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IN THE COURT OF COMMON PLEAS
CUYAHOGA COUNTY, OHIO

FORREST GREGG STONE,
a Minor, etc., et al.,

Plaintiffs,

-vs- CASE NO. 396873
JUDGE BOYLE

CORAZON O. GO, M.D.,
et al.

Defendants.

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Deposition of KEITH OWEN YEATES, Ph.D., taken as if upon cross-examination before Sandra L. Mazzola, a Registered Professional Reporter and Notary Public within and for the State of Ohio, at Childrens Hospital, 700 Childrens Drive, Columbus, Columbus, Ohio, at 11:45 am. on Wednesday, June 19, 2002, pursuant to notice and/or stipulations of counsel, on behalf of the Plaintiffs in this cause.

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Paul A. Hudock, M.D.

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KEITH OWEN YEATES, Ph.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 KEITH OWEN YEATES, Ph.D.
BY MR. LEVIN:

Q. Could I have your name, please?
A. Keith Yeates.
Q. And that's Dr. Yeates or Mr. Yeates?
A. Yes, doctor.
Q. And you are not a medical doctor, you are a psychologist, is that correct?
A. Neuropsychologist, correct.
Q. And that is not a medical doctor, correct?
A. No.
Q. I was given this morning a copy of your curriculum vitae which is dated as of June 2002. Is this your most current CV?
A. Yes. I printed it this morning.
Q. Okay. And you believe it to be reasonably truthful and accurate?
A. Yes.
Q. You know of no mistakes in it?

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A. Not as far as I know.
Q. And you know of nothing significant that's not listed in here that would be relevant to one's CV as you understand it?
A. No.
Q. I've just been presented it and it's fairly long. I just want to see if I can go through a coupie of things.

To get your Ph.D. you majored in clinical child psychology and minored in developmental psychology, is that right?
A. Yes.
Q. Okay. Is your practice today restricted to child psychology?
A. It's restricted to child neuropsychology. We occasionally see young adults that have childhood disorders.
Q. When you say it's restricted to neuropsychology, do you have a degree that specifically claims neuropsychology or is that something you learned in practice?
A. There are no degrees in neuropsychology. It's very new. Most neuropsychologists obtain their Ph.D.'s in clinical psychology and then specialize in neuropsychology. I have a Board

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certification in neuropsychology.
Q. When did you become Board-certified in neuropsychology?
A. I don't remember the exact year. It's listed in there. I believe it's '93 or '94, but I don't remember specifically.
Q. All right. It's '93. And you have been a iicensed psycnoiogist in Ohio since 1993, is that correct?
A. Yes.
Q. And you were licensed in Massachusetts, but you gave that up when you moved, is that true?
A. Yes.
Q. And we are here at Ohio State University Childrens Hospital, is that right?
A. Childrens Hospital is not part of Ohio State University, but --
Q. Oh, pardon me. We are here in Columbus at Childrens Hospital. You are associated with Ohio State University though?
A. Yes, I am a tenured faculty member at Ohio State.
Q. And that's the department of pediatrics?
A. Correct.
Q. And you give your address as Childrens Hospital?
A. Childrens Hospital houses the department of

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pediatrics for Ohio State.
Q. So there is that connection?
A. Yes.
Q. You wrote a report on March 6,2002. Do you have that in front of you?
A. Yes, I do.
Q. Is that the first and only report you wrote for Mr. Scott?
A. Yes.
Q. Was there a draft of this earlier?
A. I mean there's always a draft, but I don't keep drafts. I work an a draft an$ tho final product is what I have.
Q. What did you review for writing this report?
A. The medical records that are in these two volumes provided to me by Mr. Scott, as well as I believe there was a separate letter from Dr. Rothner that was not originally in those records because it came subsequent to that. And there was a copy of a letter from a Dr. Matula. There's two letters from Dr. Rothner, but I believe one of them was already in those other records.
Q. Do you have the dates on those?
A. They're all right here. That includes the correspondence with Mr. Scott.

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Q. Okay. When you say they're all right here, everything you reviewed for t his case consists of either the medical records which are in those binders set -- or they were on the floor, correct, which we can look at in a minute --
A. Uh-huh.
Q. -- and what you've just handed me. Is that fair, doctor?
A. Yes.
Q. And I'm going to read this into the record. If you were a little closer, you could check to make sure that I am reading it accurately, but there is a March 6 letter to Mr. Scott along with the bill at the end, correct?
A. Correct.
Q. There is a letter from Mr. Scott to you enclosing Dr. Rothner's report of January 31,2002 and asking you to comment on IQ in general?
A. Yes.
Q. There is a report of Dr. Rothner dated January 31,2002, correct?
A. Yes.
Q. There is a cover letter from Mr. Scott asking again about IQ and enclosing a report of Dr. Matula, a copy of a speech language

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evaluation of October 29,2001, and a copy of Dr. Rothner's report undated per the letter, and a reference to the fact that the underlying records and the records of Dr. Schauer have already been provided, correct?
A. Yes.
Q. And you recognize Dr. Schauer as the clinical psychologist at Cleveland Metro?
A. I don't recognize the name. I do remember seeing a report.
Q. Do you recognize that that's her position?
A. Again, I couldn't tell you. I don't recognize her name.
Q. Do you know Cleveland Metro as a hospital?
A. Yes.
Q. Have you ever practiced in your field in Cleveland?
A. Practiced in what sense? I've been involved in one or two legal cases that originated in Cleveland.
Q. We will get to that in a minute, but have you ever taken on patients or conducted studies of patients in the Cleveland area specifically?
A. Yes.
Q. Okay. We will get to that then in a minute.

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Dr. Matula's report is here, correct?
A. Yes.
Q. Do you know Dr. Matula?
A. No.
Q. Have you ever heard of Dr. Matuia before this?
A. No.
Q. And you have a speech language therapist's record, correct?
A. Yes.
Q. You have a letter or report of October 22,2001 from Dr. Rothner, correct?
A. Yes.
Q. You have yet another letter from Mr. Scott saying the speech language evaluation records are enclosed?
A. Yes.
Q. And I think that may be duplicative.
A. Yes, they are identical.
Q. They're identical to what is elsewhere. And you have a letter from Mr. Scott which -
MR. LEVIN: Let's go off the record.
(Thereupon, a discussion was had off the record.)

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Q. And the last thing in this pile is a letter of December 7 from Mr. Scott which asks you to render an opinion, suggests a summary of the matter and tells you what's in the binders, the two binders that are in 1 and 2, which have the medical records, correct?
A. Correct.
Q. Have you reviewed anything else in conjunction with rendering opinions in this matter?
A. I don't beiieve so.
Q. Have you discussed this matter with anyone else other than Mr. Scott?
A. No.
Q. Okay. Are you aware that there are several experts associated with Ohio State who are also rendering opinions in this matter?
A. No.
Q. Do you know any of the experts, that is, are you personally acquainted with any of the experts and do you know who the experts and who are rendering opinions in this case?
A. I'm familiar with Dr. Rothner by name and reputation, but I don't know him personally, and I'm not aware of any other experts necessarily that -- I'm not sure if Dr. Matula was being

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calied as an expert or not. I don't know of anyone else.
Q. Okay. Well, let me just quickly go through this. Other than Dr. Rothner, there is no other expert that you're aware of that you know either by on a personal basis or by reputation, correct -
A. I haven't been told the names of any other experts, so I can't by definition -
Q. --that you know?
A. No.
Q. And Dr. Rothner, it's fair to say you know of his reputation, but you don't know him personally, is that correct?
A. Yes.
Q. And what is his reputation?
A. I don't know that I can characterize his reputation. I know he's a pediatric neurologist and I've seen his name on a few cases that I have been involved in. But I don't know that I know his reputation among pediatric neurologists.
Q. There is a distinction between opinions that are rendered in neuropsychology and ones that are -- that ~ I be rendered in neurology. Is that a distinction you would accept or not?

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A. I don't even understand how to apply -- respond to the question because I'm not sure what you mean by distinction.
Q. Do you believe you will be rendering any medical opinions in this matter?
A. Again, I'm not sure what exactly you would mean by medical opinions. So I'm not sure I'm able to answer the question.
Q. Just for the sake of the jury, could you tell the jury the distinction between a psychologist and a psychiatrist?
A. A psychiatrist has a medical degree, completes medical school, completes residency training in psychiatry. A clinical psychologist obtains a doctorate degree in clinical psychology that includes internship training and usually postdoctoral training. They are both involved in the diagnosis and treatment of a variety of different types of behavioral and medical disorders. A psychiatrist is legally entitled to prescribe medications. That's not true for psychologists in most states.
Q. Are you allowed to prescribe medication, doctor?
A. No.
Q. Do you know how Mr. Scott came across your name?

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A. No.
Q. Have you ever worked with Reminger & Reminger before?
A. I was trying to remember that today, and the name of the firm rings a vague bell, but I don't remember if it's because I did a case for them or that they were on the opposite side of a case I was involved in. Just don't remember.
Q. How many medicolegal matters have you been involved as an expert in?
A. Over all the years I've been practicing?
Q. Yes, over all the years.
A. I couldn't give you an exact number. My guess that is that it's somewhere between 25 and 50.
Q. And how many have been plaintiff and how many have been defendant?
A. The majority have been plaintiff, in part because the nature of the practice we have here is the kids are seen for traumatic brain injuries very often in our acute trauma program and our rehab program.
Q. I'm sorry. You said are seen for --
A. Traumatic brain injuries.
Q. Traumatic brain injuries, okay.
A. In terms of direct referral from attorneys,

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again, it's still the majority plaintiff, but a higher percentage of defense.
Q. And what do you charge for your services?
A. $250 an hour.
Q. Have you asked for any records that you haven't yet received?
A. I had asked if we could get copies of the raw data from the speech pathologist, and I think that's the only thing that I asked for that I have not actually seen.
Q. Do you anticipate looking at any other records other than reviewing what you already have and perhaps seeing the raw data from the speech pathologist before trial?
A. It depends on if there are any pertinent records that become available.
Q. Well, is there anything that you can think of today that you are waiting to see or even anticipate seeing?
A. No. I guess I mean I suppose if there were depositions by Dr. Rothner or other pertinent parties, certainly I would prefer to see those prior to trial.
Q. Are you aware that Dr. Rothner's deposition has been taken?

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A. Yes, I just found that out today.
Q. So would you anticipate reviewing it at some point?
A. Yes.
Q. But you haven't been shown it before today?
MR. SCOTT: I'm not aware it's available. To my knowledge, it has not been returned, certainly not to my knowledge.
MR. LEVIN: Well, John, my court reporters give me my stuff the next day. However you pick your reporters, I just know that it's been more than one day since Dr. Rothner's deposition.
Q. Do you anticipate reviewing Dr. Schauer's deposition testimony?
A. Possibly, yes.
Q. What is your understanding of the source of the injury to the patient here, Forrest Gregg Stone?
A. Do you mean the nature of the injury? I'm not sure what you mean by source.
Q. The cause or the nature of the injury itself. Let's start with the cause.
A. I don't have any opinion as to the cause of the brain insult that he has sustained. I think that's part of the issue here. It's not my area

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of expertise.
Q. Does it make any difference to you in terms of rendering any opinions you would have what the cause is?
A. Aside from in a sense of that the nature of the lesion may have some bearing on expectation about prognosis or outcome, but the way the lesion got there is not relevant to my opinions.
Q. Does when the lesion got there make any difference to your opinions?
A. Within some reasonably -- back it up. Yes, within certain boundaries. It's not a matter of minutes or hours. it's more a matter of we know certain things about the outcomes of stroke prenatally or close to the postnatal as opposed to later in life, so in that sense, yes, but not as a matter of did it happen within a framework or a time frame of several hours or days.
Q. Dr. Rothner commented on a different set of prognoses that might follow depending on whether the insult is prenatal or postnatal. Do you make that distinction in terms of trying to understand the pathology of an insult?
A. Understanding the pathology of the insult and when it originated clearly there are

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characteristic differences between prenatal and postnatal stroke.

There is a somewhat different set of issues though in terms of prognosis of long-term outcome from those strokes, and I don't believe there is scientific literature yet that makes a strong distinction between prenatal, perinatal and postnatal stroke.

Q. Do you know if there is any literature that suggests that the two are coincidental, or is it your opinion that the literature is yet to be written comparing the two?

A. I don't believe that there's a clear literature that differentiates between the two.

Q. Do you know if there has been studies on that?

A. There have been a lot of studies on perinatal stroke. A lot is sort of a relative term, of course. There have been some very interesting studies on perinatal stroke.

Q. What are you calling perinatal stroke?

A. It would include prenatal and postnatal in a relatively soon after birth period.

Q. Okay. What do you understand the nature of this injury to be? You say the cause - there is a lesion and the cause is not relevant to your

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opinions as you understand them to be, is that fair?

A. Correct.

Q. Okay. How would you characterize the lesion?

A. It's a stroke on the right posterior region of the brain with some sort of neurological sequelae, according to Dr. Rothner, and some residual findings on CT scan.

Q. Have you read the CT scans?

A. I've read the report.

Q. Are you able to read CT scans.

A. In the sense reading the films themselves?

Q. Yes.

A. I can do it informally, but I wouldn't rely on my opinion. I would rely on the radiologist's opinion.

Q. Have you seen the opinion of the neuroradiologist, Dr. Charles Lanzieri, in that matter?

A. I don't remember the specific name. You need to show me a document to see whether or not I've seen it.

Q. Do you know who Dr. Lanzieri is?

A. I don't have a recognition of the name.

Q. Is neuroradiology to your understanding a

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specialized field within radiology?

A. Yes.

Q. And the CT scans that we are talking about here are ones that you from your practice understand to normally be within the gambit and expertise of neuroradiologists?

A. Yes. I mean other physicians will certainly interpret CT scans, as will neurologists, but the real expertise in neuroradiology is with a neuroradiologist.

Q. Now, there have been a number of other findings, diagnoses and prognoses concerning Forrest Gregg Stone other than the IQ issue. You are aware of that. There have been other comments about what's happened to him and what's likely to come of him?

A. Yes.

Q. Okay. For instance -- and I want to go through some of them. For instance, there's been in some of the medical records and in Dr. Rothner's records a discussion of hemiparesis. Have you seen that?

A. Yes.

Q. Okay. And what is hemiparesis?

A. It's a partial paralysis of one side of the body.

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Q. Okay. And is it sometimes a sequelae of a traumatic brain injury?

A. It can be a sequelae of traumatic brain injury or stroke or any insult to the brain.

Q. Are you rendering any opinions as to whether Forrest Gregg Stone has suffered any hemiparesis?

A. No.

Q. Okay. And to follow up then, you wouldn't make any comment or be expected to render any opinions about the severity or prognosis with regard to hemiparesis, if he does have it, is that fair?

A. The severity to hemiparesis or its sequelae you said?

Q. Right, or its sequelae.

A. The only way I can think that I would have any comments of a hemiparesis is in trying to make an argument about the relationship between hemiparesis and cognitive and behavioral outcomes, in which case I might have something to say about whether it's predictive and to what extent, but if you are talking about physical outcomes of hemiparesis, no.

Q. I'll use your pronunciation, hemiparesis. I've heard it the other way, but I may have heard wrong.

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A. You can say it either way.
Q. So if there was a finding of hemiparesis, you then might be willing, if asked to make a comment on it, to what extent it's indicative or correlative with other cognitive factors within your field, is that fair?
A. Yes.
Q. You haven't been asked to do that yet?
A. No.
Q. Okay. There's been something called -- let me see if I can get some of the terms that are actually in here. Well, first of all, have you read anywhere that there's microcephaly with regard to Forrest Gregg Stone?
A. I don't remember reading that, no.
Q. Do you know what microcephaly is?
A. Yes.
Q. Okay. What is microcephaly?
A. It's an abnormally small head.
Q. And is microcephaly something that is within your expertise that is something that you discuss or write about or review?
A. It's within my expertise, yes.
Q. Do you treat patients with microcephaly?
A. I've seen patients with microcephaly. I don't

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actually engage in the treatment. Most of my work --virtually all of my work is evaluation and consultation. Define treatment. Do I have patients that have microcephaly? Yes.
Q. So you evaluate patients who perhaps among other problems have microcephaly?
A. Yes.
Q. Okay. And we can agree that microcephaly is generally a problem as opposed -- is that fair?
A. It's an abnormality, yes.
Q. And could you tell me or tell the jury what microcephaly is in terms of being an abnormality, why it's bad? Is it a bad thing to have, doctor?
A. It increases the risk of developmental problems, but it's not a guarantee. It's better not to have it.
Q. Doctor, in that I read through some of the literature at the shallowest end of neuropsychology, is it fair to say that it is difficult to predict the future course and prognosis of young children into adulthood as a neuropsychologist?
A. I don't think that's limited to neuropsychology.
Q. It may include economists and physicists and everything else. I'm just asking you as a

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neuropsychologist. Is it fair to say that predicting the course of development of children into adulthood is an activity that neuropsychologists deal with on a daily basis?
A. Sure.
Q. And often what they do is they talk about one factor increasing a risk or one factor being irrelevant to a risk, would that be fair?
A. Yes.
Q. So one thing that they do is they try not to base opinions on a single factor if they're able to look at a variety of factors so that they can get a better indication of prognosis, is that fair?
A. Yes.
Q. So one thing that they would consider, if it presented itself in terms of future developmental problems, would be microcephaly, correct?
A. Yes.
Q. Do you know how microcephaly is defined?
A. I don't know the exact cutoff. It's based on a certain amount of head size being below normal levels, but I'm not sure exactly what the cutoff would be -- or if there is a standard cutoff.
Q. Do you know whether in fact it would be expressed in numbers of standard deviation?

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A. Based on head circumference, but I don't know what the standard cutoff is.
Q. But often that is how people speak of varieties from the norm in psychology? They speak of degrees from standard deviation?
A. Standard deviation from normal, yes.
Q. Standard deviations from normal, okay. And all other things being equal, the further from normal -- strike that. All other things being equal, the greater the deviation from normal, the greater concern one would have, would that be fair as a very general rule?
A. Not always in that the relationship between the degree of abnormality in something like head circumference is not necessarily related to outcome. So that's an empirical question research would need to address.
The presence of microcephaly is a risk factor. Whether or not it's worse to have less is, I think, a question you have to look at the research to answer.
Q. Well, do you know whether, for instance, two standard deviations is less of a risk factor than three standard deviations from normal?
A. I don't know.

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MR. SCOTT: Objection.
A. I don't know.
Q. Do you know what being in the bottom two percentile of cephaly would be indicative of in terms of microcephaly?
A. Well, it would be about two standard deviations away from normal. The second percentile would be closer to two if you have a norm, which you probably do in head circumference.
Q. So you didn't notice anywhere in, at least as you sit here today and try to remember all the medical records, in Dr. Rothner's reports where he mentioned microcephaly?
A. I don't remember right now one way or the other.
Q. Would it be fair to say that microcephaly may be something that would be important to you in judging cognition if it were put in with other risk factors?
A. Yes.
Q. Are you aware of how many neurosurgeries this child has had?
A. I haven't counted them, no.
Q. You are aware that he's had more than one, is that fair?
A. I have to go back to the records. I know he's

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had some.
Q. And by neurosurgeries, these are actual brain surgeries as opposed to hand surgery, let's say?
A. Right.
Q. Does brain surgery in a child count as a risk factor for developmental problems later?
A. It's usually the reasons for the brain surgery that counts as the risk factor. I don't know that there is really any good data to suggest that just having an episode of neurosurgery necessarily places you at risk. It really would depend on the nature of the surgery, if there were other complications that occurred.
Q. Is that something that you could evaluate if you were shown the operative records?
A. Evaluatewhat?
Q. Whether the nature of the surgery itself, that is, the trauma of the surgery of cutting the head open and dealing with the brain itself during surgery, would be a particular risk factor for a particular child. Would that be something you would be able to assess if given the operative records?
A. My guess is that I would tend to rely on the opinion of a neurosurgeon as to the nature of how

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much trauma the brain might sustain during a surgery. It's possible you might be able to tell from operative records, but my experience is that that's not often the case.
Q. That would generally be outside your field of expertise at any rate, is that fair?
MR. SCOTT: Objection.
A. Again, it would depend on the nature of the records and how well documented it was.
Q. Now, you said that one of the things that would be a risk factor would be the underlying reason for the brain surgery, is that fair?
A. Yes.
Q. Okay. And the underlying reason for the brain surgery with Forrest Gregg Stone you understand to be what?
A. Well, at least one of them was the stroke itself.
Q. And that stroke itself is a risk factor?
A. Yes.
Q. And it's a risk factor for developmental problems?
A. Broadly defined, yes.
Q. And it's a risk factor for problems with developmental and cognition problems?
A. Yes.

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Q. Would you characterize that underlying condition as an infarct?
A. I have to go back to the records. Off the top of my head, I'm not remembering. If you want to give me back my records there, I can tell you.
Q. You can have the reports. I don't have your records. You can certainly have back your reports.
A. No. I mean the stuff that I gave you. Because I can't off the top of my head actually remember if it was an infarct or it was a hemorrhagic stroke. It does involve an infarct even though the stroke itself was hemorrhagic in nature.
Q. So is the infarct a factor that presents an increased risk for developmental and cognition problems?
A. Again, the stroke is part of that. I mean just answering the same question as before, from my perspective.
Q. And the answer from your perspective would be yes?
A. Yes, it is a risk factor.
Q. Dr. Rothner -- I'm sorry. If you want to look through this, I don't mean to cut you off.
A. I can process. Go ahead.

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Q. I certainly don't want to get afoul of your counsel.
A. No. If I need you to stop, I'm not shy about telling you to stop.
Q. That's fine. Dr. Rothner in his testimony or in his reports gave the opinion that there was clinical manifestations of cerebral palsy at a least episodically with this child. Do you recall seeing that anywhere in the records?
A. Yes.
Q. Okay. Is cerebral palsy an increased risk factor for developmental and cognition problems?
A. Yes.
Q. And again, are you going to be rendering any opinions as to the accuracy of the diagnosis of CP by Dr. Rothner?
MR. SCOTT: Objection. Now? When are you talking about? At the time that the patient presented to MetroHealth, or are you saying that the patient had CP at the time?
MR. LEVIN: At any time.
MR. SCOTT: Well, Dr. Rothner hasn't made any diagnosis of cerebral palsy at this time.
Q. My only question to your expert is if Dr. Rothner

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renders an opinion one way or another about the occurrence or manifestations of CP at any time, are you going to be rendering opinion as to the accuracy of that judgment?
A. No, I don't believe so.
Q. Okay. You have heard of uncal herniation?
A. Yes.
Q. What's uncal herniation?
A. It's a herniation of the uncus as a result of pressure, usually some mass lesion that creates a space in the cranial vault and brain herniation.
Q. Do you know whether or not Forrest Stone suffered an uncal herniation?
A. I have a vague memory that he did but I'm not certain.
Q. Is uncal herniation an increased risk factor for developmental and cognition problems?
A. In and of itself, I don't know that it would be because it would depend on how quickly and effectively it was treated and what the underlying condition was. I'm not aware of research literature that specifically looks at the association between the uncal herniation and developmental outcome.
Q. You said taken in and of itself. What about

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taken with other factors, can it be a risk factor?
A. Again, I don't know that as a neuropsychologist I would pay a lot of attention to uncal herniation per se. I would look at what the reasons were for it having occurred and how long the mass effect was likely to have occurred and other factors. So it's an indication that there's a pathological process occurring in the brain. The question is what's that pathological process.
Q. Are you aware that there is a some discussion in the medical records that there was some seizure activity in Forrest Gregg Stone?
A. I have some vague recall of that.
Q. Would seizure activity be an increased risk factor for developmental and cognition problems?
MR. SCOTT: Again, do you want to give the doctor timing? You're not suggesting to the doctor that the child has had any seizures in the last two and a half years, are you?
MR. LEVIN: I'm not suggesting anything at all. I'm just asking him a question.
A. If a simple comparison is made between children

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who have seizures and children who don't at the time they still have a seizure disorder, there is some association between ongoing seizures and cognitive functioning. In some disorders the presence of seizures as a neurological complication during the course of an illness will be associated with a heightened risk of cognitive or developmental problems. I don't know offhand whether or not that pertains for children with perinatal stroke. So whether or not the association between seizures as neurological complications and negative outcomes that's been shown, for example, in kids with meningitis is true of children with perinatal seizures, I would have to look literature to find out.
Q. Okay. So as of this moment when I'm taking your deposition, my only opportunity to take your deposition and understand your opinions, you don't have an opinion on that right now. You have would have to look it up, is that fair to say?
A. Right. With reference to children with perinatal stroke like Forrest.
Q. What about midline shift? Do you see any mention of midline shift in the medical records?

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A. Yes.
Q. What is midline shift?
A. Midline shift is a displacement of the midline of the brain to the side as a result of a mass lesion, usually as a result of a mass lesion.
Q. Is that also a matter of degree, that is, the amount of the shift?
A. Yes.
Q. Do you know how severe this shift was?
A. I don't remember.
Q. Are you able to judge the severity of a midline shift?
A. Well, it's easy to measure a midline shift. I'm not aware off the top of my head of the standard grading scheme in terms of that and I generally wouldn't be the person who would make a judgment.
Q. That would be the neurologist, most likely?
A. Neurosurgeon, neurologist, typically a physician.
Q. Is the midline shift an increased risk factor for developmental or cognitive problems?
A. I would think a midline shift in the same way would be pretty much all the answers to the same questioning you asked for uncal herniation. In and of itself, I don't know of any literature that looks at midline shift per se. It would be

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a matter of what the underlying pathology was, how long the midline shift lasted, how severe it was and so forth.
Q. And these are areas that again are even further outside your field?
MR. SCOTT: Objection.
Q. This is not something you look at?
A. No.
Q. is that fair?
A. I don't agree with that. In fact, many of the kids we see have midline shift, uncal herniation or compiicarions associated with their condition. What I said was that I don't believe there's specific literature about those factors, but there certainly would be literature relative to the pathologies that cause those things.
Q. Well, aside from the literature, clinically, have you noticed any increased developmental or cognition problems due to your patients who have suffered either a midline shift or uncal herniation?
MR. SCOTT: Objection. Go ahead, doctor.
A. I mean because both of those factors by definition involve some sort of abnormal

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condition of the brain, that they are abnormal conditions of the brain, but are caused by other pathology. They would be certainly factors that would indirectly reflect other processes that are likely to be associated with risks.
Q. So it would be fair to say they are correlative with factors that are indicative of increased risk, is that fair?
A. Yes, I believeso.
Q. Okay. Did you know there was a hematoma associated with Forrest Gregg Stone when he went into Metro?
A. I believe so.
Q. Okay. And a hematoma is what?
A. A collection of blood.
Q. Is a hematoma -- and that would be in the -- somewhere in a cranial cavity?
A. You can have a hematoma outside of the brain, but yes, in this case it was inside the cranial wall.
Q. I meant in this case that's where it was.
A. *Yes.*
Q. Would such a hematoma in a cranial cavity be an increased risk factor for developmental or cognitive problems?
A. In most cases, yes.

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Q. Okay.
A. I mean we have a group of kids with epidural hematomas in one of our studies that seem to do very well. So again, it depends on the larger context, but it's certainly better not to have a blood clot or blood on the brain than it is to have it.
Q. Now, I've given you a number of factors that may impact on prognosis, right?
A. Yes.
Q. Okay. And if I was quicker at my math, I could figure how many permutations there are of that, but without doing that, would you agree that the more of these risk factors that are present for any patient, the greater the risks in general of the developmental or cognitive problems, that when taken in the aggregate, the risk factors present increased risk?
A. I think clinically my judgment would usually rely on some overall picture of severity of insult to the brain, so that it isn't necessarily additive. You add them up and there they are, but the more you have some of the indicators that you mentioned, the more likely you are to have a more severe brain insult. So in a very general

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level what you said is probably true. Although I don't believe you simply can just add them up.
Q. More complicated but still generally true, is that fair?
MR. SCOTT: Objection. He answered,
A. I've answered.
Q. You said it would all depend on the -- strike that.
A. I wouldn't say it would all depend.
Q. You said that it was important to know the severity of the impact to the brain, correct?
A. Well, not impact.
Q. The insult?
A. Make sure we are not talking about trauma, but yes, the insult to the brain.
Q. Okay. Severity of the insult would be an important thing to know, correct?
A. Yes.
Q. And how would you measure that? Would that be on some kind of scale?
A. It depends on the nature of the brain insult. There are scales that can be used for traumatic brain injury, for example, but in perinatal stroke i don't believe there's a really well accepted grading scheme. There are grading

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schemes, for example, for stroke associated with intraventricular hemorrhage, but that's not what we are dealing with here. *So* that I think that would be an overall clinical judgment of the severity of the injury in this sort of instance.
Q. Do you use a grading scale in your own practice, you know, one tnrough five, standard of deviations?
A. It really depends on the nature of the case.
Q. Well, for a case like this.
A. I don't know that I would have a specific scale that I would make reference to. I mean I would have some probably, perhaps, notion of the size of the lesion, the complications associated with it, but I don't know that I would try put it into any one to five rating scheme, no.
Q. Well, do you speak of very severe, somewhat severe, I mean do you --
A. I typically --
Q. Let me ask. Do you write notes in that way to other physicians to try to give them some idea of what your clinical judgment is on severity?
A. I typically will do that certainly with reference to my description of cognitive outcomes in neuropsychological function in terms of level of

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impairment. I will sometimes do that with the pathology involved if I feel like there is a reasonably well agreed upon system. For example, there is a pretty well agreed upon system for judging the traumatic brain injury.
Q. Is this a trauma?
A. Not as I would define it, no, it doesn't involve blunt trauma.
Q. *So* traumatic brain injury has to involve trauma?
A. A traumatic brain injury has *to* involve some sort of force being caused to the head.
Q. You wouldn't think that would be the case here?
A. Not that I believe.
Q. Let me go back really to my question. Could you give me some notion of how severe you think the insult was here? Or do you feel that you can't answer that as you sit here today?
A. I could characterize the injury as involving a significant neurological insult. I'm not sure I would put it on a grading scheme because I don't have a -- I mean I can use an adjective, but I don't know that it would have any particular standard reference.
Q. Are you familiar with the use of the term, orthopedic injury, with regard to brain injuries?

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A. Orthopedic injury would not be a brain injury.
Q. What would an orthopedic injury be?
A. Orthopedic injury --
Q. A broken bone, you mean?
A. -- involves fracture.
Q. And do you believe there is literature -- I'm trying to understand what you said, doctor. There is a literature about traumatic brain injury and that literature does not apply to cases or conditions like that which you have observed with Forrest Gregg Stone, is that fair?
A. He doesn't have a traumatic brain injury. He had a brain insult. Some people might say he has a brain injury, but in the way that traumatic brain injury is generally defined in research literature, he doesn't have a traumatic brain injury.
People -- maybe I can add that many people would equate closed head injury to traumatic brain injury in neurosurgical literature. Certainly, there is a trauma here in the sense of some insult to the brain, but it wasn't caused by blunt trauma to the head.
Q. There are studies about what happens to traumatic brain injury children, correct?

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A. Yes.
Q. You've published some of those studies?
A. Yes, I have.
Q. And you're publishing them on an ongoing basis, I assume?
A. Yes.
Q. Is there a parallel literature to your knowledge on brain insults that are not traumatic brain injuries?
A. There is literature specifically about perinatai stroke.
Q. Have you published in that field?
A. Not yet, no.
Q. Are you doing any research as we sit here today on that?
A. We have a grant pending.
Q. In other words, you applied for the money, but it hasn't been awarded and when it is awarded, you will begin the research, is that fair?
A. Yes.
Q. Do you know -- is that NIH?
A. No, it's N-A-R-A-S-E-A. I couldn't even tell you what it stands for.
Q. And when would you expect to hear from them?
A. I'm a subcontract on this grant. I'm trying to

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remember when the PI told me it would be. I think he said August or September, if I remember.
Q. So it's unlikely that any significant research would be done before the trial begins in this case if it begins on time on September 30?
A. Research here, yes.
Q. Okay. Now, I believe you said that others have done research in this area, is that correct?
A. Yes.
Q. Can you point as you sit here today as an expert to any researchers in that field that are prominent?
A. Sure. Elizabeth Bates. Joan Stiles, S-T-I-L-E-S. Jeffrey Max.
Q. M-A-X?
A. Yes. Dorothy Aaram, A-A-R-A-M. Joan Gerring has done some work in that area. G-E-R-R-I-N-G.
Q. Is there any journal or --
A. I'm trying to remember if Joan's actually done stroke. It might just be TBI. I may be wrong.
Q. Is there any journal or set of journals that these people tend to publish in?
A. There are a lot of journals they would tend to publish in.
Q. They -- that they would publish these kinds of

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results in, is that correct?
A. Yes.
Q. A number of them, okay. Would you agree that children who sustain a perinatal stroke are at high risk for problems in behavior?
MR. SCOTT: Objection. You can answer that if you can.
A. I believe they're at risk. I think you used some other adjectives, but there is a risk factor for behavior probiems.
Q. High risk. What about children who suffer severe brain injury? Are they at risk for problems?
MR. SCOTT: Objection.
A. I don't know what you mean by severe brain injury.
Q. I'm sorry. I'll try it again. Would you agree that children who suffer traumatic brain injury are at high risk for problems with behavior?
A. Depending on the severity. The more severe the injury, in general the higher the risk.
Q. When you write, do you ever write about severe traumatic brain injury?
A. Yes.
Q. And when you write about severe traumatic brain injury, what do you mean by that?

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A. There are accepted definitions of severity generally based on factors like the Glasgow Coma Scale and other indicators of severity of injury.
I think it's important to point out that the literature about outcomes in traumatic brain injury and those in perinatal stroke actually come to somewhat different conclusions because the pathology is quite different and the risks associated with those two disorders are somewhat distinct, both cognitive and potentially behavioral.
But having said that, because you are asking about both and going back and forth and I wouldn't want them to get mixed up, they don't have the same outcomes. But in terms of severe traumatic brain injury, yes, it's a risk factor for behavioral disorders.
Q. And it's a risk factor also, that is, perinatal stroke is also a risk factor, correct?
A. Yes.
Q. And is perinatal stroke also a risk factor for adaptive functioning?
A. Yes.
Q. is perinatal stroke a risk factor for probiems in

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educaiionai performance?
A. Yes. And again, I would put the same parameters to the severity and nature of the injury, nature of the stroke, but yes, all things being equal.
Q. Doctor, when I gave you back your notes, I gave you back my copy of your report.
A. Oh, I'm sorry.
Q. No. That's my fault. You must have at least six copies. The hole-punched copy is my copy.
A. Actually, I only have one.
Q. I do want to address your report.

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(Thereupon, a discussion was had off the record.)

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Q. Doctor, you believe that all the opinions that you hold thus far in this case are contained in this report, is that fair?
A. No. I have other opinions that I was asked -- I rendered opinions in response to Mr. Scott's questions in that report. Actually, you have already elicited some opinions from me today that are not in that report.
Q. What is the Bayley Scale of infant Development?
A. The Bayley scale is a standardized measure of

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early motor and mental skills in early development for infants and children.
Q. Can you keep your voice up just for the woman on the line?
A. The Bayiey Scale *is* a standardized measure of eariy motor and mental skills intended for infants and very young children.
Q. When is it typically administered, what ages?
A. I'm trying to remember. Anywhere from birth up to, I believe, if I remember correctly, it's 42 months, but I'd have to double-check the scale.
Q. In that age range is it the *most* common test given in this area?
A. Certainly under the age of about two and a half there are a variety of other tests that are often given to two-year-olds. But the Bayley is one of the standards.
Q. Have you administered it yourself?
A. Not in many years, but I have.
Q. *So* it would be fair to say that in the actual administration, that's something you did earlier in your career and now you have others do the actual administration, but you continue to use it as an interpretive stool, to interpret, is that correct?

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A. That's correct. We don? actually see too many kids and do Bayleys because, again, we don't see lots of infants, but yes, we do use it that way.
Q. When you say you don't see lots of infants, what age is typically in your practice or what is the range of your practice typically?
A. Most of the children that we see will be between the ages of three and fifteen.
Q. When you say we, common problem for witnesses, I mean as a whole, there is a hospital here and there is the Ohio State Medical School, both of which you're associated with.
A. I run the neuropsychology program here at Childrens Hospital. I have two other staff neuropsychologists and two postgraduate fellows and some interns who work with us. I also have a graduate student that sees patients.
Q. *So* when you say we --
A. In the neuropsychology program at Childrens Hospital.
Q. Okay. That's fine. I just want to know who the we is. And Childrens Hospital is a tertiary care center tor children, is that fait?
A. Childrens maintains and provides primary care, psychiatric care and tertiary depending on --

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Q. Actually, I meant it to be inclusive. When you say you have patients that are typically between three and fifteen, after they're older than fifteen, they're sent to adult treaters who treat -- people who treat adults rather than children typically?
A. No. We see older adolescents. I know what the age distribution tends to be. And we see children under age three or under two. It's just you asked me for the range that we commonly see. Some older children would be sent to neuropsychologists who typically see adults. It's a matter of referral sources.
Q. How many patients do you see a year through this department?
A. Our program sees about 350 a year.
Q. And how many are below three typically a year?
A. It wouldn't be many. I couldn't tell you an exact number. Probably less than 30 would be my guess. Maybe less than 20. Under age 2 and below, probably less than 30.
Q. And that would be for all kinds of problems?
A. Yes.
Q. *So* it would be even more difficult for -- well, let me ask you. You don't know how many you

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would see with perinatal stroke or with the kind of condition that Forrest Stone --
A. Actually, we see a lot of those children. Actually, we tend to see them at slightly older ages.
Q. But you don't see many that are under three?
A. Generally not, because you are limited in the range of testing you can do and its predictive utility.
Q. Why do you have give the Bayley test to children zero to four? What's its purpose?
A. It's usually to get a -- broadly speaking, to get some sense of their developmental status at that time.
Q. And would it be fair to say it's a tool to give you some understanding?
A. Oh, yes.
Q. And it's a tool to be used, if possible, along with other tools, including medical records, clinical examination, history?
A. Again, used for what purpose, but yes, I mean in the context of a broader evaluation, all of that information would be relevant.
Q. Well, for instance, in making a prognosis, those other areas would be useful in adding to a more

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confident prognosis as a general rule?
A. Yes.
Q. Have you ever been asked to make a prognosis of a three-year old?
A. Yes.
Q. Okay. And what tools do you use? Do you ever use the Bayley as one of the tools?
A. Usually wouldn't with a three-year old. There are other tests that can provide more reliable measures of overall cognitive ability, more specific cognitive skills. We would certainly have used it in a two-year-old.
Q. How old was this patient when he had the test, do you recall?
A. I believe he was -- my memory is that he was in the two-year-old range, but I need to check.
Q. I beiieve he was two years and four months, and maybe John and I can agree on that.
A. I'm thinking 28 to 35 months, but I don't know.
Q. I can show you the Metro record where it says that.
A. Yes. For the -- when he was given the Bayley, yes.
Q. Yes. He's been seen by a variety -- you understand he's been seen by a variety of health

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proiessionais for a variety of reasons, correct?
A. Yes.
Q. And you understand that he is being treated for his clotting disorder by a hematologist?
A. i assume he is. I didn't pay attention to that.
Q. Right. But you would assume that a child with the kind of medical course he has has seen a number of people, would that be fair?
A. Yes.
Q. And I understand there are a whole range of opinions you're not going to be venturing into including hematology?
A. I wouldn't venture opinions about hematology other than its and cognitive outcome, but not about hematology itself.
Q. if you were to do a prognosis of a child who is two years and four months old, would one of the tools that you would use be a Bayley test?
A. I have to break that down into two parts. If he's two years and four months old, I probably would use the Bayley depending on what I know about the case in terms of the level of functioning. I would be, for the reasons I mentioned in my letter to Mr. Scott, extremely reluctant to rely on the Bayley for making any

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determination of long-term prognosis.
Q. Would it be fair to say that you would be willing to use the Bayley as one tool or one indicator along with other indicators for a child who is two years four months in making a prognosis?
MR. SCOTT: A prognosis of what?
Q. A progress -- a neuropsychological prognosis?
MR. SCOTT: Objection. You're going
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A. One of the things we know about the Bayley, the infant assessment, is that if children are extremely impaired, they tend to remain extremely impaired. And one of the reasons the Bayley is sometimes used is to try to get a sense of whether the child is severely impaired. So in some cases it has more prognostic value than others. But in the broadly defined normal range, depending on the clinical context we would use to get a sense of where a child's function is now, and depending on the results, it may or may not have prognostic significance.
Q. Right. My question is would you use it in any case for a two-year and four-month old to make a prognosis with regard to cognition and development, along with other indicators,

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including medical records, examinations, clinicai assessments?
A. I think I've answered question. I would use -- in my own clinical work would incorporate all of that information.
Q. Including the Bayley?
A. Bayley would be considered. Whether or not it provided prognostic information or not.
Q. Because you wouldn't give it to a two-year four-month old here at Childrens Hospital if you thought it would have no value, would that be fair?
A. No value? No. I would prefer not to give my patients anything that has no value.
Q. How much does it cost for the Bayley to be administered? How much do you charge for it?
A. We don't charge per test. We have an hourly rate. It depends on how long it takes to give a child a test.
Q. What's the normal range?
A. Depending on the child's age. A two-year-old would usually need about an hour and he give moat the motor and developmental skills.
Q. And would you charge an hourly rate for that time to the patient?

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A. The hospital charge is roughly $150 an hour.
Q. And then would you also evaluate that as a neuropsychologist?
A. Well, yes. There is -- the total cost of evaluation would include test administration time, interview, report preparation, review of records.
Q. And certainly, you wouldn't charge a patient for a test that you didn't think was valuable, is that fair?
A. Valuable is defined a lot of different ways, but no, if I thought that a test was totally useless, I wouldn't give it in the first place. Now, if I have a test that is invalid because the child is uncooperative or whatever, we still would charge the patient for the time.
Q. Do you find the tests with Forrest Stone to be invalid?
A. I don't have any indication that it was, no.
Q. Would you expect that if a test is invalid because, let's say the child is uncooperative, that the psychologist who was preparing the evaluation would note that?
A. Actually, he actually did in terms of his interpretation that he felt it was perhaps under

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reporting of function based on the final report. So I would expect a colleague to mention if they felt the results of testing may not be valid.
Q. Who is he, by the way?
A. She. It's a she.
Q. Dr. Schauer?
A. I assume that's a she. I've actually known Orels that are men, so I try not to make assumptions about those sorts of things,
Q. Let me go back to your report, doctor. We can speak of mental development index, which is what the Bayley measures, is that fair?
A. It's a name.
Q. Purports to measure?
A. Yes.
Q. And how does that match up to IQ? Are those numbers supposed to be the same even if they often fail to correlate?
A. IQ, when it's applied to a specific test is simply just another name for what's meant to measure ability, and in that sense the MDI is meant to measure something similar to that.
Q. So one would expect to correlate in general in IQ with -- let me finish -- with all the caveats of the problems of administering tests to younger

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children and any other testing problems involved?
A. You would expect to correlate with IQ measurement being administered around the same time.
Q. But that would be true of IQ tests, too, that sometimes change over time?
A. Yes.
Q. What is the normal IQ within one standard deviation?
A. One standard deviation?
Q. Yes, for all measures.
A. For most tests, again, it all depends on what the actual norms are for the test. For most tests the one standard deviation would be anywhere between 85 and 115. 15 points of the standard deviation of most of these tests.
Q. 15 points. And so the norm -- and that would mean for most of these tests 85 to 115?
A. No, I don't think that anybody uses the word, normal, necessarily just on the psychometrics. Most people often use a cutoff of around -- again, it depends who you speak to, but most neuropsychoiogists would use the cutoff of the ten percentile to describe a performance that as impaired or abnormal.
Q. What's a ten percentile in IQ?

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A. in IQ it would be roughly 80.
Q. And on the Bayley scale --
A. Yes.
Q. I'msorry?
A. Yes.
Q. You have to give me a word. And is there plus or minus for any point in terms of the way the tests are administered, a polling data where they now talk about four points. That is, in polling data they speak as 50 as meaning it's the same as 54 to 46 being fairly indistinguishable because the polling data doesn't account for accuracy closer than that.
A. There is a confidence interval associated with any score on psychological tests like the Bayley, but it's not really accurate to say it's -- it really isn't accurate to say the score is the same as something else, but you can confidently state that it is between a certain range or within a certain range.
Q. You dropped your voice or maybe my hearing is going. I apologize. You called it confidence integral?
A. Interval.
Q. Oh, interval. I'm trying to think of what

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integral would be. Confidence interval. What would be the confidence interval in the Bayiey?
A. It depends on how confident you want your interval to be. I don't want to be facetious. But you can use 90 percent or you could use 95 percent confidence intervals, and off top of my head I couldn't tell you what the Bayley is. I know that, I think, Dr. Matula mentioned what it is or what it was with a particular confidence, but off the top of my head I don't know.
Q. Well, you have done this. Do you think it's in the range cf two, three points or seven or eight, or don't you know?
A. I'd have to look. I don't think it's more than seven or eight points, but I don't know for certain.
Q. Is 84 below average?
A. No.
Q. Didn't you tell me average was 85 to 115?
A. No. I said that the first standard deviation is 85 to 115.
Q. Fair enough.
A. Most tests in standard nomenclature would be to describe 90 to 110 as average. 80 to 90 it's a low average. Anything under 80 is below

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average. Again, it's a matter of convention more than anything else.
Q. Because obviously, there's a bigger difference between 80 and 89 than there is between 89 and 90. It's just a matter of convention, each point would be a point?
A. Yes.
Q. So it would be -- it would be -- is this -- is this a straight scale grading or is this some kind of logarithmic scale? It's straight scale grading, isn't it?
A. I'm not exactly sure what you mean, based on normal distribution?
Q. No. What I mean is are there going to be the same population between 80 and 81 as between 90 and 91 as between 100 and 101?
A. In terms of percentage of population, no.
Q. So it is not going to be logarithmic?
A. It has nothing to do with logarithms. It has to do with normal distribution.
Q. Dr. Rothner rendered an opinion as to why this child would have problems, developmental problems, later based on a number of factors. Do you recall that?
A. You have to point to what you are specifically

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referring to.
Q. Okay. You don't recall it without looking?
A. I remember he had opinions about certain outcomes and certain factors that are relevant to that.
Q. Okay. Can you tell me what factors would to your mind indicate that a child will have developmental problems later in life?
A. How many hours do you want to spend? I mean there are so many factors that could be related to deveiopmentai problems, I don't know how to begin.
Q. Does this child have any of them?
A. Yes. We have already talked about a number of them that are risk factors.
Q. Are cognition problems different than developmental problems? I think we talked about that earlier and I think there was a distinction made, but I'm not sure.
A. I think the word, developmental problems, is aiways a very loose and slippery term because it can mean a lot of different things to different people. You can have cognitive deficits, you can have behavioral problems, adaptive deficits, and those are all potential developmental problems. So I prefer to use more specific terms and talk

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about what particular outcomes we are talking about.
Q. What about -- there are children with behavior problems obviously, correct? There are children who have behavior problems?
A. Yes.
Q. Okay. And those may manifest themselves by observation as opposed to testing. One might be able to see some of them, correct?
A. You don't generally test them. You either observe them directly, or more commonly, you would get information about them from people who observe the child regularly.
Q. Do you know whether Forrest Stone has had behavioral problems?
A. I don't remember one way or the other whether there is indication of significant behavior problems.
Q. Have you been asked to render any opinions whether he will have behavioral problems, has them or will have them?
A. Mr. Scott hasn't asked me to -- some of your questions indirectly asked me --
Q. I'm asking if Mr. Scott asked you.
A. No.

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Q. Do you know whether Forrest Stone is having cognition problems?
A. The only results -- well, I take that back. The only results that I'm aware of that would address that question have to do with the Bayley and the speech language evaluation that was done. The Bayley, I think, is equivocal as to whether or not there are overall cognitive ability deficits even at this point in time. Because 85 is not significantly impaired.
The speech language evaluation is lower and certainly he is described as having -- at least in the past, and again, I don't know what his curreni status is, Forrest is having speech difficulties and language difficulties. And those are the pieces of evidence that I have available to me.
Q. Would those be indicative of cognition problems?
A. I think I've answered the question. I mean I don't think the Bayley necessarily is. I think the results of the language testing suggests that at least at the time that he was assessed that there were some significant deficits in language skills.
Q. Right. And I'm just asking about those. Those

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significant deficits in language skills would be indicative of underlying cognition problems?
A. They're a type of cognitive problem, yes.
Q. You don't discuss that in your report, is that fair?
A. No.
Q. I want to ask you about a statement you make on the second page of your report. It's in the first full paragraph, which is the second paragraph, the second to last sentence.
Adolescents with IQ scores in the low average range are often capable of graduating from high school or obtaining GED. Do you see that?
A. Yes.
Q. Okay. I want to try to understand what you mean by often capable. Do you mean that some are capable and some are not?
A. That more often that people with IQ's in that range graduate from high school than don't.
Q. Do you have any numbers on that, 60 percent, 50 percent?
A. No.
Q. Do you know how many graduate from high school compared to hard core median, let's say a hundred

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-- first of all, we can agree that from the tests that he has an 84, is that right?
A. Well, if you want to make a prediction based on the Bayley, I don't have any prediction whatsoever because I don't think it predicts high school graduation.
Q. But I want to ask you about a sentence you have --
A. But you then referred to the Bayley.
Q. Only because I want to remind so that you're not embarrassed later.
A. You mentioned both an 85 and 84 on the Bayley.
Q. I just reminded you, doctor. If you don't want to be reminded, it's a courtesy.
A. I don't believe I referenced the Bayley.
Q. You said it a minute ago. I just want to be sure we are on the same page.
I want to talk about low average range, people with IQ in the low average range, wherever that came from, whatever test was administered or set of tests, along with clinical, along with whatever, achievement scores, along with whatever would indicate to you that somebody was low average. What would be the graduation rate of those as opposed to people within the average

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range.
MR. SCOTT: Objection.
A. I don't have a foundation for an answer right now. I don't know.
Q. When you say that adolescents in the low average range are often capable of graduating from high school or obtaining a GED, do you know in general how many get to high school as opposed to how many get the GED?
A. I don't know.
Q. Have you read studies that indicate that GED children or GED graduates do significantly worse in the workplace in terms of income than high school graduates?
A. I'm not an economist. I'm sorry.
Q. There is a woman on the phone who is struggling io hear you.
Talking about going to college or let's say graduating from college, is it typical for those with low average IQ's to graduate from college?
A. I'd say it's harder for them.
Q. Do you have any number on what harder would be?
A. No.
Q. It would be harder for them do everything that requires cognition than someone with a higher IQ,

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the more cognition, the easier it is to handle cognitive skills?
A. I think it's always an empirical question whether the relationship is that linear or what the minimum cognitive is required for certain activities. Some don't require more. You just have to have minimum level and you can do it. Depends on the particular outcome you are talking about. I will sometimes tell people you may not be better off having a high one.
Q. Have you ever done any studies of long-term outcomes of patients with perinatal traumatic brain injuries?
A. You just mixed two different forms of injury as far as I'm concerned.
Q. Wait a second. Let me impact that. You can have traumatic brain injury at any point perinatal or later in life. You can be hit over the head when you're one day old.
A. Traumatic injury, yes.
Q. Let me ask my question again. Have you done any extensive study of long-term outcomes of patients with perinatal traumatic brain injuries?
A. Okay. I misunderstood. Our research does not involve children with traumatic brain injuries

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sustained perinatally. Most of those injuries are a result of abuse. Most traumatic brain injuries that I see are inflicted intentionally, so it's a very different population that I see.
Q. You said you have done work for the plaintiff's side as well as work for the defense side?
A. I've been retained by both, yes.
Q. Can you give the names of any Ohio lawyers on the plaintiffs side?
A. No.
Q. You can't name me any?
A. Names, no. I've got far too many things to remember. I can give you a list of the cases that I have either been deposed or testified in but I don't remember attorneys' names.
Q. Can you recite the names of the cases?
A. I couldn't. I don't have it off the top of my head.
Q. You can't?
A. I know Dale Purdue. I think may I have worked for him.
Q. Doctor, if you give me a minute, I might be close to done. Let me consult my colieague and see if he has any other questions other than what he's already handed me.

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(Thereupon, a recess was had.)
Q. Doctor, do you have a prognosis with regard to cognition for this patient?
A. Only in very general sense.
Q. What would that be?
A. Well, the studies on perinatal strokes suggest that IQ is not likely to see large effects of perinatal stroke. They tend to be somewhat more subtle. And more specific cognitive outcomes certainly affect visual, spatial skills or have a subtle effect on language skills, and I'm talking about long-term school age sorts of outcomes.
There are also an increased risk of certain types of behavioral problems, particularly attention problems. So that I do think there is a decreased risk for this child, but I think that it will be much easier io begin to get a sense of what those actual manifestations would be as he gets a bit older, and there are tests which become more extensive in terms of what we can measure or become more predictive, I should say, of future outcomes.
Q. I don't want to mischaracterize what you have just stated, so let me see if I have got this right. You would agree that under your prognosis

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for this child, he is at risk for behavioral problems, correct?
A. Certain kinas of behaviorai probiems, yes.
Q. And what would those be?
A. I think that the list predominantly focuses on attention problems, inattentiveness seem to be associated with perinatal stroke.
Q. And is he at risk for problems with linguistic skills or language skills?
A. Of a certain sort, yes.
Q. And what would those be?
A. The research literature suggests that unlike adults when you have a perinatal stroke, you don't tend to have gross language disturbance and the language manifestations change over time. So that they tend to be more obvious and basic linguistic skills at a younger age. But at older ages if they are present, they tend to involve more subtle problems with using language conversationally, discourse, connecting language and meaning-- it's not that they don't have the basic building blocks of language, but when they do have problems, and not all kids with perinatal stroke do, but when they do, it tends to be higher level language skills.

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Q. What about -- I read some of your articles. I found you interesting and I understood them.
A. Put you to sleep probably.
Q. Actually, they didn't. You speak in some of your articles about the difference between math skills and other skills. You set out math skills, and I'm not sure I used the term exactly right, but you talk about the ability to do math as a separate factor often from other skills. Would math skills be impacted by or would any deterioration or abnormality in math skills be evidenced because of this insult to your understanding given the prognosis you have'?
A. You know, the Statements I'm making about prognosis are not about -- the statements about outcomes of perinatal stroke that I just made were not so made In reference specifically io Forrest, but in an attempt to give you a general description of what we know from research. I can't retrieve off the off top head what the studies have been showing about academic performance in any detail. So I would have to look back at them. Now, again, my research does not concern perinatal stroke, and I certainly would make the assumption that the outcomes of

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traumatic brain injury or other disorders because I've looked at this particular question relating spinal bifida, are necessarily, you know, related to this particular child.
Q. I'm not actually asking that. I understand, at least I understand from your testimony that you are separating out the articles you wrote in terms of traumatic brain injury from the insult here.
All I'm asking you is that in that these studies that I have of yours you talk about math skills, and I can probably find – what I am saying is, what I am asking you is do you have an opinion in terms of prognosis for patients like Forrest Gregg Stone whether his math ability will be harmed because of the perinatal insult that he had?
MR. SCOTT: Will it be more likely than not or is he at risk?
Q. At risk. And then more likely than not. Separate questions. I'll ask the two of them.
A. I would actually probably not want to venture a guess -- or an answer. Mot a guess. Venture an answer right now. I really would want to go back to those groups of studies with children with

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perinatal stroke to be sure it's based on sound science.
Q. And at the risk getting a vociferous objection, would you agree with me that you believe that given the insult that Forrest Gregg Stone had in terms of his prognosis, he is at risk for -- generally, for cognition problems, but you don't believe that it's more probable than not that he will suffer a significant IQ drop?
A. I think only -- two questions in that question. I wouldn't say that in general -- this is the way I phrased it. He is at risk for cognitive deficits. I don't believe that he's more likely than not going to show a significant decline in IQ.
Q. Are you making a distinction between a small drop in IQ and significant drop? I'm just asking that.
A. A drop that I would attribute to or be related to the neurological incident.
Q. I mean as I'm looking at one of your articfes, you are talking about math skills, and that's what I was referring to before. You are talking about how in traumatic brain injuries when there is more than one risk factor, math skills can be

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involved.
A. I believe, yes, all those risk factors that we are talking about there are include not the injury, but the environment that the child is raised in, because our research is more focused on the interplay between the child's environment and their brain injury.
Q. Do you have any knowledge as to whether there is any literature about environment impacting on children like Forrest with the injuries he has?
A. There is some, yes.
Q. And what does that literature conclude about environment as a risk factor?
A. Plays a significant role.
Q. So if that child's home life is less than optimal, less than Ozzie and Harriet, he's at greater tendency towards things like abuse, towards domestic --
A. I don't think that our research would suggest that you need to have grossly abnormal family environments to have an effect on children. In fact, not just our research, but in much of the research, the variation of normal quote-unquote range in families has an impact on children.
Q. All children or these children?

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A. I think that there is evidence to suggest that variations in family and parents plays a role in the outcomes of children with neurological insult, including children with traumatic brain injury, and I think there is a literature that's relevant to children with stroke. Mostly with children with prematurity, but there is some a specific evidence.
Q. Let me put it another way. I'm not sure if you answered my question. Maybe you did. Are children like Forrest Gregg Stone more at risk than average children for environmental difficulties in the home?
A. No. That's flipping it around the other direction. I don't think that necessarily that kids with perinatal stroke are more at risk for adverse famiiy environments, although having a child with neurological insult does -- is sometimes associated with more stress at home.
Q. So you flipped it a third way. That is, that there may be more stress in the home life because of an impaired child?
A. If the child is impaired, yes.
Q. Is that something that's part of your studies?
A. Yes.

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Q. Impaired in the way that Forrest Gregg Stone is? Would you expect that --
A. I haven't said that he is impaired other than --
Q. You don't --
A. Other than the language area based on old testing. I don't know where he is right now.
Q. Well, you have certainly seen patients with physical issues as well as psychological or neurological issues, that is, in your practice some patients who come here must be patients who have all kinds of physical problems, correct?
A. Yes.
Q. And do those physical problems in your experience put greater stress on environment?
A. One of the interesting things is that most data would suggest that families find children with physical handicaps not particularly distressing. It tends to be behavioral, cognitive, academic sorts of problems that families find most difficult to cope with.
Off the record, I do need to stop by two.
Q. I think I'm done.
A. Great.
MR. LEVIN: I believe I'm done, doctor. Carol, do you have any questions of

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the expert?
MS. METZ: No, I have no questions.
MR. SCOTT: The doctor will read.

KEITH OWEN YEATES, Ph.D.

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CERTIFICATE

The State of Ohio) SS:
County of Cuyahdga.)

I, Sandra L. Mazzola, 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 KEITH OWEN YEATES, Ph.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; I am not, nor is the court reporter firm with which I am affiliated under a contract as defined in Civil Rule 28(D).

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office, at Cleveland, Ohio, this ____ day of _____, A.D. 2002.

_____
Sandra L. Mazzola, Notary Public, State of Ohio
14237 Detroit Avenue, Cleveland, Ohio 44107
My commission expires February 19, 2007

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