of birth.

Q Well I'm just going do say that's per your response to Dr. Martin's report.

A That's fine.

Q Okay. Adding that, and I will give you an opportunity to educate me on your opinions about that -- the infection issue, is there anything else that we missed?

A Let me just try and go back in my mind for one second, my reading of the deposition. Now I think we covered the observation that now is supported by the nursing notes that Dr. Kumar had very little physical interaction with this infant in the way of examinations.

I cited one place where they talk about an assessment of this infant by a physician but I never found a nursing entry that specifically said Dr. Kumar examined or responded to the bedside to assess the infant.

There appears that on the first day there was some type of entry related to his knowledge of a low blood pressure. But his name appears sparsely throughout the nursing notes.

Q Okay. With that, you believe you've covered everything?

A Yes. I believe -- I believe for the most part we've covered everything.

Q All right. Fair enough. Let me pick up about this, your opinions regarding Dr. Kumar's involvement in this case. Is it your opinion based upon your review of his notes and the nurses' notes that Dr. Kumar did not ever perform a physical examination or assessment of Shane Maslanka?

A I can't firmly document it. I don't find any examination by him either in the medical records or cited in the nursing records where he examined the head, neck, listened to the lungs, listen to the heart murmur, felt the pulses, palpated the abdomen, did a neurologic examination.

I just cannot find that among the dictated notes that he provides, or an assessment that would lead me to believe that there was a thorough examination on a daily basis by Dr. Kumar,

as opposed to an examination by either a pediatric resident or a fellowship staff. And the record will speak for itself.

Q All right. Well is it fair to say that you don't know what Dr. Kumar's routine is as it relates to his assessment in examination of infants in the NICU?

A I think that's a correct statement. I don't know what his routine is.

Q And you don't know how the rounding procedure with the residents and the fellows and Dr. Kumar works; is that fair?

A That's fair to say.

Q All right. And you don't know because you weren't there whether Dr. Kumar was present or whether he was not when the residents or fellows performed their assessment of Shane Maslanka in the NICU, right?

A I think that's fair to say. But I've already indicated to you that early in the course of this infant, I believe there's one date in which there's not an entry by Dr. Kumar.

Q All right. And have you --

A And we stated that in the prior deposition testimony.

Q Right. Right. And you stand behind that testimony as you sit here today?

A Unless you can produce the note.

Q Well I think -- it's not my obligation to produce you the records. But based upon the records you got from Plaintiff's counsel, you believe there was no note by Dr. Kumar that date, correct?

A That's the only assumption I can make.

Q All right. You made a mention that in one of Dr. Kumar's initial note that he wrote Group B status unknown, where in fact you believe that the Group B status was known. Do you remember that?

A Yes.

Q Is it your opinion that that notation by Dr. Kumar was a deviation from the standard of care?

A Yes, it is.

Q All right. Can we agree that PDA or patent ductus arteriosus can be difficult to detect in the initial days of life of a premature baby?

A No, we can't agree on that. I just have a paper in press on that.

Q What's the name of that paper?

A It has to do with infared -- near-infared spectroscopy for assistance in the diagnosis of a PDA in infants. It would be an additional tool that would be used based -- besides the clinical examination.

The Gold Standard for diagnosis of PDA is still the echocardiogram. It would be below the standard of care in a 27-weaker where there's a murmur on August 2, to not perform a echocardiogram on that date. And as you know, none was performed on that date.

Q The echocardiogram was performed the following date, correct?

A In the afternoon, I believe at 4:30 on the 3rd, that's correct.

Q You believe that that 24-hour delay in the performance of an echocardiogram proximately caused any injury to Shane Maslanka?

A I believe within a reasonable degree of probability that it did.

Q How can you quantify that?

A Well, we've already -- in my previous deposition testimony, the earlier you would treat a ductus arteriosus to close it, the less likely you're going to have pulmonary edema and pulmonary

injury that leads to bronchial pulmonary dysplasia.

And the less likely you are to have what we call ductal steal, which blood goes back to the lungs and not to the brain, creating an ischemic state, which then can be associated with intracranial hemorrhage.

Q Doctor, can we agree that a ductus arteriosus can close spontaneously?

A We can agree on that. But that is far less common at 27 weeks gestation than at near term or term.

Q Well in your review of the records, did you determine whether there was a point in time when the physical examination of Shane Maslanka, and this is prior to his surgery, indicated there was no murmur present?

A Well there were times when there was no murmur present but the time to address the patency of the ductus is early in the hospital course. We know that that's a serious complication. We know that the baby had diastolic blood pressures in the teens on the first and the second days of life.

And low diastolic pressures are commonly associated with the presence of ductus arteriosus. And that along with presence of a murmur appears to

have been ignored on both the 1st and the 2nd of August.

Q Can you have a diagnosable ductus arteriosus in the absence of a murmur?

A Yes, you can.

Q All right. So in your opinion, physicians can and should diagnosis ductus arteriosus even absent a heart murmur?

A They can diagnose it based on a number of other criteria: There may be bounding pulses, there may be a wide pulse pressure, there may be low diastolic pressures, there may be a short diastolic runoff time after the diachronic notch and before the next up-stroke of the pressure wave curve on an umbilical arterial catheter.

There can be an active precordium, there can visible axillary pulses, all of which would be indicative of ductus arteriosus in addition to metabolic acidosis. And all of those are indicators in the absence of a murmur.

There's a paper published which says that in micro-premie, such as this child, or extreme prematurity as is the case in this child, that perhaps 50 percent of infants may not have an audible murmur.

And when a murmur is present in a baby of this size, it would be highly indicative of the indication to do an echo, in addition to all the other list of criteria that I've listed.

The shopping list that I personally and other neonatologists go through in diagnosing a patent ductus arteriosus in a baby of this immature state on the first day, second day, third day, fourth day, fifth day, sixth day, seventh day of life.

Q Doctor, is there a range of diastolic blood pressures which you believe is indicative of a ductus arteriosus?

A Certainly diastolic blood pressures in the teens would make one highly suspicious of a patent ductus arteriosus. In a cranial ultrasound study that I mentioned previously that I participated in with Dr. Donald Shields at UCLA Medical Center many years ago, we have found the diastolic pressures below 22 were strongly associated with intracranial hemorrhage.

And that -- and that addressing the patent ductus arteriosus to prevent cerebral ischemia due to diastolic hypertension was an important factor in either preventing or

potentially minimizing intracranial hemorrhage in these immature infants.

Q Do you consider Shane Maslanka to have been a micro-premie?

A Well, not technically he wasn't a micro-premie because he wasn't below a thousand grams but he was a baby that would have extreme prematurity because he was between 23 and 27 weeks of gestation.

But that's not the issue here. The issue is, is he probably wouldn't have been 27 weeks gestation, born at that age, had it not been for the actions taken by the obstetrical staff in the absence of their knowledge of the 7-12-01 ultrasound.

Q Well in fairness, I mean, I don't want to go back to this again. You can't give an opinion as to how long they could have maintained this pregnancy, correct?

A I cannot give an opinion to that but I can give an opinion regarding causation of injuries to an infant that is inappropriately born at 27 weeks gestation.

Q Fair enough. Are there -- let me step back.

What are the potential treatments in your opinion for a ductus arteriosus in an infant born with extreme prematurity?

A Well, there's both preventive therapy and there's an intent-to-treat therapy. The preventive therapy would be pharmacologic with indomethacin. That has been published by Ron Clyman and others as I cited previously but my wife worked with Ron Clyman and Ron Clyman is a personal friend.

In addition to that, there is the use of indomethacin as a prophylactic agent to prevent intracranial hemorrhage. And it is generally believed that one reason why indomethacin may prevent intracranial hemorrhage when used in that manner, is because it closes the ductus and prevents the diastolic hypertension and ischemia to the brain, which then leads to the bleeding.

After you look at either preventative or intent-to-treat indomethacin therapy, intent-to-treat indomethacin therapy is applied when you have evidence of a hemodynamically significant ductus as you had here. That was based on the fact that the ultrasound showed left side volume overload when it was performed.

It's my more likely than not opinion that

Dr. Kumar misinterpreted the clinical presentation on the day of life. He thought there was Grade 4 RDS. Dr. Martin states in his letter that this was mild RDS. But in fact, significant left to right flow through a ductus can give a picture of more severe --

Q I don't --

A Wait a minute. Let me finish, please, okay. I've been patient with your questions, and you will get to the answer here that you so desire.

So, you know, left to right shunting on the 1st and the 2nd would present as more pulmonary disease, even though it is heart failure.

Now after you -- so there was a definite evidence for intent-to-treat as well on day one and two of life, and to do diagnostic studies to look for a patent ductus arteriosus, the Gold Standard being echocardiography. And assisted by the physical examination and clinical record.

After that therapy, either if it fails or a person believes indomethacin pharmacologic therapy cannot be applied, then surgical ligation, which was ultimately performed but the wait in this case it occurred. And that would be a therapy

which would be a hundred percent effective in closing the ductus where indomethacin at 27 weeks gestation may not be entirely effective.

There are other things that we do to try and close the ductus and that is minimizing fluid administration in the first days of life, provided that you don't have hypernatremia. If the course is complicated by hypernatremia, you may have to give more fluid therapy than you would want to.

And then that aggregates the potential for having a patent ductus arteriosus. And in fact in this case, a hypernatremia was present. And in my opinion is more likely than not due to the amnioinfusion therapy that was provided during the intrapartum period.

Q Okay. Is it your opinion in this case that the standard of care required the administration of indomethacin to treat the ductus arteriosus?

A Yes. It is more likely than not in my opinion that had the study been performed on the 1st or the 2nd, that indomethacin could have been safely given to this infant.

Q Can you say to a reasonable degree of probability whether or not the indomethacin would

have caused the ductus arteriosus to close?

A There probably would have been a greater than 50 percent chance of closure at 27 weeks. And that's based on data that we generated at UC Davis Medical Center in studying the ductus arteriosus, and is a reason why we performed the study that's in press.

Q Potentially though, the indomethacin -- strike that, let me phrase it another way.

There are also studies that indicate that indomethacin has some -- may not be effective in the closure of ductus arteriosus in the premature infants, correct?

A That's a broad statement and presented as a broad statement that would be true but the --

Q Well, I mean it as a general statement. I know that you can qualify it but I just meant it so the record -- clear, as a broad, general statement.

A Well, as a broad, general statement it's true but I think presenting that to a jury would be subterfuge with regards to the truth, okay, of what indomethacin does to close --

Q Dr. Sherman, I just --

A Look it, look it --

Q (Continuing)--get through this deposition. And I'm not committing any subterfuge as we sit here today.

A Okay. But you are very, very aware that the effectiveness of indomethacin at 23 or 24 weeks gestation is not as effective as it would be at 27 weeks of gestation or even closer to 28 weeks of gestation.

So it is -- it is -- you can't -- in medicine, we do not select the facts that we want to present. We present a full knowledge of what the literature says.

Q Fair enough.

Doctor, if the appropriate intervention had been -- had taken place as you see in this case, on what date do you believe the ductus arteriosus would have closed?

A Usually the course would take three doses, and usually within 24 to 48 hours the ductus may be effectively closed.

Q So by the 4th?

A By -- well, it depends on whether you applied the therapy on the 1st or the 2nd but certainly by the 3rd or the 4th the ductus arteriosus may have been closed, thereby avoiding

central nervous system and pulmonary morbidity.

Q All right. And that's my next question. Let's assume that the ductus arteriosus was closed by the 4th.

A Yes.

Q Can you state to a reasonable degree of probability whether or not Shane Maslanka would have still suffered from intraventricular hemorrhage?

A I would say more likely than not he would not have suffered intraventricular hemorrhage and he would not have had the subsequent complications that are stated in the nurse's notes. They clarify in the nurses' notes that the baby was put back on the ventilator on the 12th because of CHF or congestive heart failure.

And so undoubtedly, there had been increased left to right flow creating a problem from the early tendance of this baby's birth. And therefore taking the ductus out of the picture, which is more likely than not to have occurred within indomethacin therapy, would have either prevented or minimized subsequent complications related to diastolic hypertension.

Things such as the pulmonary bleed may

not have occurred. Pulmonary bleeds are associated with coagulopathies. Coagulopathies are associated with an increased risk of intracranial hemorrhage.

Q But just so I'm clear, your opinion to the jury will be, had the PDA been treated appropriately --

A Right.

Q (Continuing)--to a reasonable probability --

A Right.

Q (Continuing)--Shane Maslanka would not have suffered an intraventricular hemorrhage?

A That's correct. On the 1st or the 2nd, and I think there's -- it's up to debate about -- especially having reviewed the ultrasounds, it's up to debate about the presence of intraventricular hemorrhage on when the first ultrasound was performed.

Q All right. We'll get to that in a minute.

Had the PDA been treated appropriately as you have set forth, do you have an opinion to a reasonable degree of probability as to whether Shane Maslanka would have suffered from PVL?

A Could you restate that question, please.

Q Of course. Let's assume that the physicians had treated the PDA appropriately and the ductus arteriosus closed by August 4 as we discussed before.

A Right.

Q If that is the case, can you state to a reasonable degree of probability whether or not Shane Maslanka would have suffered from PVL?

A Well first of all, I assume by PVL you're talking about periventricular leukomalacia, manifest after the month of August by cystic periventricular lesions that were present on ultrasound?

Q That's exactly what I'm talking about.

A Okay.

So the timing of periventricular leukomalacia, as we know those cystic structures in the periventricular tissue occur -- occur, as thought, two to three, maybe four weeks but an average of maybe three weeks after an event where there was periventricular ischemia.

If we go back to when those appeared, it would put the timing perhaps during the intrapartum period and might be associated with the fetal heart rate decelerations that were seen in this baby. I

can't make a conclusion on that because I don't have a conclusion on the severity of those heart rate decelerations.

With the occurrence of the hypertension post birth related to the ductus arteriosus, that will be a cause of periventricular leukomalacia. And more importantly, when a bleed like a -- particularly a Grade 3 intraventricular hemorrhage occurs, then there may be pressure in the ventricle that leads to ischemia of the tissues right below the wall of the ventricle and therefore -- and therefore PVL would show up at some time later.

And if you calculate that, if you look at the Grade 3 hemorrhage identified on the 15th and then you look at the PVL identified in September, you will have timing.

So therefore prevention of the Grade 3 hemorrhage by treatment of the ductus arteriosus and prevention of that bleed or prevention of the bleed by the administration of betamethasone, and enably, either one of those could have had more likely than not a preventive affect on the PVL.

Q All right. So if I'm hearing you correctly, which I may not be, it's your opinion that multiple factors, including the treatment or

the mismanagement of the PDA, the failure to use betamethasone and perhaps the sustained bradycardia during labor were all proximate causes of the PVL; is that correct?

A Well, the major one would have been delay in preterm birth, okay. By properly knowing the gestational age of the infant based on the 7-12-01 ultrasound, so prevention of premature birth is strongly correlated with prevention of intraventricular hemorrhage.

Administration of betamethasone is strongly associated with the prevention of intraventricular hemorrhage. Prevention of fetal distress is certainly associated with prevention of intracranial hemorrhage.

And we know that there was some type of intrapartum distress because the baby had a mild elevation of enucleated red blood cells on the hemograms on the days after birth, then disappeared.

And then of course, you know, the ultimate prevention is antenatal not postnatal. But certainly taking the patent ductus arteriosus out of the equation, especially when it's causing diastolic pressures in the teens is very, very

important in preventing cerebral ischemia and subsequent brain injury.

Q All right. I'm assuming, and you correct me if I'm wrong, that you can't attach a percentage to each of those factors as to, you know, the lack of betamethasone was a 25 percent factor in the development of the PVL, the PDA was X percentage? Can you do that?

A I cannot and it would be very interesting to see if you have experts that certainly can.

Q No. I don't think I will but you never know what you might say, so I just wanted to make sure.

A That's kind of a cryptic slam, wasn't it.

Q All right. Let's -- I want to talk to you about a couple of other opinions you had when we initially took your deposition, just to make sure I'm clear.

You talked about the child's respiratory status and that the -- and the partial pressures of oxygen. Do you recall that?

A The partial pressure of oxygen in the arterial blood?

Q Right.

A Yes, correct.

Q That it was in the 55 to 80 is normal, I think you told me?

A There's different textbooks but 50 to 70, 55 to 80 appears in different commonly used educational handbooks that are used by pediatric house staff.

Q Is it your opinion based upon that discussion we had about the partial pressure of oxygen that the ventilator management for Shane Maslanka deviated from the standard of care?

A Well, you know, we're -- you -- really, that's not an appropriate question. The appropriate question is the management of the delivery of oxygen. Ventilator management is one aspect of lung care but control of the inspired oxygen concentration is another aspect of care.

And you're asking me a question that could be more simply answered that you could bring the PAO2 into the normal range and not result in hyperoxic eye or other injuries by appropriately managing the inspired oxygen concentration.

We talked about the very first elevation, which I believe was perhaps 261 and then it got better, and then the next episode of hyperoxia was 156. Again, this speaks to the fact that one, you

have good intraarterial oxygenation.

You can draw your own conclusions or the jury will regarding whether this baby was hyperoxic on too many occasions. But you can also draw your conclusions of whether that supports this severe pulmonary disease.

One of causes of having high PAO2's is the fact that the ductus arteriosus delivers more oxygenated blood to the lungs through the left or right flow, and therefore that's further support of a significant ductus early in the course of this infant.

Q Let me ask you using your term, because I apologize if I didn't use the correct term of art, but it is your opinion that the oxygen management for Shane Maslanka was below the acceptable standards of care?

A Generally speaking, repeated elevations in PAO2 of that nature are generally considered if they are repeated -- on a repeated basis, are considered deviations in the standard of care by many, many neonatologists; not only experts in litigation testimony.

And therefore we've even covered that this last week and put in a new protocol for

maintenance of oxygen saturations in our own Level 3 NICU. We did the same thing at UC Davis. And so I think that all -- this baby was born in a time frame when everybody was paying attention to PAO2's and saturations.

I saw saturations in the nursing records like 98 percent, which would be well out of range. And you can judge the occurrence of the saturations and/or the PAO2's and judge -- your own experts can come to a conclusion of whether this fell outside the standard of care but...

Q It's your opinion it did?

A I think the most -- most of the majority of most neonatologists, not experts, would agree that it did.

Q All right. You brought up initially, and I think it was mentioned again here this morning, the issue of hypernatremia?

A Yes.

Q And in your opinion it was due to amnioinfusion, correct?

A Well the baby didn't have any other external source of sodium after birth, and sodium was quite high early on. That can be due to transepithelial water loss but to be occurring of

that nature without providing free water.

And it's somewhat unusual to have so high sodiums like that in a 27-weaker as opposed to a 23- or 24-weaker. And so the sodium loading from the amnioinfusion was a likely culprit, more likely than not culprit in the high sodium.

Q You can't say one way or the other because you're not an obstetrician as to whether or not the performance of an amnioinfusion itself was below the standard of care; is that correct?

A That's correct.

Q Fine. Are there other potential causes for hypernatremia in a premature baby, other than amnioinfusion and transepithelial water loss that you're aware of?

A Well certainly if a baby is hypotensive and you have to administer saline to treat hypotension on a repeated basis, or if you give blood which has a lot of sodium to treat hypotension on the same basis, these small immature infants will be sodium loaded, and the sodium will in fact rise.

And in fact this baby did receive sodium for hypotension, the hypotension undoubtedly was related to the patent ductus arteriosus. And so

that will be part of the paradigm.

And then of course the babies will lose free water from the skin. Less so in a 27-weaker than in a 23- or 24-week gestation infant but that still can be a source of the sodium rising in an immature infant.

But again we must, must point out that this baby need not be born immaturely had the proper gestational age been known, based on the ultrasound that was done two weeks or more before birth.

Q But, and I just want to be fair here, I mean, you can't tell me whether the child would have been born then at 28 weeks, 29 weeks, 30 weeks, you can't state that, correct?

A I can't state that.

Q Right.

A But any delay in birth improves mortality. In other words, you have a lower death rate and you have fewer complications. And you have fewer complications when you delay delivery and provide betamethasone.

Q But we can agree that there's still morbidities associated with the delivery of premature infants even if the perfect care is

provided, correct?

A There is but this was a needless delivery at 27 weeks. This -- remember this baby was actually induced to be delivered, okay. And it's even stated in Dr. Martin's letter and I quote: It was not apparently recognized by the obstetric team managing this patient that this was a 27-week gestation infant, and neither antibiotics nor antenatal steroids were administered.

I take that -- my interpretation of that sentence is, is that there was a failure of standard in care in those three interventions, okay, admitted by your own neonatal expert.

Q That's your interpretation of his report?

A That's my interpretation of his report. Why did he put it in there?

Q I think Dr. Martin will explain that to us.

A Okay.

Q Let's talk about the ultrasound for a minute.

A Yes.

Q You have now taken a look at the ultrasound films themselves; is that correct?

A That's correct.

Q I take it from your testimony that you disagree with some of the interpretations of the ultrasound?

A That's correct. Actually they're overstating the ultrasound report of the first ultrasound. There's no clear indication of that report. And we've covered this before but I can read the -- I can read the report again.

Q Well you don't have to read -- you're talking about the 8-3-01 report?

A 8-3-01 report.

Q Right. And you believe it's overstated that this was a Grade 2 intraventricular bleed?

A It doesn't state that it was a Grade 2 bleed.

Q It says Grade 1 to Grade 2 bleeds bilaterally, correct?

A Well, you know, you either have Grade 1 or you have a Grade 2, you don't have a Grade 1 to 2, okay. You may have a Grade 1 hemorrhage, which is a subependymal hemorrhage; and you may have a Grade 2 hemorrhage, which is an intraventricular hemorrhage.

And the description of both hemorrhages

should be separately described on the report. But the report only describes a Grade 1 subependymal hemorrhage.

Q All right. So you believe that the appropriate interpretation of the 8-3-01 head ultrasound would have been a Grade 1 hemorrhage?

A A bilateral Grade 1 hemorrhage, and I have further comments on that. I don't believe one, there was not ventricular dilatation. The ventricles are of normal size.

There's no -- you can look at the subependymal hemorrhages, which I'm doing right now, and you can see their hyperechoic, they have -- they're very, very bright, okay, indicative of blood.

And similar clotted blood within the ventricular system should have a similar hyperechoic appearance. And you can look at the ventricles and you cannot identify a hyperechoic appearance that is the same as the subependymal hemorrhages on the images.

And you can compare that -- that hyperechoic appearance in the subependymal hemorrhages to the choroid plexus, okay, which is less ectogenic.

Now, you also have additional testimony by your expert, a Marilyn Segal, and I believe that her interpretation of the subependymal hemorrhages is also -- is not correct, and I can explain why; if not now, at trial.

Q All right. So you disagree with both the report from the Metro Health Medical Center radiologist and with Dr. Segal?

A That's correct. And I virtually looked, either independently myself or with pediatric radiologists, virtually thousands of cranial ultrasounds probably at this gestational age and younger gestational ages, older gestational ages. I have enormous experience in this area.

Q Did you review these ultrasounds with a pediatric radiologist?

A No, I did not. But I can tell you right now -- actually, we don't have a pediatric radiologist here. The films are read by a general radiologist and oftentimes the general radiologist defers to my opinions about ultrasound findings.

Q Who is that general radiologist at your facility?

A Dr. Scott Long.

Q Do you have disagreements with the

interpretations of any of the other head ultrasounds?

A No. I do agree there was a Grade 2 on the 7th, and a Grade 3 on the 15th.

Q All right.

A I do believe that there was subsequent finding consistent with periventricular leukomalacia.

Q Ultrasounds?

A That's correct.

Q All right. So the only interpretation that you dispute then is the one of August 3 of 2001?

A That's correct.

Q All right. Doctor, have you submitted a bill to Mr. Becker or Mr. Kulwicki for your review of this case to date?

A I believe there was an earlier bill but there hasn't been any recent bills.

Q Do you have any idea of what the time frame of your initial bill was?

A No, I don't. I think it probably would have been earlier this year but I can't tell you the time frame.

MS. REID: Mike, will you provide me a copy of

Dr. Sherman's bill to date.

MR. BECKER: I don't have a problem with providing you with bills that we have from Dr. Sherman until today's deposition. I think that's a fair request.

MS. REID: All right. Thank you.

Q Dr. Sherman, can we agree that patients have a responsibility to provide an accurate history to their physicians?

A As they may understand it, patients may be ill informed by the physicians caring for them regarding, you know, their medical history.

Q All right. But, I mean, it's fair --

A I assume you're -- this is a hypothetical question you're asking.

Q I'll qualify it, it is a general, hypothetical question.

A Right. And I don't believe you have any knowledge of what or how it was explained to the mother, you know, prior to her appearance in the intrapartum period.

Q I think I do have some knowledge about that. But be that as it may, my question is in general, hypothetically: Can we agree that patients have a responsibility, to the best of

their knowledge and understanding, to provide an accurate medical history to their physician?

A I would agree with that, and also it's the responsibility of the physicians to act on the basis of all available medical information on the patients that they're treating, which was clearly a deviation of the standard of care in this case.

Q Fair enough.

A Fair enough. You said it.

Q Dr. Sherman, if -- I want you to assume that -- well, I'm trying to think of the best way to ask this question.

Is it your opinion that had appropriate care been provided, and I'm taking specifically the administration of betamethasone and the management of the PDA. Had that occurred in this case, would Shane Maslanka have avoided all the deficits he currently suffers from?

A That's a very compound question that I'm surprised Mr. Becker didn't object to, and therefore I ask that you restate it and maybe break it down.

Q All right. Do you want me to break it down by deficit?

A You know, I mean, it was a very, very

difficult question to understand.

MR. BECKER: Doctor, why don't we have the court reporter read the question back.

MS. REID: Were you sleeping Mike? Your witness wants you to wake up.

MR. BECKER: No, I'm with you.

MS. REID: All right.

MR. BECKER: Read the question. Ms. Court Reporter, if you'd read the question back. And, Doctor, if you don't understand the question --

THE DEPONENT: Just tell her.

MS. REID: You can tell me, that's fine. I'll just rephrase it, I can accept the fact that you --

THE DEPONENT: I couldn't really -- I mean it was a very compound or complex question with many variables in it.

MS. REID: All right. Well here, I mean --

THE DEPONENT: Well, perhaps the court reporter would like to read back -- what Mr. Becker asked for.

MS. REID: That's fine.

(Whereupon the requested portion of the record was read back by the Reporter.)

THE DEPONENT: Do you have any comments,

Mr. Becker?

MR. BECKER: No. I follow the question, Doctor, but maybe --

THE DEPONENT: Well, I can't answer the question and the reason why is the question is incomplete. It doesn't address the issue of avoiding preterm birth. And we're only dealing with two of many issues there, and therefore I cannot answer that question.

MS. REID: All right.

Q In order to answer that question, you would need me to factor in the timing of the delivery as well as all of the other medical issues you pointed out to me through the course?

A That's correct. And you already told me that you can't -- that you can't tell me when the baby would be born. The baby might have been born at 35 weeks.

You know, since I can't really state when the baby was born, it really is a hypothetical question as to what exactly would have been the outcome of the infant.

Obviously it would have been better but you want an answer that all deficits would disappear. We don't know -- since we don't know

the delay in the duration of time from presentation to birth, you know, it's not a question that's answerable.

Q All right. And that's based on the premise that you don't have an opinion as to whether this baby would have been born at 27-and-a-half weeks or 35 weeks, correct?

A That's correct.

Q All right. I'm saving Dr. Martin's report because it's my understanding that you have some comments you would like to make about that; is that fair?

A Dr. Martin's report and your radiology expert's report.

Q Any preference of order we take these in?

A No.

Q All right. Well why don't we -- well let's address Dr. Segal's report because it's -- tell me what your --

A It's shorter.

Q You already told me that you disagree with her interpretation of the 8-3 ultrasound, correct?

A That's correct.

Q Is there anything in addition to that,

that you disagree with?

A No.

Q Okay. So is there anything else we need to cover in Dr. Segal's report?

A I believe that -- I think we should cover her interpretation of the timing of the bleed based on the 8-3-06 ultrasound.

Q All right. Well I think, and correct me and I'm just trying to tie things up if I can. I thought you told me in your initial deposition that you disagreed with that because it didn't match the clinical presentation that you saw in your review of the records?

A That's correct. And also now I've had an opportunity to actually look at the images and I believe based on extensive experience of reviewing ultrasounds, either myself and/or with pediatric radiologists, that my opinion of what she is concluding is incorrect.

Q Tell me specifically what you're referring to?

A Okay. With regards to the subependymal hemorrhages, you will see lucensies within the subependymal echogenic areas. And it's her conclusion that that results in a cystic

subependymal hemorrhage that would be -- and she says there are slightly cystic suggestions that are a few days old, okay.

When you go from a hemorrhage to a cyst, a cyst by definition is a thick-walled structure, okay, with a uniform thick wall. These lucensies within the subependymal hematomas are not -- are not cystic in nature.

They're lucensies but they don't have a well developed, well formed wall such as the formation of a total clot, fall by the lysis of the clot and a well-formed wall lateral to the cystic structure.

What these actually represent are hematomas that are recess in origin. I can't tell you whether they might be intrapartum or on the 1st or 2nd but they -- chances are they're more likely on the 1st and 2nd based on what I'm just going to say.

The fact that there are lucensies there is that the blood has not completely clotted within the hematomas. And therefore it shows up as a lucency within the hematomas and it doesn't have a nice uniform cystic appearance.

And therefore it's not really appropriate

to call it a cyst, the proper designation is there's lucensies within the subependymal hematoma. And among the potential explanations for that, the most likely one in my opinion, is it represents unclotted blood within the hematoma that it will subsequently clot, and then the hematoma will resolve.

And in fact -- and in fact if you go to the ultrasound on the 7th of August, okay, and you look there, you'll see that a similar lucency appears on some of the images and that -- but they now are more uniform in nature, suggesting that the baby is in fact forming a resolution of the subependymal hematoma.

And the subependymal hematomas are in fact somewhat less prominent on the 7th. You still see a lucency within the hematoma on the coronal views, and one of those coronal views shows a very nice thickened wall around the -- where there's a much greater lucency, it's not a gray scale like on the initial images.

Again, indicating resolution of a hematoma that probably occurred -- probably more likely than not on the first or second day after birth.

Q Does that cover your opinions about that film?

A I think that people can look at the images and they can see a clear difference between the 15th and the 3rd with regards to wall formation within the subependymal hematoma.

Q Dr. Sherman, prior to you moving your practice to southern Illinois, when you worked at UC Davis and other institutions, there were pediatric radiologists that you worked with, I assume?

A Yes, there were two.

Q There were two, okay.

A In fact, I published articles with one of them.

Q Who was that?

A That was -- we published an article in Active Pediatric in 2003, Dr. Wooten: W-O-O-T-E-N.

Q Well during that time frame when you were working or had the availability of a pediatric radiologist, how many times or what percentage of the times would you interpret a head ultrasound of a newborn without using the expertise or discussing the ultrasound with that pediatric radiologist?

A Well pediatric radiologists unfortunately

don't spend time in-house on nights and weekends like neonatologists. So when we had to have decision making about a serious intracranial hemorrhage in a very immature infant in the middle of the night or on a weekend, particularly after hours on a weekend because they were there from 9:00 to 12:00 on Saturday mornings.

But on those weekends, we had to rely on our own interpretations of the ultrasounds. And in fact, neonatologists are tested on their board examinations on their competency to read cranial ultrasounds.

Q I'm assuming, and again correct me if I'm wrong, that if you had the opportunity to avail yourself of the expertise of a pediatric radiologist that's something you certainly would do?

A That's something I would do, yes.

Q Okay.

A I wouldn't say that all neonatologists all the time will have agreement, okay, with the pediatric radiologist on --

Q That wasn't my question --

A I realize that.

Q Have we covered your comments about

Dr. Segal's report then?

A Yes.

Q All right. Should we move on to Dr. Martin's report?

A Yes, please.

Q All right. You had covered some opinions about Dr. Martin's report in your initial deposition. Do you recall that?

A Right.

Q Was there comments you wanted to make in addition to what you already explained to me back on August 3?

A There are additional comments. I wanted to go through his letter to Mr. Malone on a line by line basis. Okay?

Q Okay.

A First of all there's a statement there: Was some tobacco exposure, okay. Now this was a 1100 gram baby born at 27 weeks gestation. That would place the baby at a reasonably high birth weight percentile wise.

The one complication, or couple complications associated with tobacco exposure would be a restriction in birth weight, which was obviously not present here.

The only other complication, which my wife and I have published on, are changes in heart rate related to tobacco exposure that may have some meaning with regards to the increased risk of SIDS in woman who use tobacco.

As we know, then, the tobacco exposure here neither produced a lowering of birth weight, and certainly we know the patient did not die of sudden infant death syndrome.

The next sentence I would like to cover: In late June she had a positive urine culture for a Group B strep. That was negative in mid July, approximately two weeks prior to delivery.

Dr. Martin very well knows that carriage can come and go with Group B strep. And whether a mother is positive one time or negative another time is still below the standard of care to not provide some type of penicillin, chemoprophylaxis, in a preterm delivery when Group B strep has been identified during pregnancy. So that's, in my opinion, a self-serving statement on his part.

And then we have the fact that spontaneous rupture of membranes occurred approximately 12 hours prior to vaginal vertex delivery. We've already covered the fact that

rupture of membranes can still result in many weeks delay before delivery of an infant.

And then there's a statement: It was not apparently recognized by the obstetrical team managing this patient that this was a 27-week gestation. And neither antibiotics nor antenatal steroids were administered.

Q And we've covered your opinions or thoughts about that statement, right?

A That's correct. But it doesn't hurt to restate it about 50 times. Because really, clearly, that the issues in this case are really obstetrical as it results to the major complications this baby suffered because they're more likely than not preventable.

The X-ray was consistent with mild respiratory distress syndrome. I presume that having made that statement, Dr. Martin had access and looked at the X-rays. And it's my interpretation that in this particular infant, the left right flow through the ductus was significant.

It was based on hard forensic evidence of low diastolic pressures on blood pressure measurements from umbilical lines. And it's also manifest, as I said, by the potential for having

elevated PAO2's in the arterial blood as a consequence of right to left shunting.

Now, we're going to fall into a later part, so I'll cover it here. Babies who are septic at birth, typically have low APGAR scores because they are depressed from infection. And this is well stated in a number of sources.

And this baby's APGAR scores were 7 at one minute and 8 at five minutes, which would be considered reasonably normal APGAR scores in a baby of 27 weeks gestation.

Q We discussed this. Not to interrupt you but I am interrupting you. But we discussed this initially, in your initial deposition. That you don't think the APGAR scores are clinically correlated with a baby with infection?

A That's correct.

Q All right.

A Okay. And then he talks about the baby -- we talked about the administration of dexamethasone and how dexamethasone can lead to the occurrence of cerebral palsy, okay.

And that there were grave concerns even in 2001 about administering dexamethasone to achieve extubation, even because of the potential

risks to the baby from the effects of dexamethasone potentially and brain development.

As we've also talked about, dexamethasone can suppress the immune system, particularly the TH1 helper cells lymphocytes, and that can of course be associated with infection.

And in fact the baby -- he doesn't talk about this but he talks about there was successful intubation or extubation after the dexamethasone. This is in the next sentence: Apart from a brief reintubation for apnea around August 31, 2001.

Well he doesn't candidly state that the reason for reintubation around August 31, 2001 was due to coagulate negative staphylococcal bacteremia and the apnea was caused by it, and could be linked to the dexamethasone therapy.

Q The administration of dexamethasone at or around the time of extubation was below the standard of care?

A No. They provided a course of dexamethasone. It wasn't just to prevent laryngeal edema around the time of extubation was actually to -- it was actually applied to reduce lung inflammation, to facilitate extubation from the ventilator and to a nasal canula.

Q Well was that, the administration of that dexamethasone course inappropriate?

A Well, I mean that's -- I don't think that -- that's a controversial point that has not yet been litigated, or I'm not aware of it, related to the administration of dexamethasone and the subsequent occurrence of cerebral palsy.

Q Well my question is and I --

A You're question is, is whether that was appropriate.

Q Well was it --

A It's problematic but there will be some testimony by some experts that it still may have been within the standard of care.

Q What's your opinion?

A Well, I try -- well I'll give you the exact opinion that we use in speaking with parents.

If a baby is going to die because of the ventilator and oxygen therapy at three weeks of age, then we would apply dexamethasone therapy. And we would have the parents be fully informed that there was risks of cerebral palsy. And that's what we did at UC Davis Medical Center in year 2001.

That having been said, this baby did not appear to be dying as a result of oxygen and ventilator therapy.

Q Do you believe, Dr. Sherman, that the administration of dexamethasone in this case was a proximate cause or factor in the development of Shane Maslanka's CP?

A I think that the far overwhelming reason for cervical palsy in this case was the failure to undertake proper obstetrical care. And there was some contribution of failure to properly manage the patent ductus arteriosus. But the major concern I have as a neonatologist is the obstetrical care in this case.

Q Are we done then with the first page of the report?

A Yes. We are going to go to page two now.

Q Okay.

A And he talks about the 3rd and the 4th that there was, and I'll quote: A patent ductus arteriosus was diagnosed at this time. And this was likely reason for blood-sustained intratracheal secretions.

It's well known that a PDA can lead to

pulmonary hemorrhage. As you know from the medical record, obviously Dr. Kumar was not of that opinion. He wanted to get an ENT consult to determine the cause of the bloody secretions.

And I believe almost any fellow that I've taught has been taught -- or any resident that I've taught for that matter, that patent ductus arteriosus and congestive heart failure is a sign of blood in the intratracheal tube.

You've heard of bloody pulmonary secretions in adults who have congestive heart failure, bloody pulmonary secretions occur in infants who have heart failure from patent ductus arteriosus.

And this is a cause that could have been avoided by early treatment of the PDA on day one or two because of the symptoms that were manifest; including the presence of diastolic hypertension, the presence of a murmur and other factors that I mentioned in past testimony.

Q You don't agree with the general statement that PDA can cause pulmonary hemorrhage?

A Pardon me?

Q Can PDA cause a pulmonary hemorrhage?

A Yes, it can.

Q Okay. Go ahead.

A And also indomethacin can prevent that from occurring.

Indomethacin therapy was withheld because of intraventricular hemorrhage, I think you have my testimony on that point now, as to the August 3 ultrasound.

But in fact, earlier examination of the ductus on the day of birth or the second day of life is on August 2, well could have resulted in, you know, avoidance of the things that we've already discussed.

Now in the very end of that paragraph it says: Ligation of the PDA was performed on August 19, 2001. Well the baby was put back on the ventilator and according to the nurses' notes, this was because of congestive heart failure.

That was on the 12th and there's yet again a week delay before a PDA surgery is performed. And I guess I would question more likely than not why earlier intervention for ligation of the PDA, given the reasonably good clinical status of the baby, did not occur.

Q Does the surgeon's opinion as to the infant's clinical status factor into the timing of

surgical intervention?

A Yes, it does. But I don't see anything in the medical record that states that the surgeon wanted the surgery delayed. They consulted them on the 16th, they did it on the 19th, you still have from the 12th to the 16th that's unexplained why they didn't consult pediatric surgery.

Q Next paragraph.

A I'm sure you did want to move on.

Q I'm just trying to get through, Doctor, that's all.

A Okay.

Initial blood culture from August 1, 2001 was negative. In the absence of intrapartum antibiotics in a septic infant, you would expect the blood culture to be positive, okay.

And if you really thought the baby had infection, okay, then you would have considered doing a lumbar puncture. But even in the presence of ventriculitis, which Dr. Martin assumes could be infectious on the 8-7 ultrasound, no lumbar puncture was performed, no antibiotics were given at high doses to treat meningitis.

And in fact the ventriculitis that appears on the 8-7, 2001 ultrasound represents

ventriculitis that is due to blood irritation. It's a common occurrence that once there is intraventricular blood, that there will be irritation of the ventricle.

As you can note on the ultrasound that was done on the 3rd, there's no mention of ventriculitis due to intraventricular hemorrhage. So the explanation that there was a ventriculitis caused by early onset neonatal sepsis is simply not true.

The ventriculitis was caused by the hemorrhage, it's a common occurrence. I've seen it in virtually hundreds, if not thousands, of cases of intraventricular hemorrhage in neonates.

Now let's go to something that I really think was self-serving, and also factually inaccurate in his letter. And I will provide the actual numbers to Mr. Becker and Mr. Kulwicki so they can use them at the time of trial in questioning Dr. Martin.

And that is the following statement: However there was a persistent neutropenia from August 1 to August 6, 2001 with neutrophil counts of 1,000 to 1,400 per cubic milliliter, falling to less than 1,000 on August 6, 2001.

Well if a baby is septic and you -- and they would have neutropenia and the lowest counts would be right after birth and then they would rise, okay.

But let's really review the record --

Q Doctor --

A Now wait, you're going to listen to this because this is very, very accurate and it's forensic evidence, okay.

Q I can listen to what I want listen to, Dr. Sherman, number one; number two, I don't want to go through every lab result in --

A No. We are going to go through these lab results or you're not going to have full discovery and Mr. --

Q Are you lawyer, Dr. Sherman?

A No. I'm not a lawyer but I can tell you that the neutrophil count on the 1st was 1649, the neutrophil count on the 3rd was -- there were two counts, one was 3,002, one was --

Q Contrary to your belief, I mean, I have the labs in front of me. I'm familiar with what they are, that's why I don't think it's necessary to repeat them.

A No, no, no. You don't want to hear this

testimony. I will tell you this is a hematology report, it's a thing in the Metro Health system record --

Q I'm aware of it, Dr. Sherman that's what I'm -- you don't need to --

A You're trying to get this testimony to not go into the record. You look at how you calculate whether there's a neutropenia or not, is based on the total number of neutrophils in the manual differential count times the white blood cell count, okay.

That was not done by Dr. Martin and I have the numbers right in front of me because I've calculated them, okay.

Q Here's what we're going to do because I --

A And there's also not in evidence what neutropenia definition is, which in the June 2006 Journal of Perinatology we published that article on neutropenia; the definition was less than a thousand white neutrophils per cubic millimeter, okay.

And I can find no count, okay, between the 1st and the 6th where you do the proper calculation of neutrophils per cubic millimeter

that is less than a thousand.

And in fact -- and as a matter of fact only two of them, one on the 5th and one on the 6th are below 1500. And in fact one on the 8th, two days after the one on the 6th, has an absolute neutrophil count of 2878.

So, you know, the letter, Dr. Martin will have to stand by, okay.

Q We will, Dr. Sherman. You believe that Dr. Martin's calculations are wrong, correct?

A That's correct.

Q And you don't believe that Shane Maslanka had any evidence of persistent neutropenia, correct?

A That's correct.

Q You're going to pull the lab values that you have in front you and I have in front of me to show that at the time of the trial, correct?

A That's correct.

Q All right. Let's move on then.

A Okay. I will provide the actual numbers on chart. Now there's more --

Q You put a list together already?

A I've already put together a list.

Q Do you have that with you today?

A The list today, no. I put it in the record. I have written the actual numbers in two copies of hematology profiles.

Q Okay. And you're going to provide that to Dr. Becker?

A That's correct.

Q All right --

A Along with other things because probably more importantly than the absolute neutrophil count is something called the immature total neutrophil ratio. Where you create a ratio of the number of immature neutrophils to the total neutrophils, and values that are associated with sepsis are usually above a value of .2 to .3.

And in fact, if you do calculations on the number of bands or other immature neutrophils to the total number of polys, you'll find out that all of the values in the first six to eight days of life fall below .3.

And in fact, in the first -- on 8-1 and 8-3 those values, except for one where they have an elevated value that then goes down, the value on the first day is .09. The value on the third, one value says that it's .27. A value done on the same day, later in that day, again says it's .09 for the

ratio of immature neutrophils to mature neutrophils.

That's one of the common tests that we run to determine bacterial infection, along with a C-reactive protein, which no C-reactive proteins to my knowledge were performed on this infant.

So in addition to that, the -- except for a platelet count of 147 on the 4th, there were platelet counts from the 1st of 266; 200,000 on the 3rd, another one 184; one on the 4th, 198; one on the 5th, 173. If you have serious bacterial sepsis, you will have low neutrophil counts often in association with neutropenia.

Q Have you made notations about the neutrophil counts as well?

A Pardon me?

Q Have you made notations about the neutrophil counts as well?

A About the -- I'm not quit understanding your question.

Q You described that there were some notations you had made for Mr. Becker about the -- whether there was evidence of persistent neutropenia?

A Right. I wrote down the A and C values,

okay.

Q All right.

A You know, above the white blood cell counts on these two pages that cover -- that will cover the 1st through the 8th, okay.

Q Okay. And that's what you're going to provide to Mr. Becker?

A That's correct.

Q All right.

A But these values that are said to be a thousand to 1400 per cubic millimeter are in fact not correct. And in fact -- in fact, of the values up to the 8th; one, two, three, four, five of those values are above 1500 as far as the absolute neutrophil count is concerned.

This baby did not have an infectious neutropenia. I happened to take the opportunity to look up whether Richard Martin is an expert in neonatal leucocyte biology.

Q Where did you look that up?

A I looked it up in Pub Med. If you look at my vitae, which you have, you will find out that since 19 -- for 30 years, I have been a basic scientist and a clinician studying leucocyte-- neonatal leucocyte biology, okay. It's my area of

expertise.

Q And it's not Richard Martin's?

A It is not Richard Martin's.

Q You believe you're a better expert on this issue than Richard Martin?

A I would believe so. If it came to airway obstruction or apnea or things of that nature, he would be the expert but he is not an expert in neonatal leucocyte biology.

Q You don't take -- you don't believe his opinions has any credence in this case, do you, Doctor?

A Well that's a self-serving statement. I won't answer it.

Q Why do you believe things are self-serving so much, Doctor?

A Because Richard Martin knows that there is an expert testimony standard put forth by the AAP, okay. And he knows that members, fellows of the American Academy of Pediatrics are to provide honest scientific testimony in deposition or at trial, okay.

And to provide less than that, you know, not candid testimony, one's interpretation. Or to serve as an expert for a health system that is also

aligned with Case Western Reserve University School of Medicine, is something that I personally, ethically, have not seen in any of the testimony I've given at deposition or trial in many, many, many years. In fact, I've never seen it before.

So there are -- I have deep concerns -- deep, deep concerns about the fact that this person is an advocate, okay.

Q But do you believe -- and I want to leave this point because I really would like to get through with this deposition.

Do believe that Dr. Martin providing testimony in this case, or the opinions he is authored in his report violate an ethical duty?

A In my opinion, if I was involved with a sister institution that was also under the umbrella of the medical school that I taught at, I would not be allowed to provide testimony for that sister institution. So yes, I do believe that he's violated an ethical standard.

Q You believe he's violated the standard set forth by the American Academy of Pediatrics regarding expert testimony?

A I'm very concerned about it, yes.

Q Any other comments you have about

Dr. Martin's opinions regarding infection? Without going through all the lab results, please.

A Okay. One of the things that he talks about here is the jaundice but he doesn't talk about the significant scalp bruising that this baby had that would have been related to a preterm delivery, that was not based on proper knowledge of the gestational age.

And the bruising itself could have consumed coagulation factors that may be important in preventing intraventricular hemorrhage down the line.

There are a certain group of obstetricians that believe that a baby at this gestational age might be better delivered and delivered atraumatically, or with less trauma, by cesarian section. But that's not an opinion that I can give.

The next paragraph has a statement where he reveals the bilateral Grade 1 to 2.

Q Well let me just -- we have talked extensively about your disagreement about -- or what your opinions are or your interpretation of the ultrasounds.

A Right.

Q I mean, I would prefer not to repeat that now because I think we've covered that at length.

A Yeah. I think -- I think the next paragraph that deals with the -- and includes the ventriculitis and involves ventricular dilatation, I think we have in fact covered that and we need not cover it.

Q All right.

A The very next paragraph talks about evidence of retinopathy of prematurity but Dr. Martin does not speak to the issue of hyperoxemia or high O2 saturations, and it's role in the pathogenesis of retinopathy of prematurity. And we've covered that I believe as well.

Q Okay.

A And then the last paragraph it says: In my opinion Shane suffers from severe morbidity associated with preterm birth and it's complications. But again I will state that this is a major obstetrical issue because to blame preterm birth adds to a reduction of mortality and a significant reduction of morbidity, particularly when betamethasone is administered.

And he said: He experienced mild RDS and progressed to be BBD but he doesn't address the

issue that BBD is a complication of an untreated patent ductus arteriosus as described by Bank Lori (phonetic) and others repeatedly in the literature.

And that is the most likely explanation for the pulmonary morbidity that this baby suffered because I agree with Dr. Martin, the baby's RDS was mild in nature.

Q I'm going assume, Dr. Sherman, that you disagree with everything Dr. Martin says in his final report because those are his ultimate opinions; is that fair?

A I think that that is an overstatement of my testimony. And I certainly will agree with him that about many of the factual things in this case including the --

Q No, no. I --

A (Continuing)--including the PO2 of 260, okay.

Q No, no, no. You're not listening to me.

We are at the final paragraph, where Dr. Martin -- the final paragraph of Dr. Martin's report.

A Yes.

Q Where he sets forth his ultimate opinion. I understand there's going factual things

you're going to agree about.

A Right.

Q But I'm going to assume for the purposes of brevity here --

A Right.

Q (Continuing)--that you disagree with Dr. Martin's ultimate opinions in this case?

A Yeah. This baby was -- did not have early onset neonatal infection. I just provided a lecture on August 16 to the family practice residents on early onset neonatal infection. You can look at my vitae, you will see that I've lectured on this very topic in recent years.

The -- it -- his opinion that this is supported by metabolic acidosis cannot be supported in the fact that the metabolic acidosis would be caused by patent ductus arteriosus. And that the low diastolic pressures will lead to tissue ischemia and a metabolic acidosis.

And that very commonly a significant patent ductus arteriosus is treated with pressor support during the neonatal period. And that there is really far more likely explanations, more likely than not explanations in this particular infant for metabolic acidosis and pressor support. I stated

those previously.

And the timing of the PVL on the ultrasound would not suggest, as I've stated and you can look up the timing on PVL after an ischemic insult, could not be associated with intrauterine infection.

This baby was not infected in utero. But I do agree with him that the administration of betamethasone would have reduced the likelihood of the occurrence of intraventricular hemorrhage or the severity of intraventricular hemorrhage.

So on that very point, I end the discussion of his report. And see we are in agreement.

Q Right. On that one point.

A On many points. I certainly agree with him about the fact that the APGAR scores were 7 and 8, and that's inconsistent with neonatal sepsis.

I certainly do agree that a PAO2 of 261 actually occurred and that can be associated with morbidity, such as retinopathy of prematurity.

Q Dr. Sherman, do you feel satisfied we've covered your opinions in this case?

A Well we really haven't covered all of my opinions because there may be some new discussion

that needs to occur. I only have Dr. Martin's report, I don't think we have his deposition testimony yet.

There will probably be other defense' experts and other plaintiff's experts in this case. And after I've had an opportunity to review their deposition testimony, there may be other unusual statements made that have to be addressed with regards to my opinions.

Q Well I mean, I take that as that doesn't necessarily change your opinions, it might just be something you want to comment on as this case progresses?

A That's correct.

Q All right. But as far as with the materials you have in front of you today and you had in front of you in the beginning of August, you've been able to express the opinions, understanding that at times I told you not to get into the factual basis for all of your opinions?

A Understanding that, that's correct.

Q All right. Have you requested any further information from either Mr. Kulwicki or Mr. Becker at this point?

A No, I haven't. But they know that I will

want to see deposition testimony as it occurs and is relevant to my testimony.

Q Have you prepared any other notes or -- that you are -- other than what you have described that you're intending to provide Mr. Becker or Mr. Kulwicki?

A I only plan to provide with them because I think it's clearly an error based on their forensic laboratory information why, you know, the neutrophil counts and other parts of the hemogram in this case are inconsistent with neonatal infection.

And I probably will provide them but they have already heard my discussion of point-by-point why intrauterine infection and evidence of intrauterine infection, both on an intrapartum basis and on a postnatal basis did not exist.

MS. REID: All right. With that, Dr. Sherman, I don't have anymore questions for you today.

THE DEPONENT: Okay.

MS. REID: Appreciate your time.

THE DEPONENT: Thank you.

FURTHER DEPONENT SAITH NOT.

I, MICHAEL PARKER SHERMAN, M.D., having read the above and foregoing, find the same to be true and correct with the following additions and/or corrections, if any:

Page_____Line_____Change:

Page_____Line _____Change:

Page_____Line _____Change:

Michael Parker Sherman, M.D. (9-1-6) DATE

STATE OF ILLINOIS)
) SS
COUNTY OF MENARD)

C E R T I F I C A T E

I, Tricia L. Gudgel, a Notary Public and Certified Shorthand Reporter in and for said County and State do hereby certify that the Deponent herein, MICHAEL PARKER SHERMAN, M.D., prior to the taking of the foregoing deposition, and on the 1st of September A.D., 2006, was by me duly sworn to testify to the truth, the whole truth and nothing but the truth in the cause aforesaid; that the said deposition was on that date taken down in shorthand by me and afterwards transcribed, and that the attached transcript contains a true and accurate translation of my shorthand notes referred to.

Given under my hand and seal this 5th day of September A.D., 2006.

Tricia Gudgel

Notary Public and
Certified Shorthand Reporter

License No. 084-004053

OFFICIAL SEAL
TRICIA GUDGEL
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 11-3-2007