

STATE OF MICHIGAN

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IN THE CIRCUIT COURT FOR THE COUNTY OF MACOMB

ZACHARY SUNDERLIK, a minor,  
by his Next Friend, DAWN SUNDERLIK, )

Plaintiff, )

vs. )

WILLIAM BONNEFIL, M.D., MACOMB ) Case No.  
GYNECOLOGIC ASSOCIATES, P.C., a ) 98-5052-NH  
Michigan Corporation, ST. JOHN ) Pages 1 - 35  
HEALTH SYSTEM - DETROIT MACOMB-  
CAMPUS D/B/A MACOMB HOSPITAL )  
CENTER, a Michigan Corporation, )  
Jointly and Severally, )

Defendants. )

DEPOSITION OF MARVIN D. NELSON JR., M.D.,

LOS ANGELES, CALIFORNIA

OCTOBER 26, 2000

Reported by Laura Mellini, CSR No. 8181

PRS Job No. 3-57898

1	APPEARANCES OF COUNSEL:	1	LOS ANGELES, CALIFORNIA; THURSDAY, OCTOBER 26, 2000
2	FOR PLAINTIFF:	2	2:10 P.M.
3	PEARLIN AND PEARLIN, P.L.L.C.	3	
4	By: Michael Pearlin, Esq.	4	MARVIN D. NELSON JR., M.D.,
5	One Thorne Square	5	having been first duly sworn,
6	Suite 1870	6	was examined and testified as follows:
7	Southfield, Michigan 48076	7	
8	(248) 354-5000	8	EXAMINATION
9	FOR DEFENDANTS:	9	
10	Kirtz, Oetzel, Wagner & Keaney	10	MR. PEARLIN: Let the record reflect this is
11	By: Stephen R. Krasinski, Esq.	11	discovery in the deposition of Dr. Nelson being taken
12	One Woodward Avenue	12	pursuant to notice.
13	16th Floor	13	Q Would you state your full name, please.
14	Detroit, Michigan 48226-3412	14	A Marvin D. Nelson, junior.
15	(313) 561-6711	15	Q Dr. Nelson, my name is Michael Pearlin. I
16		16	represent a child named Zachary Sunderlik in a lawsuit
17		17	that he's brought. I'm going to be asking you some
18		18	questions today about your opinions. If I ask you any
19		19	questions that you're not clear about or any questions
20		20	that you don't understand, please don't answer the
21		21	question. Tell me that you're not clear or that you
22	Deposition of MARVIN D. NELSON JR., M.D., the witness,	22	don't understand it.
23	taken on behalf of the Plaintiff, on THURSDAY, OCTOBER	23	Is that fair?
24	26, 2000 at 2:10 P.M., at Childrens Hospital, 4640	24	A Yes, sir.
25	Sunset Boulevard, Los Angeles, California, before	25	Q I know you've had your deposition taken
	Laurea Mellini, CSR No. 8181.		
	Page 2		Page 4
1	INDEX	1	before. Is that correct?
2	WITNESS EXAMINATION PAGE	2	A Yes, sir.
3	MARVIN D. NELSON, JR., M.D.,	3	Q You've given me a curriculum vitae, which I
4	By Mr. Pearlin	4	just received before the start of the deposition. I
5		5	take it that it is current and up to date.
6		6	Is that correct?
7		7	A Well, let me take a look at it just to be
8		8	sure. It's still warm from the copier.
9		9	Yes, it appears to be the most up-to-date CV I
10		10	have seen yet.
11		11	Q Okay. Thank you. It's my understanding that
12		12	you have been asked by the defendants to render an
13		13	opinion in this case. Is that correct?
14		14	A Yes.
15	EXHIBITS	15	Q Can you tell me what information that they've
16	(None offered)	16	given to you in order for you to review so that you can
17		17	make an opinion?
18		18	A They have forwarded the neuro imaging studies
19		19	on the child, consisting of an MRI scan and a CT scan.
20		20	Q Anything else?
21		21	A No, sir.
22		22	Q Did they give you the reports as well as
23		23	studies or just the --
24		24	A No.
25		25	Q You just had the films?
	Page 3		Page 5

1 A Yes.  
 2 Q Have you ever seen the reports?  
 3 A No, sir.  
 4 Q Have you written any of your own reports or  
 5 impressions regarding your evaluation or interpretation  
 6 of the films?  
 7 A No, sir.  
 8 Q Do you have the films here today?  
 9 A Yes, sir.  
 10 Q For identification what specifically did --  
 11 what specific films did they give you to look at?  
 12 A An MRI scan dated 24, April, 1997, and a CT  
 13 scan of the head dated 16, April, 1999.  
 14 Q Did they give you any ultrasounds to view?  
 15 A I think that there was an ultrasound of the  
 16 kidneys or something in there that -- unrelated that was  
 17 in the film jacket.  
 18 Q Did you ever receive any information regarding  
 19 Zachary Sunderlik, other than the films themselves?  
 20 A Just after rendering an opinion as to what I  
 21 thought the films showed, then I was informed by  
 22 Mr. Brzezinski about there being a question of a group B  
 23 Strep infection around the time of birth, just some  
 24 basic details about the child and what happened around  
 25 the time of birth.

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1 Q Is it your testimony that when you looked at  
 2 the films, you had no background information in terms  
 3 of --  
 4 A That's correct.  
 5 Q You have known Mr. Brzezinski for cases before  
 6 this case. Is that correct?  
 7 A Yes, I have given consultations in three or  
 8 four brief cases.  
 9 Q How much do you charge?  
 10 A \$400 an hour.  
 11 Q How long did that take you to look at the  
 12 films?  
 13 A Half an hour.  
 14 Q Is this charge of \$400 an hour for all the  
 15 work that you do?  
 16 A Yes.  
 17 Q Does that including testimony?  
 18 A Yes.  
 19 Q How many other cases have you worked on for  
 20 either Mr. Brzezinski or his law firm?  
 21 A Like I mentioned, three or four other cases.  
 22 Q That's for Mr. Brzezinski. Does that include  
 23 all the other members of his law firm?  
 24 A As best I can recollect.  
 25 I think -- I don't think I've done any cases

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1 for anybody else in your law firm that I can remember.  
 2 Q Do you know -- when did you first start --  
 3 when was the first case you reviewed for Mr. Brzezinski?  
 4 A Three or four years ago.  
 5 Q How much medical/legal work do you do?  
 6 A In what terms? Percentage of my time?  
 7 Q In terms you want to give me. How many cases  
 8 a year? What percentage of your time? Pick your own  
 9 parameters.  
 10 A Well, I started reviewing medical/legal cases  
 11 in 1988, and over the years I have averaged about 50  
 12 consultations a year, 50 cases a year, and, of course,  
 13 they go on forever. Of those I would say there have  
 14 been on average about ten depositions a year, and I've  
 15 done about three trials a year.  
 16 Q In terms of percentage can you tell me the  
 17 percentage that you've been doing it at the request of  
 18 defendants versus plaintiffs?  
 19 A At the level of consultations, just overall  
 20 consultations?  
 21 Q Sure.  
 22 A It's about 75 defense, 25 percent plaintiff.  
 23 Q In terms of depositions?  
 24 A More depositions for defense, probably 80, 85  
 25 percent defense.

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1 Q In terms of trial?  
 2 A Probably about 90 percent defense. Most of  
 3 the plaintiff ones settled.  
 4 Q Has that been constant since 1988, that  
 5 percentage?  
 6 A Yes.  
 7 Q Do you advertise your services anywhere?  
 8 A No, sir.  
 9 Q Do you know how people know of you to review  
 10 cases?  
 11 A No.  
 12 Q Do you know how Mr. Brzezinski knew of you to  
 13 review cases?  
 14 A No, sir, I don't know.  
 15 Q Have you ever been -- testified live at trial  
 16 in Detroit?  
 17 A No.  
 18 Q In the Detroit area, Michigan?  
 19 A No.  
 20 Q You said you've testified live at trial about  
 21 three times a year?  
 22 A Yes.  
 23 Q Do you also give video depositions?  
 24 A Well, that's up to you guys.  
 25 Q Do you consider that testifying live at trial,

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1 or do you consider that a deposition?  
 2 A Well, I've done it both ways. I've done video  
 3 testimony for trial, and I've done video depositions.  
 4 Q When you said three times a year live at  
 5 trial, you meant actually going to court?  
 6 A Yes.  
 7 Q Since you brought it up earlier, approximately  
 8 what percentage of your income is from medical/legal  
 9 work?  
 10 A Ten percent.  
 11 Q Do you hold any administrative positions at  
 12 Childrens Hospital?  
 13 A Yes.  
 14 Q What's your administrative position?  
 15 A Chairman, Department of Radiology, Childrens  
 16 Hospital, Los Angeles.  
 17 Q How long have you done that?  
 18 A I've been the -- I was the acting chair  
 19 starting in February, 1998 and became the permanent  
 20 chair in August of 1999.  
 21 Q If I asked this, I apologize. You have not  
 22 seen the reports at all?  
 23 A No.  
 24 Q Even to this moment?  
 25 A I have not.

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1 Q Okay. Let's start with the MRI scan. The one  
 2 that was taken in '97. I take it you read it. You  
 3 wrote no report interpreting it. Correct?  
 4 A That's correct.  
 5 Q You do remember what it looks like?  
 6 A Yes, sir.  
 7 Q What's your interpretation of the MRI scan?  
 8 A It's normal for the age.  
 9 Q I'm going to show you the report from Beaumont  
 10 Hospital and tell me if you agree with it.  
 11 A Yes, I agree with what was stated. "No  
 12 abnormality is identified." I agree with that.  
 13 Q Just so we're clear on identification, this is  
 14 a report for an exam date of 4/24/1997 regarding Zachary  
 15 Sunderlik, and it's a head MRI. Is that correct?  
 16 A That is correct.  
 17 MR. BRZEZINSKI: 5/24?  
 18 THE WITNESS: April. It was April.  
 19 MR. BRZEZINSKI: April is a 4.  
 20 BY MR. PLANIN:  
 21 Q You then looked at the head CT that was done  
 22 on April 16th of 1999. Correct?  
 23 A Yes.  
 24 Q That would be approximately two years later --  
 25 A Approximately.

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1 Q -- after the MRI? What is your reading of the  
 2 head CT?  
 3 A The head CT is abnormal. There are  
 4 calcifications in the putamen bilaterally that are  
 5 fairly symmetrical. There is also a little subcortical  
 6 calcification in the region of the middle frontal gyrus  
 7 of the right frontal lobe. I would say there's a slight  
 8 prominence of the lateral ventricles and the cerebral  
 9 sulci.  
 10 Q I'm going to show you the written report from  
 11 Beaumont Hospital and ask you if agree or disagree with  
 12 the finding of the radiologist.  
 13 A Okay. Well, let's take this line by line.  
 14 Q All right.  
 15 A He has (reading) pre and post contrast axial  
 16 CT scan of the head were obtained. That's correct. The  
 17 ventricular system and basal cisterns are normal. I  
 18 would say top normal at best, if not moderately  
 19 enlarged. Upper limits of normal or maybe slightly  
 20 enlarged would be my interpretation.  
 21 Q Of the lateral ventricles?  
 22 A Of the lateral ventricles and sulci. There  
 23 are no signs of acute intracranial pathology. I have no  
 24 idea what that means.  
 25 Abnormal calcifications are noted in the

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1 region of the basal ganglia bilaterally and subcortical  
 2 white matter of the frontal lobe on the right side.  
 3 That's what I mentioned. Although I was more specific  
 4 instead, of giving the exact location. They are  
 5 specific in the putamen, which is nucleus in the brain,  
 6 the base of the brain.  
 7 No abnormal parenchymal enhancement is noted  
 8 on the post contrast studies. I agree.  
 9 The exact nature of these calcifications are  
 10 not clear. You can never exactly define the nature of  
 11 the calcifications. It can be seen in patients with  
 12 toxoplasmosis, rubella, cytomegalia virus and herpes --  
 13 that should be cytomegalia virus and herpes --  
 14 encephalitis, granulomatous disease, metabolic disease,  
 15 et cetera.  
 16 That pretty much covers it -- most things.  
 17 That's not the entire list, but it's most things.  
 18 The skull base and calvaria are unremarkable.  
 19 I'll accept that.  
 20 Impression. Abnormal calcifications noted  
 21 involving the basal ganglia bilaterally and the  
 22 subcortical white matter of the frontal lobe. There are  
 23 no signs of acute intracranial pathology. No other  
 24 definite significant abnormality is identified. The  
 25 posterior fossa structures are normal, and there are no

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1 signs of hydrocephalus. The periventricular white  
2 matter appeared to be preserved.  
3 That's not really an impression. He's  
4 restating his findings, and he's adding some new  
5 findings, but not really giving an impression at all.  
6 C minus.  
7 Q I wasn't really asking you to grade the  
8 radiologist.  
9 A You're asking me if I agree with the report.  
10 I think he has correctly identified the calcifications  
11 that we talked about, but I don't think he's really  
12 given -- he hasn't really provided much help to the  
13 referring physician who asked for the study as to what's  
14 going on.  
15 Q So we see it, the referring physician is who?  
16 A Let's see. Referring physician.  
17 Q That's up on top.  
18 A That's patient name there.  
19 Q Right below there.  
20 A Ernestina S. Mac.  
21 Q Yes.  
22 A That looked like the mail room person from the  
23 way that was -- looked -- put there. All right.  
24 Q Going away from your grading of his actual  
25 writing, do you agree that the periventricular white

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1 white matter in the frontal lobe?  
2 A Yes. One focal calcification in that region.  
3 And all of these are new since the MRI exam.  
4 Q Obviously, none of these were found on the MRI  
5 since you found the MRI was normal?  
6 A That's correct.  
7 Q You said there was a slight prominence in the  
8 lateral ventricle?  
9 A Ventricles, yes.  
10 Q That is not reported in -- by the physician at  
11 Beaumont Hospital. Correct?  
12 A He thought they were within normal limits.  
13 Q You don't agree with it?  
14 A I think they're mildly prominent, but I don't  
15 think there's hydrocephalus present. They're not  
16 obstructed and not enlarged on that basis.  
17 Q You think they're larger than they should be?  
18 A They're right in that borderline territory  
19 where they're in the upper limits of normal, mildly  
20 enlarged.  
21 Q I take it, as part of your practice, you  
22 regularly read both CT scans and MRI scans?  
23 A Yes.  
24 Q What's the difference between them?  
25 A What's the difference?

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1 matter appear preserved?  
2 A Well, as best I can tell from the CT scan, it  
3 looked to be normal.  
4 Q So you agree with that finding?  
5 A Yeah, generally, I would agree with that.  
6 Q Okay. Do you agree that the posterior fossa  
7 structures are normal, and there are no signs of  
8 hydrocephalus?  
9 A I would agree that there's no signs of  
10 hydrocephalus, and the posterior fossa structures appear  
11 to be normal as depicted on this CT scan.  
12 Q Would you have anything to indicate that the  
13 posterior fossa structures are abnormal in any other  
14 study?  
15 A No. They were normal on the MRI as well.  
16 Q So you agree with that finding?  
17 A Yes.  
18 Q The abnormal calcifications involving the  
19 basal ganglia bilaterally -- you said that they are  
20 involving the putamen?  
21 A Yes.  
22 Q The putamen is a portion of the basal ganglia?  
23 A It's one of the nuclei that are included under  
24 the general description of the basal ganglia.  
25 Q There is calcification in the subcortical

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1 Q Yeah.  
2 A Between a CT and MRI?  
3 Q Not in terms of -- obviously the -- I'm not  
4 talking about the type of machine. I want to know in  
5 terms of what can one see better versus the other. What  
6 can one see not as well as the other?  
7 A A CT scan is done using x-rays that pass  
8 through the head to make a computer-generated picture of  
9 what's contained within that volume of tissue included  
10 on that scan. So it's looking at the continuation of an  
11 x-ray beam. So things are measured in terms of  
12 continuation value, or some people call it a density of  
13 tissue. The denser the tissue, the more obstructs the  
14 passages of the x-rays.  
15 So the things that are extremely dense look  
16 bright white on our scans just by the standardization of  
17 the way we set it up. So the bones look white. The  
18 brain tissue are shades of gray in between. Air is  
19 black. Water is set at the middle point, zero. Brain  
20 tissue runs values in the 35 to 60 range.  
21 Q 35 to 60 range of what?  
22 A Hounsfield units. These are the artificial  
23 units that are set up the scale to make our pictures.  
24 What CT is excellent at doing is finding blood that's  
25 extricated out of the vascular system. It's excellent

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1 at structural detail, anatomic detail. It is exquisite  
 2 for finding calcifications in the brain.  
 3 Q Calcifications would appear white?  
 4 A Right. They appear white on the regular  
 5 brain, like on this case they are white.  
 6 Q That's because they're denser?  
 7 A It's dense. It's calcium. It's dense.  
 8 Magnetic resonance imaging uses magnetic  
 9 fields and radio frequency waves of the frequency  
 10 between the hydrogen oxygen bond in water. That's where  
 11 the resonance comes in. You make the water molecules  
 12 dance around by adding that resonant frequency, and when  
 13 they snap back in alignment to the field, they give off  
 14 an energy that we use to make the images.  
 15 Depending on how we make them dance around,  
 16 makes the difference on how the image looks. That's  
 17 where the things you've heard about T1, T2 images comes  
 18 around.  
 19 MRI is excellent at looking at the  
 20 three-dimensional structure of the brain because we can  
 21 angle the plane and look at any direction without making  
 22 the patient contort to fit the scanner. It's all done  
 23 electronically. It's excellent at looking at  
 24 myelination, which we don't see well with CT.  
 25 Q Myelination meaning?

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1 A Meaning white matter development, meaning  
 2 laying down the fatty sheath that's insulation around  
 3 the axons developing in the central nervous system.  
 4 You got that?  
 5 It is excellent at looking at congenital  
 6 malformations in the brain.  
 7 Q Like Chiari?  
 8 A Chiari malformations, migration abnormalities,  
 9 all kinds of things. It's excellent at looking at  
 10 damage to the central nervous system, areas of the  
 11 necrosis and subsequent -- how it heals and leaving  
 12 scars behind.  
 13 Q So if, for example -- you said that the CT was  
 14 good at looking at the blood, if blood has come out in  
 15 the brain?  
 16 A Yes.  
 17 Q Would an MRI be good at that?  
 18 A MRI is not good at finding subarachnoid  
 19 hemorrhages. It's very good at finding parenchymal  
 20 hemorrhages. The blood is kind of pooled there, and it  
 21 leaves hemosiderin stain on the MRI that is present  
 22 virtually throughout the patient's life.  
 23 Q So for some blood that gets outside of the  
 24 system, it might be good; and for some you couldn't see  
 25 it?

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1 A Right. Like in a subarachnoid hemorrhage from  
 2 an aneurysm. MRI is very poor at detecting that. CT  
 3 picks up very small amounts.  
 4 Q You said that the CT was good for some  
 5 structural -- looking at structure?  
 6 A Yes. But between the two, MRI does it better.  
 7 Q Calcifications --  
 8 A Calcifications are better seen on CT. Big  
 9 lumps of calcium, like are present on this CT scan, you  
 10 will see on the MRI because it's solid. It will have a  
 11 signal void if it's big enough on the MRI. Things have  
 12 to be in solution to see them on the MRI. But you will  
 13 see the holes where the calcium sits.  
 14 Q Small lumps of calcium you might not see?  
 15 A Small little flecks you wouldn't see, but the  
 16 calcifications present on this CT scan you would see on  
 17 the MRI scan.  
 18 Q So the big calcifications as were -- as you  
 19 saw in the CT of Zachary in 1999, if they did an MRI,  
 20 you would see that?  
 21 A Yes.  
 22 Q But if they were little specks of calcium, you  
 23 might not see that on the CT?  
 24 A They might not be seen, but there are often  
 25 other markers around that subject that there's necrosis

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1 or damage in the tissue that you would see other things.  
 2 You just might not see the calcification.  
 3 Q Sometimes you might; sometimes you might not?  
 4 A Yes.  
 5 Q According to the record, when the MRI was  
 6 originally ordered, it was ordered to rule out  
 7 leukodystrophy?  
 8 A Yes.  
 9 Q Would an MRI be a good modality to rule out  
 10 leukodystrophy?  
 11 A Yes. It probably would be the method of  
 12 choice.  
 13 Q Did this, in your opinion, rule out  
 14 leukodystrophy?  
 15 A Yes.  
 16 Q If there was leukodystrophy, what would you  
 17 expect to see on the MRI?  
 18 A I would expect to see areas of abnormal or  
 19 deficient myelination.  
 20 Q You didn't see any of that. Is that correct?  
 21 A No.  
 22 Q Is that correct?  
 23 A That's correct.  
 24 Q In both of the studies, both the MRI and CT,  
 25 you found no malformations or abnormal actual structure

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1 in the brain. Is that true?  
 2 A I did not.  
 3 Q That's what -- by looking at both the MRI and  
 4 CT. Zachary had a normally developed brain in terms of  
 5 structure?  
 6 A As best can be determined by an imaging study.  
 7 Q Now, in the MRI report -- I'm sorry. In the  
 8 CT report from 1999, the radiologist, Dr. Noujaim, lists  
 9 a number of things that potentially could cause some of  
 10 these changes that you saw, and I want to go through  
 11 them with you. Okay?  
 12 A We're talking about the CT scan, not the MRI  
 13 scan?  
 14 Q I apologize. The CT scan of 1999. The first  
 15 thing he mentions is toxoplasmosis. You saw that?  
 16 A Yes.  
 17 Q When you looked at the CT scan of 1999, did  
 18 the possibility of toxoplasmosis cross your mind?  
 19 A No.  
 20 Q Why not?  
 21 A Because the calcifications present in  
 22 toxoplasmosis have a different appearance than were  
 23 present on this scan, and they have a different pattern  
 24 of distribution.  
 25 Q So based on your look at the CT scan, you

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1 don't believe this child suffered from toxoplasmosis?  
 2 A No, I don't.  
 3 Q Is that correct?  
 4 A I do not.  
 5 Just in general, what he's doing is he's  
 6 giving the garden variety list of things that cause  
 7 calcifications in the brain, one of which are congenital  
 8 infections. So he's reading down the congenital  
 9 infections list as possibilities without really giving  
 10 much thought to it.  
 11 Q I don't know how you would know he wouldn't  
 12 give much thought to it, but I'll accept your comment.  
 13 A Do you want me to explain why?  
 14 Q Sure.  
 15 A Because toxoplasmosis, like I said, not in  
 16 this distribution -- in the calcifications, don't look  
 17 like this. Cytomegalovirus -- these are not the  
 18 calcifications of cytomegalovirus infections. The  
 19 calcifications have a different appearance and different  
 20 distribution.  
 21 Cytomegalovirus calcifications are small and  
 22 subependymal in distribution, likewise, are not this  
 23 apparent on this CT scan and not in this distribution.  
 24 Herpes in a neonatal herpes infection  
 25 typically does not give you calcifications in the brain.

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1 and it produces a global encephalitis. So at this point  
 2 you would expect to see a global atrophic brain. Not  
 3 the pattern that's present here.  
 4 Rubella can give you multiple tiny little puny  
 5 calcifications scattered throughout the brain in no  
 6 particular distribution, also which is not present here.  
 7 What else did he put there?  
 8 Then he put the general metabolic distributor.  
 9 Yes, I agree with that. In my opinion, if I were  
 10 looking at the scan with the referring physician, I  
 11 would say you need to do a metabolic workup on this  
 12 child.  
 13 Q You think there's a possible metabolic cause?  
 14 A I think that this child -- there's a good  
 15 possibility that this child could have an inborn error  
 16 of metabolism.  
 17 Q You agree with the possibility of one of the  
 18 things he lists?  
 19 A Yes.  
 20 Q Do you have an idea which inborn error of  
 21 metabolism?  
 22 A I would tell them to focus their attention on  
 23 the aminoaciduria like propionicaciduria,  
 24 methylmalonicaciduria, and particularly on the  
 25 mitochondrial ATPase, the respiratory chain enzymes

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1 present within the mitochondria.  
 2 Q So the two things you think you would want to  
 3 focus on are the amino acid abnormalities and the  
 4 abnormalities of the mitochondria?  
 5 A Yes.  
 6 Q Can you state within a reasonable degree of  
 7 medical certainty whether Zachary has a metabolic  
 8 disorder?  
 9 A No.  
 10 Q Do you have an opinion of whether there's one  
 11 metabolic disorder that's more likely to have been in  
 12 Zachary than another metabolic disorder?  
 13 A Again, I would say, first, do the  
 14 mitochondrial analysis, and then, second, do the amino  
 15 acid panel, if you're looking for abnormalities.  
 16 Q By the "mitochondrial analysis," you're  
 17 talking about diseases like Meert -- Feerf (phonetic), I  
 18 believe?  
 19 A That's one of the things that it could be.  
 20 That's a specific syndrome that you're talking about  
 21 that's associated with mitochondrial abnormalities.  
 22 What you would need to do in this particular  
 23 case is get a sample of his blood, and they go and they  
 24 take the mitochondria out of the white cells and do an  
 25 analysis of the cytochrome (phonetic) that's present

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1 within the mitochondria, looking for the specific  
2 genetics that produce these abnormalities.  
3 Q If that were done and it were negative, what  
4 would you then do?  
5 A Then I would press on and go to the amino acid  
6 panel and, obviously, this all should be done in the  
7 context of having been evaluated by a geneticist, who  
8 probably could point to things much better than I can,  
9 from having done a clinical exam and the appropriate  
10 laboratory tests that match up with the abnormality.  
11 Q If that were done -- the amino acids were  
12 looked at and that was negative -- what would you think?  
13 A Then I would say you need to keep looking  
14 until -- you're looking at some of the other inborn  
15 errors of metabolism, screening panels, ureal cycle  
16 defects.  
17 Q You believe it would be possible for Zachary  
18 to be tested by a geneticist and have no positive  
19 findings. You believe that's possible?  
20 A Yes.  
21 Q Then what would your opinion be?  
22 A It means that they were not able to identify  
23 what his particular problem was and, unfortunately, that  
24 happens.  
25 Q So you can't testify more likely than not that

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1 he, in fact, does have a metabolic problem, can you?  
2 A I think his imaging studies point in that  
3 direction, but I can't, you know -- that would all have  
4 to be confirmed with the appropriate laboratory tests.  
5 Q My question to you is you can only testify as  
6 to what your opinion is based on the scan. Correct?  
7 A That's all I can testify to, period.  
8 Q You can't testify more likely than not that --  
9 Zachary does, in fact, have an inborn error of  
10 metabolism?  
11 A No, I would leave that for the appropriate  
12 specialist to talk about that.  
13 Q So you agree with my statement that you could  
14 not testify more likely than not that he, in fact, has  
15 an inborn error of metabolism?  
16 A That's correct.  
17 Q Are you familiar with Fahr's disease?  
18 A Yes.  
19 Q Do you think he has Fahr's disease?  
20 A Fahr's disease is really a wastebasket disease  
21 of exclusion -- once you've ruled everything else out,  
22 and you have calcifications in the basal ganglia, they  
23 call it Fahr's disease. So I don't use that diagnosis  
24 because I think there's always a cause, even if you  
25 can't find it. So I don't agree with that diagnosis.

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1 Q I want to talk to you for a minute about an  
2 infection. Okay. I take it you're familiar with  
3 infection in newborns?  
4 A Yes.  
5 Q If a newborn gets an infection, let's talk  
6 about a specific kind. Let's talk about group B Strep  
7 infection. Can that infection cause calcifications in  
8 the brain?  
9 A Anything that can cause necrosis of brain  
10 tissue can cause a calcification.  
11 Q The answer is yes?  
12 A The answer is yes. Group B is a particularly  
13 nasty organism and, yes, it can cause calcifications.  
14 Most typically, it's not associated with any particular  
15 pattern of calcifications like some of the other  
16 congenital infections are.  
17 Q So generally if -- generally speaking, if a  
18 child had a group B Strep infection, the child could get  
19 calcifications in the brain, and it can be in different  
20 areas of the brain?  
21 A Well, typically, a group B Strep infection  
22 wipes out the white matter. Particularly nasty to the  
23 white matter in the baby brains, and you end up with a  
24 brain in which the cortex is by and large left intact,  
25 with all the white matter shell you had out of it.

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1 There may be some little calcifications left amongst the  
2 little bits and pieces left. But it's not the pattern  
3 of injury that's present on this brain.  
4 Q You said "typically." That's not always how  
5 group B Strep infections attack, is it?  
6 A Well, there are always possibilities to have  
7 things that don't go by the book. That's true of any  
8 disease.  
9 Q The fact that this child had been pretreated  
10 before he was born -- could that have an effect on the  
11 amount of damage to the brain, or is that something  
12 outside of your area of expertise?  
13 Well, I think if this child's brain were  
14 damaged and necrotic as a result of infection, we would  
15 have seen it, first of all, on the first MRI. These  
16 changes we're seeing here happened between that MRI and  
17 this scan. So anything that happened around the time of  
18 birth -- these calcifications are not related to  
19 anything from the time of birth, period.  
20 Q You agree that if there were some calculations  
21 due to some damage by group B Strep at birth, it's  
22 possible that an MRI taken at ten months would not have  
23 seen it, but if a CT scan had been done at the same  
24 time, it would have seen it?  
25 A I think that to be highly unlikely.

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<p>1 Q It's possible?</p> <p>2 A Anything is possible.</p> <p>3 Q What do you believe has caused the slight</p> <p>4 prominence of the lateral ventricles?</p> <p>5 A I think it's very difficult to say</p> <p>6 specifically what it's due to in this case. I don't</p> <p>7 know if it's a slight loss of volume of brain tissue or</p> <p>8 if there's a slight imbalance in the production and</p> <p>9 absorption of cerebral spinal fluid. At this age it</p> <p>10 could be either one, and I couldn't tell the difference.</p> <p>11 Q Would a metabolic disease cause it?</p> <p>12 A Yes, a metabolic disorder could be responsible</p> <p>13 for interfering with the normal amount of white matter</p> <p>14 produced, which could make the ventricles appear</p> <p>15 slightly bigger.</p> <p>16 Q Could damage at birth cause it?</p> <p>17 A Yes, but then you need to look for the -- are</p> <p>18 you referring to -- tell me what you mean by "damage at</p> <p>19 birth."</p> <p>20 Q Any kind of damage at birth, be it bacterial,</p> <p>21 viral.</p> <p>22 A Well, sure, depending on if you got a viral</p> <p>23 encephalomyelitis as necrosis of brain tissue, then you</p> <p>24 can have volume loss and ventricles be bigger. Then,</p> <p>25 again, those usually occur in specific areas of</p> <p style="text-align: right;">Page 30</p>	<p>1 the right frontal lobe?</p> <p>2 A Probably an incidental little focal area of</p> <p>3 brain injury that resulted in calcification.</p> <p>4 Q So you --</p> <p>5 A Cause unknown.</p> <p>6 Q The bilateral calcification of the basal</p> <p>7 ganglia -- that's a different part of the brain than the</p> <p>8 right frontal lobe, isn't it?</p> <p>9 A Yes.</p> <p>10 Q Is it your opinion that you don't have an</p> <p>11 opinion as to what caused the calcification in the right</p> <p>12 frontal lobe?</p> <p>13 A Well, no, I think that there's damaged brain</p> <p>14 there. The brain was injured, and that's where the</p> <p>15 calcifications came from.</p> <p>16 Q What do you think injured the brain there?</p> <p>17 A I don't know specifically why that particular</p> <p>18 area ended up being injured, but we do see that</p> <p>19 sometimes in metabolic diseases. I don't know -- since</p> <p>20 I don't know the whole clinical summary in this case, I</p> <p>21 don't know if the child ever had a brain biopsy or a</p> <p>22 ventriculostomy took place. I don't think he did.</p> <p>23 Q He didn't so?</p> <p>24 A So that -- that was one of these things that</p> <p>25 happened. It's in a completely different vascular</p> <p style="text-align: right;">Page 32</p>
<p>1 distribution. I would expect on that MRI for there to</p> <p>2 be more cortical injury melting away at the gyri, which</p> <p>3 is not present here. The cortex seems to be perfectly</p> <p>4 preserved. So I don't think that's present in this</p> <p>5 case.</p> <p>6 Q I want to talk for a moment about the putamen.</p> <p>7 A Putamen.</p> <p>8 Q P-u-t-a-m-i-n?</p> <p>9 A P-u-t-a-m-e-n, that's singular. Putamin,</p> <p>10 that's plural.</p> <p>11 Q The putamen is a portion of the basal ganglia?</p> <p>12 A It's a nucleus within the base of the brain.</p> <p>13 By "nucleus" I mean it's a defined cluster of neurons.</p> <p>14 A ganglia is defined as a cluster of neurons in the</p> <p>15 peripheral nervous system. So this is a bit of a</p> <p>16 misnomer in calling it basal ganglia of the brain</p> <p>17 because the brain and the central nervous system should</p> <p>18 be a nucleus. Not a ganglion.</p> <p>19 Q You said that they were bilaterally</p> <p>20 symmetrical?</p> <p>21 A Yes.</p> <p>22 Q Were they equally symmetrical, exactly</p> <p>23 symmetrical or generally symmetrical?</p> <p>24 A Generally symmetrical.</p> <p>25 Q To what do you attribute the calcification in</p> <p style="text-align: right;">Page 31</p>	<p>1 distribution than the putamen.</p> <p>2 Q Could the calcification in the right frontal</p> <p>3 lobe be due to an infection at birth?</p> <p>4 A I don't think so because the MRI done a year</p> <p>5 later was normal, and calcium of that chunk, if it had</p> <p>6 been caused by something at birth, would have been seen</p> <p>7 on that previous MRI.</p> <p>8 Q If a brain tissue was injured at birth because</p> <p>9 of bacterial infection, does it usually take some period</p> <p>10 of time for it to react and become calcified?</p> <p>11 A Sure. It goes through the whole set and</p> <p>12 sequence of necrosis and recovery and injury. But</p> <p>13 that's measured in terms of days and weeks. Not years.</p> <p>14 Q Do you have any other opinions in this case</p> <p>15 that we haven't covered?</p> <p>16 A No. I will not testify as to standards of</p> <p>17 care, nor the survival of the child. I will testify to</p> <p>18 what I've talked about today.</p> <p>19 Q So have we covered all of the opinions that</p> <p>20 you have?</p> <p>21 A Yes, I believe so.</p> <p>22 MR. PIANIN: Give me a second just to think.</p> <p>23 (Discussion off the record.)</p> <p>24 BY MR. PIANIN:</p> <p>25 Q Have you billed defense counsel for this work</p> <p style="text-align: right;">Page 33</p>

1 already?  
 2 A I don't believe so.  
 3 Q Do you know when you first looked at this  
 4 information?  
 5 A Four or five months ago. This deposition has  
 6 been on again, off again, on again, off again.  
 7 Q Have you discussed your opinions with anybody  
 8 other than Mr. Brzezinski?  
 9 A No.  
 10 MR. PLANIN: I'm all done.  
 11 (Whereupon, at 3:00 P.M. the deposition of  
 12 MARVIN D. NELSON JR., M.D. was adjourned.)  
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1 STATE OF CALIFORNIA )  
 2 ) ss  
 3 COUNTY OF LOS ANGELES )  
 4 I, LAURA J. MELLINI, Certified Shorthand  
 5 Reporter, number 8181, for the State of California, do  
 6 hereby certify;  
 7 That prior to being examined,  
 8 MARVIN D. NELSON JR., M.D.,  
 9 the witness named in the foregoing deposition, was by me  
 10 duly sworn to testify the truth, the whole truth and  
 11 nothing but the truth;  
 12 That the testimony of the witness and all  
 13 objections made at the time of the examination were  
 14 recorded stenographically by me;  
 15 That the foregoing transcript is a true  
 16 record of the testimony and all objections made at the  
 17 time of the examination. And signature is waived.  
 18 I hereby certify that I am not interested  
 19 in the event of the action.  
 20 IN WITNESS WHEREOF, I have subscribed my  
 21 name this day of , 2000.  
 22  
 23

24 Certified Shorthand Reporter  
 25 for the State of California

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