In The Matter Of:

Deborah Caimi, et al. v.
St. Luke's Medical Center, et al.

Mark S. Scher, M.D.
November 8, 1999

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IN THE COURT OF COMMON PLEAS
CUYAHOGA COUNTY, OHIO

DEBORAH CAIMI, et al.,
Plaintiffs,

JUDGE RUSSO

-vs- CASE NO. 348525

ST. LUKE'S MEDICAL
CENTER, et al.,

Defendants.

Deposition of MARK S. SCHER, M.D., taken as if upon cross-examination before Tami A. Mitchell, a Registered Professional Reporter and Notary Public within and for the State of Ohio, at University Hospitals Health Center, 5850 Landerbrook Drive, Mayfield Heights, Ohio, at 6:05 p.m. on Monday, November 8, 1999, pursuant to notice and/or stipulations of counsel, on behalf of the Plaintiffs in this cause.

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MARK S. SCHER, M.D., of lawful age, called by the Plaintiffs for the purpose of cross-examination, as provided by the Rules of Civil Procedure, being by me first duly sworn, as hereinafter certified, deposed and said as follows:

CROSS-EXAMINATION OF MARK S. SCHER, M.D.

BY MS. EKLUND:

Q: Would you state your full name, please.
A: Mark Steven Scher.
Q: And you are a pediatric neurologist?
A: Yes.
Q: Do you happen to have a copy of your CV, which I should have asked you before we started?
A: No, I do not.
Q: Do you have one at your office?
A: I can certainly send you one.
Q: Tell me about your medical training and education.
A: Medical school was at the State University of New York Down State, Brooklyn, New York from 1972 until 1976. Pediatric residency from 1976 to 1978 at New York Hospital Cornel1 Medical Center, pediatric neurology and neurology residency at University of Minnesota Hospitals 1978 to 1981.

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Also during that time a clinical neurophysiology fellowship concurrent the same years I was there. Post graduate research at Stanford in neonatal neurology and experimental epilepsy. And I began my first faculty appointment at the University of Pittsburgh.
Q: How long were you at the University of Pittsburgh?
A: 14 years.
Q: You taught pediatric neurology?
A: I was full-time staff pediatrics in the division of pediatric neurology.
Q: You left there in what year?
A: 1997.
Q: You started at University?
A: Case Western Reserve University and University Hospitals.
Q: Where you are currently employed?
A: Where I'm chief of the division of pediatric neurology.
Q: How long have you been chief of that division?
A: Since I have arrived, 1997.
Q: Are you board certified?
A: Yes.
Q: In what areas?

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A: Neurology with special confidence in child neurology, pediatrics and clinical neurophysiology.
Q: The last one you said?
A: Clinical neurophysiology.
Q: When were you certified in child neurology or neurology with a subspeciality?
A: 1983 was the orals. I completed the entire set.
Q: Is there a written exam also?
A: There's a written before that that you have to pass and you go on to the orals.
Q: Did you pass the written and orals on the first try?
A: Yes.
Q: Have you been recertified?
A: Not required.
Q: What about pediatrics, is it a written and oral exam?
A: 1986 I was boarded.
Q: Did you pass both the written and oral exam on the first attempt?
A: Written I took twice and the oral once.
Q: Meaning you did not pass the written the first time?
A: That's correct.

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Q: What about clinical neuropsychology?
A: Neurophysiology. 1980. That was the first board I took and passed that the first time.
Q: Two-part test?
A: Actually three-part test.
Q: Passed them both the fiist time?
A: Yes.
MS. **HARRIS:** Which of the three? You said both.
A: I passed all three the first time.
Q: And does that certification require any recertification?
A: No.
Q: How long have you been doing medical-legal work?
A: Since 1984.
Q: How many cases per year do you review presently?
A: 10 or **12.**
Q: Is it fair to say you review cases primarily on behalf of defendants?
A: About 75 percent for defendant, either doctor or hospital.
Q: Have you ever advertised your services as an expert witness?
A: No.
Q: Did you work for some time with the Sapanaro

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group?
A: Yes.
Q: That was before coming to University Hospitals?
A: Way before. *1984* to *1986.*
Q: Would that have been your first experience in the medical-legal arena?
A: That's correct.
Q: I take it you are not an expert in the area of obstetrics?
A: Correct.
Q: You're not an expert in the area of perinatology?
A: Correct.
Q: You're not an expert in neuroradiology?
A: Not boarded in radiology. I'm only hesitating because you know as a neurologist that's what we do is read x-rays. I'm not boarded in that area.
Q: You're not an expert in reading and interpreting fetal monitor strips?
A: Correct.
Q: Have you testified for Ms. €€arris in any other cases?
A: On one or two. I don't remember the specifics of, the names or the titles, but I have.
Q: What about other members of her firm?
A: I don't remember names of members of her firm but

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it's possible.
Q: Did you testify previously for the law firm of Jacobson Maynard when it was in existence?
A: Yes.
Q: Were you on the board of review for Jacobson Maynard or PIE?
A: No.
Q: I take it you have authored articles in your various areas of specialty?
A: Yes.
Q: And they would be listed on your CV?
A: Yes, they are.
Q: Some of those articles relate directly to some of the issues in this case, am I correct?
A: Yes. Not verbatim in terms of the specifics **but** the general concern whether a child is dysfunctional versus damaged at the time of birth which gets into the area of opinion for this particular child.
Q: Let's talk about those two terms you just used, dysfunctional versus damaged. How do you distinguish the two?
A: Dysfunctional means the brain is not irreversibly damaged but temporarily not acting right and damage is self-explanatory. There are

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irreversible neuronal injury and death of brain cells, not necessarily the child.
Q: I understand. Do you agree that a neonatologist is the physician who would treat a newborn infant up to the fist *48* hours of life?
A: Yes.
Q: And then a neurologist would typically care for the child thereafter?
A: Well, it's not been my practice to do neonatal medicine but I'm always available at the time of birth to advise on issues that are neurologic. I guess I'm trying to answer your question based on my experience.
I do not have critical care responsibilities for the newborn but I certainly may have critical care neurologic opinions that are before *48* hours of age.
Q: Okay. But typically in a hospital setting, such as University, a neonatologist would care for an infant in the first *48* hours of life?
A: If "care for" you mean general care, yes. If it's related to neurological systems, I'm usually asked an opinion as to what I would do and generally that opinion is considered carefully.
Q: Okay. So a neonatologist may consult with you on

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neurological issues?
A: Yes.
Q: In your area of practice do you have a special interest in seizures?
A: Yes.
Q: Is that a subspecialty of yours?
A: No. I mean, **I'm** director of the epilepsy center at Rainbow but I'm also interested in newborn seizures which is usually not epilepsy.
Q: If newborn seizures are not epilepsy, what are they?
A: They're usually a sign of dysfunction that may or may not also represent damage.
Q: Sometimes dysfunction in the form of seizures can represent damage?
A: It can.
Q: Do you agree that cerebral palsy can be caused by events that occurred during the labor and delivery process?
A: In the minority of situations, yes.
Q: Would you agree with 20 percent of cases of cerebral palsy are caused by labor and delivery events?
A: I have seen articles that quoted that percentage. I don't necessarily agree it's that high but it's

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in the ballpark.
Q: You have reviewed here a number of depositions —
A: Yes.
Q: — and records. Do you have any way to determine when you received the records that are in your file at this point?
A: I certainly looked at the cover sheets from Ms. Harris and her law firm. And I believe January of '99 was when I was initially contacted.
Q: Do you know what you received at that time?
A: Certainly the full volumes that are listed in the indices in front of the volumes.
Q: Do you believe you have received a complete chart of the baby's admission at St. Luke's Hospital?
A: I assume I did, yes.
Q: Do you know for certain that you did?
A: No, I don't know. That was one of the items listed in the index.
Q: Do you know if you ever reviewed the baby's hospital chart for St. Luke's Hospital apart from the labor and delivery records?
A: Yes.
Q: Do you know if those records were supplied to you very recently?

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MS. HARRIS: Claudia, let me — I know where you are going. We didn't have those records and the reason I didn't have them when Leslie sent the records, she sent out our originals. So I didn't ever see them which is why I was concerned.
MS. EKLUND: All right.
Q: That takes care of that. Doctor, you wrote a report, two reports in this case. The fist one is dated March 2nd, 1999?
A: That's correct.
Q: Is that the report you have in front of you?
A: Yes, it is.
Q: Is this the first draft of the report you prepared?
A: My general practice is obviously to have a final draft after I've reviewed spelling errors and other but I don't have a copy of that.
Q: Were there any changes, additions, or corrections of any kind made to the report based upon any conversations with counsel?
A: No. There may have been corrections only to the way I had written the prose in the report.
Q: Doctor, have you spent some time investigating the timing of brain injury in newborn infants?

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A: I also do as part of my consultations.
Q: And that's probably one of the most pressing questions that a parent might have about their child at birth?
A: Yes.
Q: And in terms of timing, it can be a prenatal event which would have occurred sometime during the prenatal time period?
A: Correct.
Q: Then we have a period we would call, would it be perinatal, referring to the labor and delivery process?
A: That would probably not be the right term. Perinatal means **28** weeks gestation to one month of life. You're referring to antepartum which is one month prenatal minus the end part of the period. The integral part is active labor until delivery. And the neonatal period is up to one month of life in a full-term infant.
Q: Okay. In examining a newborn infant to determine the timing of the brain injury, you look for certain characteristics; is that fair?
A: That's correct.
Q: One of the things you look for **is** decreased muscle tone in the infant?

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A: Yes.
Q: That would indicate a labor and delivery timing versus an antepartum timing, would you agree?
A: It may.
Q: You look for a decreased level of arousal which would indicate a labor and delivery timing of event as opposed to antepartum?
A: Once again, it may. One may see features that are helpful to point to the antepartum period. I can certainly go into that in more detail but there are children that certainly have the dysfunction of an intrapartum **stress** and reflect that dysfunction but still have antepartum injury.
Q: Okay. And when we talk about decreased levels of arousal, we are talking about respiration, lack of respiratory effort?
A: As it reflects altered states of arousal, yes.
Q: You look for the occurrence or nonoccurrence of seizures?
A: Yes.
Q: And would you agree that seizures which occur in the first *24* hours of life are more likely related to antepartum events?
A: No, I don't think that is borne out based on my

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experience or the literature. It all depends on the child and the particular presentation. This, of course, with the proviso we do indeed have seizures and the way I confiim seizures have occurred is with the use of EEG because there are many abnormal movements with are not epileptic but are clinical importance.

Q: Would you agree that seizures which occur after *48* hours of life are more likely related to labor and delivery events than antepartum events?

A: No. I think the timing after *48* hours may indeed suggest other issues that are neonatal or postnatal and also genetic or metabolic. I think the timing issue is important to keep as a generality but it's lost its usefulness on a general basis.

Q: So there is no timing that you would necessarily look for for the onset of seizures in the newborn to time the event of the brain injury?

A: As a general statement those children that have distress severe enough to contribute to asphyxia will probably have seizures during the first *48* hours, that's **a** fair generalization.

Q: Back to the criteria you look for in determining the timing of the brain injury, do you also look

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for stress to other organ systems in the newborn?

A: I do.

Q: And that would indicate an onset of brain injury in the labor and delivery period versus the antepartum period?

A: As long as you understand that you can have stress to other organs that are part of the same dysfunctional syndrome independent of damage to the brain.

Q: Okay.

A: And then, of course, the degree in which the organ is dysfunctional which makes myself, as well a as neonatologist, look to other reasons other than the antepartum period.

Q: Are you familiar with the ACOG technical bulletin defining the criteria for determining the timing of brain injury?

A: Iam.

Q: Okay. And do you abide by that guideline?

A: **As a** general guideline. That's its only purpose.

Q: And you also in determining the timing of a brain injury look to the Apgar scoring for the newborn?

A: Yes.

Q: Do you agree that Anthony Caimi when he was born was asphyxiated?

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A: Yes.

Q: Do you agree that he was acidotic?

A: Yes.

Q: Severely acidotic?

A: By which blood gas?

Q: Newborn arterial.

A: There were two blood gasses listed.

Q: His fist blood gas, I'msorry.

A: Yes.

Q: With a pH of 6.9?

A: Yes.

Q: That represents severe acidosis?

A: That would be significant acidosis of less than 7.0.

Q: Do you agree a ruptured uterus is a potentially life-threatening occurrence to the mother and child?

A: I certainly can only state as a neurologist for children. For the mother it might be, but I'm not an obstetrician. I would assume so.

For the child I have been in the situation many times of uterine rupture being associated with normal outcome and those who have abnormal outcome. It all depends on the details of the particular child's stress in the context of a

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uterine rupture.

Q: Do you believe that Anthony Caimi suffered any stress as a result of uterine rupture?

A: As we differentiate stress and brain dysfunction. I think it was how he clinically appeared in the fist days of life but that is independent of whether he had damage to his brain.

Q: Anthony required intubation and ventilation in the delivery room?

A: Yes, he did.

Q: And he was clinically noted to have seizures on the second day of life?

A: That's correct.

Q: And he was treated accordingly?

A: He was treated based on the clinical assumption of seizures, that's correct.

Q: Do you agree that in the neonate seizures are usually diagnosed based on the clinical picture?

A: If we are talking about conventional wisdom, whether it's correct or not, the answer is yes. Are children treated for movements that are abnormal that are not seizures, I believe they are.

Q: Did you read the description of the seizure like activity which was described in the nurses and

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physician notes for Anthony Caimi?
A: There were a number in question, high pitch cry, staring, I believe posturing was noted, eye rolling, clonic movements were noted.
Q: On a clinical basis would you make a diagnosis of seizures based upon that picture?
A: No, I would not.
Q: Am I understanding your testimony you only make a diagnosis when you have a correlation within an EEG?
A: Yes. If given the option, that would be my preference.
Q: Is it correct to state that an EEG will only show seizure activity if, in fact, the individual is having a seizure at the time of the EEG?
A: No, that is not correct. One can actually have abnormal movements that occur even during the EEG independent of electrical seizures without any clinical correlate. So the movement in question actually brought my attention to getting an EEG but actually another electrical event independent of movement was my diagnosis of seizures, if that makes sense.
Q: Did you just attend a seminar, with among others Dr. Rothner, where a discussion was had about how

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neonates rarely show seizure activity on EEG?
A: What conference are you referring to?
Q: I believe it was in — just a few months ago actually.
A: Which conference are you referring to?
Q: I don't know. Did you attend such a conference where that was discussed?
A: Where seizures — say that again.
Q: Where the discussion was in the neonate you rarely get EEG evidence of seizure activity and the diagnosis is made on the clinical basis?
A: That's not true. I don't know what conference you're referring to. I know presently at this time of evidence to suggest to the contrary.
Q: Did you attend a seminar where Dr. Rothner was in attendance?
A: No. We went to a child neurology meeting. I have no idea what context he is referring to a statement made by someone other than myself as to what you're referring to.
Q: You do know Dr. Rothner?
A: Yes.
Q: Now, the EEG, while not showing any seizures, was not normal either, was it?
A: It showed — it showed abnormality, yes. The

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degree of which I have not seen for myself. But based on the treaters was not severe.
Q: Okay. You have haven't seen the original EEG strips?
A: I have requested them but I have not reviewed them.
Q: And, in fact, one of the neurologists who examined this baby at that time was Dr. Wiznitzer?
A: That's correct.
Q: And he's in your department?
A: That's correct.
Q: You respect Dr. Wiznitzer's judgement and credibility?
A: Generally.
Q: He was seen by Dr. Jacobs?
A: Irwin Jacobs. It's Jacobs, yes.
Q: With an S. In your report of March 2, 1999 you say Anthony was rapidly weaned off the ventilator?
A: **Yes.**
Q: It was actually **12** hours, wasn't it?
A: That's rapidly. That's very rapidly. I think that's one of the points I can certainly elaborate on in terms of the issue of stress

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versus damage.
Q: He also — you also state in your letter he had good return of muscle tone?
A: That's correct.
Q: Is it your belief the record indicates good muscle tone throughout his hospitalization at St. Luke's?
A: No. I think there are notations of probably abnormal, more than normal but paradoxically increased rather than decreased muscle tone.
Q: Increased muscle tone would indicate injury that occurred before labor and delivery; is that correct?
A: That's one possibility-The other possibility could be a child who has a mild asphyxia stress and as a result of the mild dysfunction is reflected in increased tone.
Q: And what would decreased tone indicate, if anything?
A: It could either indicate an intrapartum stress with or without damage or still have an overlying antepartum problem.
Q: You write further that on the child's neurology exam it showed irritability with no dysmorphic features?

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A: That's what I stated yes.
Q: What do you mean by dysmorphic features?
A: He didn't have physical exam features to suggest a definable genetic syndrome.
Q: And you further write he was described to have mild to moderate hypoxic ischemic encephalopathy?
A: Yes.
Q: Do you agree with he did have HIE?
A: If we understand my definition of HIE, which is a dysfunction or clinical syndrome that doesn't necessarily have to have damage associated with it, yes.
Q: But it can have damage associated with it?
A: It can. On occasion it would be on the specifics whether there is enough evidence of that particular child to support it.
Q: What kind of things would you be looking for to support damage to go along with the dysfunction that HE caused?
A: First of all, one would want to see over time and I would say for the intrapartum asphyxia stress severe enough to be associated with damage, low tone, hypotonic child for many days.
Q: How many days?
A: I would say five to seven.

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Q: Okay.
A: Followed by slow return of tone over the next week. In the context of other organs that showed significant dysfunction, such as the lung to require long-term ventilatory support for days and significant multiorgan system dysfunction that was not only present but severe to consider the possibility that the brain also was severely affected.

The occurrence of EEG confirmed seizures in the course of acute convalescent period of a couple days, particularly the first 48 hours, and significant metabolic acidosis as we referred to but that reflected a persistent acidotic state that was not quickly reversible as it was for Anthony, meaning the bicarbonate given to the child caused a rapid improvement in his degree of acidosis. When describing a child with this severe HIE, it's in that context that I'd be most worried about commensurate damage that may or may not be there.

In converse when I see a child that's quickly weaned off the ventilator, that has a rapid restitution of the acidosis, with no EEG confirmed seizures, and minimal non brain organ

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dysfunction, and then hindsight of follow up with what this child's deficits are, I have major concerns whether the stress of the intrapartum events have anything to do with this child's neurologic problems at present time.
Q: And in your report you wrote he was concluded to have mild to moderate hypoxic ischemic encephalopathy without evidence of multiorgan system dysfunction?
A: Correct.
Q: That is not a correct statement, though, is it, Doctor?
A: Well, perhaps I should say significant or severe. He certainly had renal dysfunction with respect to the blood in the urine. He had some mild respiratory changes that resolved within 12 hours but I think it would be more accurate reflecting my opinion if it included the word severe multiorgan system dysfunction.
Q: Did you have some discussion with counsel after this report was issued, that, in fact, the child did have multiorgan system dysfunction?
A: I don't recall specifically. I did acknowledge in my discussions that there was renal dysfunction but I always couched it in the point

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of view that is it severe enough to consider the possibility that with a profound HIE syndrome there could be commensurate or coincident brain damage which I don't think happened for Anthony.
Q: That's not what the report said. You said he didn't have it, correct?
A. Correct. The way the report reads, that's correct.
Q: And you know you have done this long enough your report is to give me some information about what you think and why you think it, correct?
A: Sure. The records, I think the medical records speak for themselves.
Q: But your opinions don't necessarily. This child also had protein, increased protein in its urine?
A: Yes.
Q: Had blood in its urine?
A: Yes.
Q: Had elevated liver testing?
A: Minimally.
Q: What about the nucleated red blood cells, is that usually a marker for you of some kind?
A: It can be. They were not elevated in this child's case.
Q: That would tend to indicate it was not a chronic

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event that caused his physical function and/or damage, wouldn't it?

A: No. It means that a stress to the bone marrow that may have occurred more than *24* hours was not detected by the NRBC at St. Luke's which was three. It says nothing about Anthony's ultimate reason for his neurologic problems.

Q: Which could still be antepartum. He had increased CPK. Is that consistent with labor and delivery injury?

A: Probably muscle injury given the uterine rupture and force, forced pressure down the birth canal, I could see that as a reason for that independent of liver injury or not.

Q: The ultrasound on *8-2494* showed no abnormalities?

A: That's correct. I haven't reviewed it but that's what the report states.

Q: And the absence of abnormality on that ultrasound would dictate against an antepartum explanation for this child's injury, would it not?

A: In addition to intrapartum, intrapartum injury. It's not helpful either way. It's not helpful for describing intrapartum evidence or Sack of evidence in a cerebral edema.

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Q: When would you expect to see evidence of cerebral edema?

A: Within *24* hours on the ultrasound and peaks within *48* to *72*.

Q: Within *24?*

A: You might see.

Q: Not usually?

A: Oh, yes.

Q: Have you testified —

A: I have seen it. I guess the question is whether I have seen it or not and I have.

Q: I'm asking you generally when do you expect to see cerebral edema?

A: Within *24* hours.

Q: Greater than *24* hours?

A: I've always stated I can see it by *24* hours, it will peak at *72*.

Q: You conclude — well, on the MRI from The Cleveland Clinic you indicate there's a questionable area of cortical abnormality?

A: I was just paraphrasing what the radiologist from The Cleveland Clinic had noted.

Q: You looked at the MRI film yourself!

A: Yes.

Q: Do you see anything of note on that MRI?

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A: I don't, no.

Q: Absence of anything on the MRI at four years of age would indicate there's not a genetic cause of this child's injury?

A: No. Down the resolution of the studies one could see no evidence of a genetic problem. There are many genetic problems that are present in the child with no normal MRI.

Q: Are you aware of any chromosomal abnormality in this child?

A: Not that I'm aware of. Chromosome is a rather large structure genetically. There are millions of genes even with a chromosomal study that cannot be tested.

Q: Do you agree that the prenatal course for mother and child was perfectly normal?

A: As reflected in the records there were no problems listed.

Q: And with the onset of labor up until, let's just say about the time pitocin was introduced, it was a normal laboring process?

A: Based on my review of the records, that seems to be what was reflected.

Q: Fetal heart tracings indicated a normal reactive infant?

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A: Once again, based on my review of the records I would have assumed that.

Q: Have you reviewed the fetal monitor strips after pitocin is introduced?

A: I'm aware they are part of the records. They were given to me. I haven't interpreted them.

Q: Have you read the deposition testimony of the OBs involved in this case?

A: Yes.

Q: Both of whom have testified that the strips show late decelerations occurring at approximately 1750?

A: Yes.

Q: They also indicate that there was a loss of beat-to-beat variability?

A: Yes.

Q: And bradycardia?

A: Yes.

Q: Without getting into the specific numbers, which those have been testified to, correct, do you agree that bradycardia, coupled with severe fetal acidosis with intensive delivery room resuscitation provides objective evidence for the indication of severe intrapartum insult?

A: By insult, what do you mean?

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Q: Injury.
A: No.
Q: Do you believe that those fiidings can indicate an insult of sufficient duration to compromise a cerebral perfusion and oxygenation?
A: No.
Q: When Anthony Caimi was born with a pH of 6.9 and not breathing, do you agree there was some interruption in the exchange of gasses and oxygen to the fetus?
A: That's an assumption. That seems to be a good working assumption.
Q: Okay. And do you agree that the depravation of oxygen in a fetus can result in permanent brain injury?
A: It can under certain situations but not for this particular child.
Q: Can you point to anything in the prenatal course which would explain this child's neurological condition today?
A: No.
Q: Is there anything in the medical background of the mother or the father that you can point to to explain the child'spresent neurological condition?

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A: Not that's recorded in the records available to me or they have admitted to.
Q: None that you're aware of then?
A: That's correct.
Q: What is your basis for saying that Anthony Caimi'sneurologic condition is explained by events which preceded labor and delivery?
A: In general the way in which he responded to the stress that he had and the neurologic syndrome we have talked about and the rate of recovery that he had, together with the hindsight that I have on his neurologic findings at present, which I believe to be subtle with respect to motor impairment, which would be a hallmark of kids with cerebral palsy from potential intrapartum events and the bihemispheric or left and right hemisphere dysfunction he appears to have on neuropsychological testing in memory, language, in reasoning. If indeed we are to believe he had a diffuse or multifocal injury or damage, the events in question, to my opinion, in the neonatal period do not explain the multifocal or diffusion process.
It may not be an injury acquired process. It may be a developmental one since there is no

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evidence prenatally, as you asked me to attest to, and most cases children like this have no demonstrable prenatal maternal history to support why they are having language problems, memory problems, et cetera.
Q: Do you agree that Anthony Caimi has impairment in motor function and language and —
A: I have already stated in general he does. But I will emphasize the motor fiidings which are extremely important when judging whether an intrapartum event had something to do with a full-term infant having this sort of deficit.
He has very minimal findings. He has fine motor dexterity issues. He has balance and coordination issues which are evasive and important but not demonstrable of the event in question that I may be asked to opine about.
Q: If I understand these events, every person, every fetus has a certain amount of reserve which enables them to get through labor and delivery in good shape; is that fair?
A: In general that is fair as long as I have a chance to elaborate.
Q: Okay. Just tell me when I'm off track.
MS. HARRIS: You'renot going to

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let him elaborate? That'swhat he was asking.
Q: Do you want to elaborate now?
A: It may help in your subsequent questions. When you say reserve, the question is still regarding dysfunction versus damage. A child who has decreased reserve, and I don't think we have ways in which to measure that in medicine, a child may then reflect with decreased reserve more dysfunction at the time of stress which I believe Anthony had an incident of damage that occurred during the time the stress occurred.
What I don'twant to be an assumption is that the decreased reserve that a child like Anthony has then causes either further damage, which I don'tbelieve happened from the events for Anthony during the intrapartum period, or all the damage.
Q: Do you think that the labor and delivery events contributed in any respect to Anthony'spresent neurological condition?
A: No, I do not.
Q: They have absolutely nothing whatsoever to do with his present state?
A: That's correct.

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Q: And you have no idea what may have caused it; is that fair?

A: No. I tried to explain to you the distribution of his problems which are multifocal or diffuse as documented at an older age suggests a prenatal problem that may have been developmental from hindsight. At the time I would obviously not know that. The only way I can assess that is by my knowledge and experience of understanding what causes the constellation of his problems now in relationship to the events in question at labor and delivery.

Q: Have you read Dr. Rothner's deposition?

A: Yes.

Q: And he has a different opinion as to the cause of Anthony's cerebral palsy, doesn't he?

A: You have to refer me specifically to the line of the way he responded but in general we have a difference of opinion.

Q: Do you respect Dr. Rothner?

A: In general he is a competent neurologist.

Q: Do you refer patients to him ever?

A: We refer patients to each other.

Q: And you know that Dr. Rothner has been Anthony's treating neurologist for quite some time?

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A: I have seen his notes for follow up on multiple occasions, yes.

Q: You saw the medical records and examined this child on one occasion?

A: Correct.

Q: You saw him for about 15 minutes in examination?

A: Probably longer than that but yes.

Q: By the way, you don't have your notes from your physical examination of this child with you, do you?

A: No, I don't.

Q: Where would those be?

A: We have an office chart that I scribble notes prior to dictation.

Q: Would that — would your notes still be available in the file?

A: Yes.

Q: I would like you to provide those to Ms. Harris so I have those.

A: Sure.

Q: In your March '99 report where you state there is a questionable abnormality on the MRI scan that may suggest a prenatal malformation, do you stand by that statement?

A: No. I just testified I reviewed the scan and I also stated that it was questionable based on the neuroradiologist that read it.

Q: Can you point me to any studies or report that indicate the timing of brain injury is coupled with the severity of the multiorgan involvement?

A: There are studies that I don't have. I have not reviewed the literature for this deposition so there may indeed be studies I'm not mentioning but there are a number of studies that look at statistically a group of variables that occur during the intrapartum and neonatal period to assess whether the severity of the child's neurologic syndrome or stress reflects intrapartum or antepartum problems. There's one from Australia within the last year or two years that indicates in children who have a newborn encephalopathy or brain disorder there are antepartum reasons that explain the child's brain disorder other than intrapartum. I don't recall the specifics. That is one recent one I'm, in general, aware of.

Q: Do you know who the author of that was?

A: No.

Q: Is it your testimony, Dr. Scher, that the labor and delivery events, the fetal distress which was evidenced on the strips, the ruptured uterus, the condition of the infant when born is absolutely no consequence to the child's present neurologic condition?

A: Correct.

MS. HARRIS: I am going to object that he has not agreed that those strips were evidence of fetal distress.

Q: You would not disagree with an OB's interpretation of fetal monitor strips, would you, Doctor?

A: In terms of distress being of the heart and not of the brain and being the fact that the stress may alter the OB's management independent of damage to the brain, sure. I'm not here to interpret the strips. I'm also aware as a child neurologist, quote, fetal distress, unquote, from FHT or fetal heart rate tracing abnormalities have very poor correlation with neurological damage.

Q: That is more to neurological outcome?

A: I would include damage — if you look at ominous fetal heart rate tracings, as a general there is no correlation.

Q: This baby was acidotic at birth?

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A: Again, as I stated before the initial blood gas showed a pH less than 7. But in my experience, as well as what is published, less than half of the children have the full blown post axphyxial brain disorder which makes one concerned when they have a pH less than 7.

Q: If less than half have it, the rest won't?

A: What I find more fascinating why do more than half of the babies that have pH less than 7 do not go on to severe, severe asphyxial brain disorder. That underlines my opinion here today. Anthony Caimi was symptomatic during stress because of preexisting problems to his brain and the untoward problems that occurred from the uterine rupture from a child whose main brain was not put together right made him not negotiate the birth process well and became symptomatic.

Q: There is no evidence of any problem with this infant prior to the introduction of pitocin?

A: To the limits of our fetal monitoring, I agree 100 percent. I wish both of us could sit here ten years from now and applaud ourselves on newer techniques that can detect brain damage before labor and delivery. Right now we don't have very good tools.

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Q: Do you agree a neonatologist would be a better judge of the effects of the labor and delivery

Q: Do you agree that a neonatologist has more training and experience in treating an infant in utero and within the first *48* hours of life?

specialist for the newborn. I'm not here opining about the ABCs of dealing with circulation and breathing and resuscitation. But I am here as a neurologist that deals with newborns on a regular basis where a neonatologist may turn to me about the system I am experienced in.

Q: How about prior to birth in the last few months of gestation, would you defer to the expertise of a neonatologist?

A: Probably in that case a perinatologist but there are situations I have been asked, both in Pittsburgh and Cleveland, to give an opinion as a fetal neurologist when it deals with information or data I may have some contributions to make before labor and delivery such as sonogram abnormalities —

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Q: Okay.

A: — as an example.

Q: Okay. Even though you may be called in to consult on some basis, would you agree a perinatologist would have more expertise in the physiology of a fetus prior to birth than yourself!

A: I think in the management of the pregnancy of the

yes. But there are situations that perhaps their training does not extend to the details of the neurologic diagnosis of the unborn that I may offer some insight to that that helps.

Q: Are you ever called into the labor and delivery room?

A: No.

Q: Are you ever asked to review a fetal monitor strip in a laboring mother?

A: No.

Q: Does the duration of the fetal asphyxia have any relationship to the long-term prognosis of the child?

A: In general it does. The problem I have in answering a question in general each child is really unique to themselves based on what reserve

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they have, which is a general statement you mentioned before, and the particular situation

the asphyxial event, the poorer the outcome?

A: In general, that is beginning truism to use as a working hypothesis. I have been proven wrong

normal. So it's a general statement I will agree to.

Q: And children with long periods of asphyxia who have a better outcome than you would expect, you would attribute that to the reserve of that individual?

A: Once again, we are not defining what you mean by long. What is long? Is long ten minutes or 10 hours? I guess you need to be a little more specific.

Q: Can you define long?

A: No because it depends on the child. Experimentally one tries to use animal studies to define what is long in an animal laboratory setting. It's difficult to take that into the human situation.

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Q: You study it retrospectively?
A: You try. Clearly there are guidelines that suggest it but I don't think we truly know, once again, the compromise to actual brain function. All we know from asphyxia if we are talking about that is blood gasses that are peripheral blood, the assumption is made there are changes in oxygenation or perfusion that happens in the brain but we don't measure that directly. It's all assumed. So you may have a severe oxygenation problem or acidotic problem or even perfusion problem and you make the assumption that may or may not have hurt the brain, more stress to the brain but you have no way of measuring that directly.
Q: But we know that some stress can result in permanent brain injury?
A: That's one assumption one has to make. But also there are processes that protect the brain, auto regulation is a good one. There are ways the brain can be protected against stress from major changes in peripheral blood flow which I believe he had.
Q: What would that be?
A: Auto regulation. When you're a full-term infant,

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you're built to maintain — cerebral blood flow is protected over a wide range, changes in peripheral parameters such as acidosis or blood pressures.
Q: For a lay person, does that mean the body will work to save the brain by reducing the flow of blood, more oxygen to other parts of the body?
A: That's another phenomena that is true. I'm referring to a process that is actually within the brain that protects the brain from damage or dysfunction.
Q: What about the loss of vagal nerve function, is that important to a fetus?
A: It may or may not. It's a peripheral nerve function dealing with autonomic nervous system and it's effects on the heart is measured by beat to beat and heart rate. But it may be independent of what's going on across the blood brain barrier within the brain.
Q: Do you agree that effective resuscitation in the delivery room proves the neurological outcome for asphyxiated neonates?
A: Yes, in general.
Q: Do you agree fetal distress puts the fetus at greater risk for hypoxic brain injury?

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A: Yes, for hypoxia. Hypoxia alone is not a common reason for injury in the brain.
Q: If I say hypoxic ischemic brain injury, is that a better term?
A: Yes.
Q: Would you agree that fetal distress puts a fetus at greater risk for hypoxic ischemic brain injury?
A: Yes.
Q: You examined Anthony on November 4, 1999?
A: Yes.
Q: He had a generally normal neurological exam?
A: From what I could ascertain from my short time with him, yes. I did state some of the provisos of my difficulty interacting with him, mental status exams which many of the problems are that the records reflects.
Q: And even his motor function was somewhat limited, limited your ability to evaluate?
A: There were some aspects of motor function we can get to. He had some balance difficulties, very subtle left-sided motor findings, and fine motor problems, yes, which are reflected in the medical records.
Q: You have no disagreement with the neurological

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findings as they exist in the medical records with the neuropsychological testing and Dr. Rothner's records?
A: In general, no. Although the description of cerebral palsy he does not have at the present time, he may or may not have had it at ten months when Dave saw him initially. If he did, he outgrew a mild degree of it.
Q: You don't believe Anthony has cerebral palsy at this time?
A: Yes, I don't believe he has cerebral palsy at this time.
Q: On what basis do you now say Anthony does not have cerebral palsy?
A: All cerebral palsy is is a descriptor of motor impairment of posture and tone. At this point the types of problems Anthony has are clearly in a different venue or different category than describing significant posture and tone abnormalities. It's not to say he doesn't have balance problems and fine motor problems but it's in the context of much more diffuse or multifocal issues I referred to earlier dealing with memory, language, adaptive social skills.
Q: But he does have impaired motor function?

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A: Very minimally.
Q: He has increased tone?
A: Very minimally.
Q: Are those not characteristics of cerebral palsy on a minimal basis?
A: No. That would not be my working definition of a child with cerebral palsy at this time. It does not reflect the type of problem he has.
Q: Based on your examination, you saw no evidence of a genetic explanation?
A: Not that I could ascertain, no.
Q: Head size is normal?
A: Yes.
Q: No dysmorphic features?
A: None that I could describe.
Q: So based on all the evidence and information you have on Anthony Caimi, the only noteworthy event is the labor and delivery process; is that correct?
A: Could you explain what you mean by noteworthy? Clearly this was a significant time, both in the mother's and child's life, I am not refuting that.
What I'm trying to state with the wisdom of hindsight seeing him today and looking at all the

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records in its entirety is the problems that occur around the uterine rupture made a vulnerable child who was already damaged or dysfunctional before labor and delivery symptomatic during the neonatal period.

was already a damaged child, you hold the opinion that the events of labor and delivery had no additional adverse impact on this infant?
A: Correct, based on the available data I have and reviewing the records.
Q: So an hour and *40* minutes of severe fetal distress, coupled with loss of beat-to-beat variability and a severely acidotic infant has no impact on the neurological outcome of this child?
MS. HARRIS: Objection to the interpretation of the fetal strips. Go ahead, Doctor.
A: Even if I was to assume all was true, which may or **may** not be actually, my interpretation as a child neurologist begins at birth. If indeed that was the case, this child would have been profoundly depressed at birth and would not have responded to formal equivalent of bicarbonate with improvement to acidosis as he did. So your

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rupture and he became symptomatic.
Q: How about this child had extraordinary reserves and in light of the severe fetal stress in the intrapartum time period responded quickly and favorably to resuscitation?
A: Then he should not have the deficit he has today based on only the events of the last hour and something minutes that you asked me to consider.
Q: You're saying those events in and of themselves are not sufficient to cause neurological damage?
A: That's correct. I have had children in Pittsburgh with uterine rupture with pH less than *7* who have had a newborn syndrome several hours and have resolved to perfectly normal follow up.
Q: Do you have some that don't?

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A: Not uterine rupture. The question is how is the child evolving their brain disorder during the immediate neonatal period to support the possibility the severe dysfunction may be a marker or surrogate marker for damage and I'm

ventilator in **12** hours. His tone became rapidly increased. He had no documented seizures. The child neurologist said mild to moderate post asphyxia syndrome. He had minimal affect of other children.
This is not a child I would have expected damaged. I would have been concerned and would have followed him, given all the concerns, but I would not expect multifocal or diffusion function he has now based on the events in question and the way he presented in the newborn period as I pointed out.
Q: You have offered no opinions on the extent of the language difficulties or memory difficulties that this child has, correct?
A: I have no way of judging that based on his response and shyness during the one time I met him.
Q: In your report of November *4,1999* you indicated

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no prognosis for this child?
A: Correct.
Q: What is tandem walking?
A: One foot in front of the other.
Q: You write that Anthony was unable or unwilling to tandem walk?
A: You were there. You saw that he was shy, reluctant. Whether he was unable to do it, I don't know. He just said, no, he didn't want to do it.
Q: Did you see him toe walking?
A: Yes.
Q: What does that indicate?
A: That he has strength to get up on his toes to support his weight plus it did not allow him to express other motor abnormalities which is the other reason I do toe walking which is to see other features of the exam which might become abnormal.
Q: This baby was jaundiced a few days after birth. Is that also a consequence of the asphyxia?
A: No.
Q: Any idea the cause of that?
A: Most likely it's due to his age and the fact that many kids can get jaundice from no pathological

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reasons. I really hadn't thought about a differential of why he was jaundiced.
Q: Did you note he had some problems a few days after birth with temperature regulation?
A: Yes.
Q: Did you note his attending physician believed it was from central nervous system dysfunction?
A: Yes.
Q: Do you agree with that?
A: As long as we understand that my opinion is that the dysfunction was reflective of antepartum period, yes.
Q: The basis you already stated?
A: The basis is the same as already stated.
Q: Did you, in your review of the records and all of the depositions in this case, find any references to any antepartum events which would explain this child's neurologic condition?
A: No.
Q: Do you have any understanding as to why fetal monitors are used in the laboring process?
A: In general I'm aware that it's used for management, obstetrical management of children and mothers in the way the baby's are delivered.
Q: Anthony's first arterial blood gas showed a pH of

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6.9 and base excess of minus 27?
A: Yes,
Q: Is the minus 27 a significant number?
A: Yes.
Q: What does it mean?
A: It means the buffering capacity was acutely and severely compromised in the body.
Q: I'm sorry the buffering —
A: The buffering capacity, the body's ability or the ability to prevent acidosis. We have chemicals in our body that are released that counteract acidosis. He was using them up very quickly so he had very little reserve of bicarbonate.
Q: Would that be **the** mechanism you referred to earlier that the brain has to preserve neurons?
A: No. That's what the body has to preserve cellular function generally and it may have very little to do with what is doing across the blood brain barrier in the brain.
Q: I believe that his next blood gas indicated a base excess of minus **16?**
A: Yes.
Q: Is that still a worrisome figure?
A: In terms of its trend downward or upward, depending on your point of view, it's encouraging

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but it's still abnormal.
Q: What is normal?
A: Less than — greater than minus 10, minus 9, minus **8,** et cetera. And actually the working definition of at least **a** significant — clinically significant base deficit is anything greater than minus 15.
Q: I take it you do not know Dr. Scolnick?
A: Correct.
Q: You do not know Dr. O'Shaughnessy?
A: Correct.
Q: Dr. Nowicki?
A: Correct.
Q: Dr. Bruce?
A: Correct.
Q: Do you have privileges at St. Luke's?
A: That's changing. I might. Right now I have not gone to St. Luke's. Since it's joined, I believe, the University system that may change but I don't know.
Q: Okay. Do you know any of the medical personnel who participated in Anthony's care?
A: Other than Dave Rothner, no.
Q: What do you charge for your time for reviewing?
A: $350 an hour.

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Q: Deposition?
A: Same.
Q: Trial?
A: Same.
Q: How many times have you testified in trial?
A: About 12, 15 times.
Q: When was the last time?
A: Last year.
Q: In Cuyahoga County?
A: No.
Q: Where?
A: I'm trying to remember. I don't recall. I apologize.
Q: That's okay, What was the issue?
A: It was a newborn, question of a newborn.
Q: Can you recall for me any case where you have testified that the labor and delivery events caused brain injury in a child?
A: Yeah. I am involved in a case now in New Hampshire which I have shared with the lawyer, the last name is Duggan. It's a case I just recently reviewed that events during labor and delivery at least have to be included as contributing to injury.
Q: Are you being consulted by a plaintiff or defense

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attorney?
A: Plaintiff.
Q: And where in New Hampshire?
A: Nashua, I believe.
Q: I'm *sorry?*
A: Nashua.
Q: N-a-s-h —
A: — a-u .
Q: Do you know Mr. Duggan's first name
MS. HARRIS: Objection. I am going object. I don't know anything about that case, Claudia, and it would be improper for us to reveal any information about that case without the permission of the attorney. This case is a pending case. It's not one that is closed so I'm going to tell him not to answer any of these questions.
MS. EKLUND: He's not your witness to direct not to answer. I'm asking the attorney's first name and that's the extent of my question.
MS. HARRIS: The problem I have this attorney may not know — want anybody to know whether or not Dr. Scher was

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involved in this case. Now you're going to call him up and I think that's a violation of any agreement they might have and it would be quite unreasonable to have this doctor reveal those conferences in a pending case.
A: I don't remember his first name.
Q: Can you tell me a case that would now be closed where you testified that a child's been injured by labor and delivery events?
A: There was a case in Ashtabula, near here, a spinal cord injury that I opined for the plaintiff that that caused child's injury.
Q: Do you remember the name of the case?
A: No.
Q: Name of the attorneys?
A: No. It was just in Ashtabula County.
Q: How long ago that was?
A: Couple years.
Q: Do you keep a record anywhere of the cases in which you have been involved in as an expert witness?
A: No.
MS. EKLUND: I'm just about finished. Give me a minute to look over my

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notes.
Q: Doctor, do you agree that the asphyxia which Anthony had at birth was due to fetal distress in utero?
A: Yes.
Q: Fetal distress occurring at or near about the time of delivery?
A: Yes.
Q: Do you agree that the acidosis which this baby had was a result of labor and delivery events?
A: Yes.
Q: Do you agree that the multiorgan dysfunction that he had was related to the labor and delivery events?
A: As far as you understand the type of dysfunction of the other organs as reflected in the records, yes.
Q: Do you agree that if this infant had neonatal seizures, at least on a clinical basis they would have been related to the labor and delivery event?
A: No, not necessarily true. If indeed there were seizures, and let's assume there were, it may reflect the lower threshold or decreased reserve that may have made the child have seizure from a

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preexisting damage.
Q: Are you able to say with any probability it's the labor and delivery events or lower threshold?
A: You're asking me to assume there were —
Q: I'm asking you to assume there was.
A: I have no way of knowing the difference.
MS. EKLUND: I don't have any more questions for you, Doctor.
MR. GOLDING: Good evening, Doctor. We met earlier. My name is Michael Golding. I have a couple questions for you.

CROSS-EXAMINATION OF MARK S. SCHER, M.D.
BY **MR.** GOLDING:

Q: Ms. Eklund had just asked you a series of questions and you said at one point you couldn't determine whether this condition may have resulted from preexisting damage, correct?
A: Correct.
Q: Okay. What is your basis for saying there may have been preexisting damage?
A: First of all, in my interpretation of the facts the lack of severity and longevity of the neonatal brain syndrome to support the

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possibility that damage occurred in the intrapartum period, and the hindsight of seeing the child's follow up, and the constellation of the problems the child had that are primarily issues that have a prenatal context rather than injury from acquired asphyxia events.
Q: Are you able to rule out prenatal injury?
A: No, I cannot.
MR. GOLDING: That's all I have. Thank you.
MS. EKLUND: Nothing else.

MARK S. SCHER, M.D.

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CERTIFICATE

The State of Ohio,) SS:
County of Cuyahoga.)

I, Tami A. Mitchell, a Notary Public within and for the State of Ohio, authorized to administer oaths and to take and certify depositions, do hereby certify that the above-named MARK S. SCHER, M.D., was by me, before the giving of his deposition, first **duly** sworn to testify the truth, the whole truth, and nothing but the truth; that the deposition as above-set forth was reduced to writing by me by means of stenotypy, and was later transcribed into typewriting under my direction; that this is a **true** record of the testimony given by the witness, and was subscribed by said witness in my presence; that said deposition was taken at the aforementioned time, date and place, pursuant to notice or stipulations of counsel; that I am not a relative or employee or attorney of any of the parties, or a relative or employee of such attorney or financially interested in this action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office, at Cleveland, Ohio, this ____ day of _____, A.D. 19____.

Tami A. Mitchell, Notary Public, State of Ohio
1750 Midland Building, Cleveland, Ohio 44115
My commission expires October 23, 2004

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