The State of Ohio,)
) SS: Doe 307
County of Cuyahoga.)

IN THE COURT OF COMMON PLEAS

MARTHA GREEN,)
Plaintiff,) Case No.
vs.) 133,825
HILLCREST HOSPITAL,)
et al.,)
Defendants.)

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Deposition of DR. BRIAN F. McNAMEE, a Witness herein, called by the Plaintiff as if upon cross-examination under the statute, and taken before Ronald Stahl, a Notary Public within and for the State of Ohio, pursuant to the agreement of counsel and pursuant to the further stipulations of counsel herein contained, on Friday, the 21st day of April, 1989, at 4:00 o'clock p.m., at the St. John Hospital, 7911 Detroit Avenue, City of Cleveland, County of Cuyahoga and the State of Ohio.

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APPEARANCES:

On behalf of the Plaintiff:

Gaines & Stern, by:

John V. Scharon, Jr., Esq.

On behalf of Defendants James Zelch and Chagrin Valley Radiology Associates, Incorporated:

Reminger & Rerningsr, by:

Marc Groedel, Esq.

On behalf of Defendant Sidney Stone, Jr.:

Weston, Hurd, Fallon, Paisley & Howley, by:

Mary Golrick, Esq.

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PROCEEDINGS

DR. BRIAN F. McNAMEE, of lawful age, a Witness herein, called by the Plaintiff as -if upon cross-examination under the statute, having been first duly sworn, as hereinafter' certified, deposes and says as follows:

CROSS-EXAMINATION OF BRIAN F. McNAMEE

BY MR. SCHARON:

Q Would you state your full name For the record, please?

A Brian F. McNamee.

Q What is your address professionally?

A 7911 Detroit Avenue, Cleveland.

Q St. John Hospital?

A Correct.

Q Where we are taking this deposition. Have you had your deposition taken before?

A Yes, I have.

Q Many times?

A More than two.

MR. SCHARON: I am trying to get an idea of whether you understand the ground rules.

THE WITNESS: Yes, I do, I

believe that I do.

MR. SCHARON: If you don't understand a question, let me know, because I am going to assume that if you have responded to a question I have asked you, that the answer you gave is meant to be responsive to the question.

THE WITNESS: Okay.

MR. SCMARON: Fair enough?

THE WITNESS: Very good.

BY MR. SCHARON:

Q I have been furnished this afternoon with a copy of your curriculum vitae, and at the bottom of the first page you have listed three former appointments.

A Yes.

Q And two of those have to do with being a clinical instructor, one at Case Western Reserve and Cleveland Metropolitan at Highland View.

A Right,

Q When did you stop being a clinical instructor?

A Somewhere in the early '80's.

Q Would that be during the time you

were going to law school?

A Actually it was before.

Q Do you presently teach medicine?

A No, I don't.

Q Would some time in the early '80's have been the last time you taught medicine?

A Yes, aside from teaching at in-house conferences here to residents occasionally and things like that.

Q Is there a radiology residency at St. John?

A No, there is not.

Q You are affiliated with other hospitals besides St. John?

A Yes.

Q You are Director of Radiology at St. John-West Shore?

A Formerly, not presently.

Q The current appointment, then, is staff radiologist at St. John-West Shore?

A Yes.

Q Is there a radiology residency program at St. John-West Shore?

A No, there is not.

Q When did you become board certified in radiology?

A 1975, I believe.

Q You went to law school, your resume indicates, in 1985.

A Correct.

Q Did any of the hospitals you were associated with help fund your Yaw school education?

A No. That was entirely my own venture.

Q What was the reason for going to law school?

A I thought I might enjoy practicing medical-legal law.

Q What does medical-legal law mean to you?

A A lot of things, corporate medicine, representing physicians in business ventures, malpractice litigation in general, and law beyond actual medical-legal law, too, as a matter of fact, I find it kind of interesting in general.

Q Did your entrance into law school arise in any way out of a desire to better

involved in some AIDS litigation, actually recently, and that is primarily a lot of

what I have done, as well as some -- I review files for the radiology group as well.

Q Which radiology group is that?

A Reich, R-e-i-c-h, Seidelman & Janicki.

Q Is that the group that you are in?

A That is correct.

Q And when you say review files for them, what do you review?

A I review in-house procedures as to what might be advisable in terms of our standard of care, what types of litigation has been filed or have been filed with reference to any of the practicing radiologists in the group.

Q So, having your legal expertise and also being a radiologist in that group, they call upon you to review claims and/or cases that have been filed against members of the group?

A Yeah, and as I say, our in-house procedures as to whether they are reflecting a reasonable standard of care.

Q Wow much of your professional time do

you spend in the active clinical practice of radiology?

A Far and away, most of it. I don't know, 90 percent or --

Q And the other 10 percent, then, would be legal?

A Yes.

Q There was another radiology group that was mentioned, I thought, in your curriculum, Radiology Consulting Associates.

A That was simply the former name, the same group, just a different corporate name, the same group.

Q That is why I was confused.

A Yes.

Q This case, as you know, involves lumbosacral facet dislocation. Have you ever been involved in a case involving that lesion before?

A No, I don't believe I have.

ever had a case of it?

A I don't think so.

Q Have you ever had a case that was

taught to you during training, to differentiate between actual patients and, maybe, case presentations for a teaching purpose?

A I can't recall, to be honest with you. We came across most everything in our training, and I can't remember selectively whether I had that or not.

Q Do you know how Mr. Groedel came to contact you for purposes of working on this case?

A No, I don't.

Q When did you get involved in this case?

A Whenever, I think, I got a call from him, which I would have to go back and look at the correspondence, asking me to review a file. It was some months ago, I can tell you that. I don't know if it was -- or six months ago, probably, not that far back.

Q Do you have a file on this case?

A I have x-rays and I have, I think, a letter asking me to review it, if that is a file.

Q Could I see it?

A This is not it. Somewhere around here is a -- here is one -- I may not even have that letter anymore, to be honest with you. It was just a letter that said would you be interested in or would you look at this case, something like that, and this was a letter with a deposition.

Q This March 10 of '89 letter just encloses a deposition of Dr. Hartz, so there is something before that.

A Yes. I don't know where it is. I kept close track of what I would consider to be the evidence in the case, which was the x-rays. That is what I was concerned about, so I just keep those in the office.

Q Why don't we do this? Why don't you list for me everything you have seen that involves this case? We know you have the deposition.

A I have seen the x-rays, I have seen the report by Dr. Zelch on those x-rays, and I have seen Dr. Hartz' deposition, and I think that is all I have seen.

MR. GROEDEL: I think you

have seen Dr. Zelch's deposition, too.

THE WITNESS: Did I see that?

MR. GROEDEL: I think I sent it to you.

THE WITNESS: You may have. I may not have read it. I don't remember.

BY MR. SCHARON:

Q You don't recall reading it?

A I don't have a real clear recollection of having read chat.

Q Let me go through the films and see whether or not you remember seeing these films. The Suburban Community Hospital films of September, '85, which would have been some months before the trauma involved in this case.

A I have not seen those,

Q Those are plain film studies of the lumbosacral spine?

A That I have not seen.

Q Plain films and CT scans of the abdomen and low back from Hillcrest Hospital of February of '86.

A Those I have seen.

Q Plain films and CT scans, and I don't know whether there were myelograms or not, from Metro General Hospital.

A Those I have not seen..

MR. GROEDEL: There were myelograms.

BY MR. SCHARON:

of July, August of 1986?

A Yeah. I don't believe I saw any x-rays from Metro,

Q What did you understand your assignment or your task to be in this case?

A To review the x-rays and the interpretation of those x-rays and determine whether, in my opinion, the interpretation was within a reasonable standard of medical practice.

Q And when you say those x-rays, you are confining yourself and have confined your opinions to the films that we just talked about, and those are the Hillcrest films?

A That is correct.
Q Tell me about your experience as an expert in medical negligence cases. Have you done this before?
A Very, very infrequently. On occasion I have been requested under similar circumstances to review films for bath the defense and the plaintiff, as a matter of fact.
Q How many times, totally, do you think?
A Probably five, maybe.
Q Over what period of time?
A Since I have been in the practice of medicine.
Q Back to '71, '74?
A '75.
Q '75?
A Yeah.
Q And how would you break down those cases between plaintiffs and defendants who contacted you for the reviews?
A Probably about very close to even, which it can't be. Somewhere around even, actually, or maybe there were six cases, I

don't know, but it has been approximately even.

Q Have *you* ever testified on behalf of a plaintiff in a medical malpractice case?

A I was deposed on behalf of one, yes.

Q And was that the only case in which you found there to be merit in the plaintiff's position?

A I am just trying to think if there was any other that I got beyond just reading or looking at a case. I think that probably is -- yes, absalutely, the only one.

Q Okay.

A I have also become a plaintiff's expert witness in some AIDS litigation, which is currently ongoing, but it really does not deal with x-ray findings.

Q Why don't we try to -- I will confine my questions to radiology,

A Okay.

Q Then that way we won't have to stray off into the AIDS litigation that you are involved in.

A Yes.

Q So, in the five or six cases that you have done in the past, roughly half of them were plaintiffs, half of them were defendants, and in one case you actually testified, and that was on behalf of the plaintiff?

A Yes.

Q And have you not ever testified on behalf of a defendant in a malpractice case?

A Yes, I have. I believe I had, actually, a deposition taken on a case of an AC joint separation. I am trying to remember if I was deposed on that. I don't recall. I know I definitely did give an opinion for the defense on that, but I can't recall how far it went.

Q What did the plaintiff's case involve?

A That involved the case of a question of birth trauma to an infant.

Q So, are those the only two cases you have been deposed in?

A I think so.

Q Now, aside from medical negligence

cases, your practice probably also involves permanent injury litigation as a treating physician. Does it?

A No, not generally, no.

Q Has it ever?

A No, aside from, maybe, as a resident, you know, practicing.

Q Have you consulted with parties to permanent injury litigation, not medical negligence cases, either for the plaintiff or the defendant as a consultant, where there may be radiology question arising in the case?

A Well, I have been -- I don't know if this would fall in the same category. I have been requested to review one or two other files with reference to being an expert witness or at least giving an opinion.

Q Those were --

A But that is really the grounds we already covered here. I am not sure.

Q What I am getting at is I think I understand a77 of the ways in which you have been involved in medical malpractice

cases. 'tau have reviewed five or six files?

A Uh-huh.

Q You have given depositions in two of those, one an each side?

A Uh-huh.

Q And what I am asking about now is other medical-legal issues that were not malpractice related.

A Yes. That would be, I think, in the realm of AIDS litigation in the sense they weren't strictly physician malpractice. They were hospital, blood bank, things like that.

Q Have any of your prior medical-legal cases been in association with Mr. Groedel or the Reminger & Reminger firm?

A I have been requested by them to review another file for sure and, I think, a third file, but I can't recall who that was in reference to. I do recall that a while ago, doing another one.

Q How much do you get paid for your time on these cases?

A I have never gotten around to sending

him a bill, to be honest with you, which is something I always intended to get around to.

Q Are you going to send me a bill?

MR. GROEDEL: That you can be sure of.

A I would expect, but I have never been paid anything, that I can recall.

BY MR. SCHARON:

Q You have just done it as a volunteer?

A I intended to get around to sending some bills out, and I didn't do it.

(At this time a discussion was had off the record.)

BY MR. SCHARON:

Q So, from some earlier questions that I asked and answers you gave, it is my understanding that you, yourself, have not had the occasion, in your practice, to diagnose a lumbosacral facet dislocation.

A I don't recall that I have.

Q Would you remember it if you had?

A Probably, because it would be a fairly unusual case.

Q Sure. Do you know if you have had a

patient who had a lumbosacral Facet dislocation, that *you* didn't diagnose?

A I am not aware of this, hopefully.

Q Do you specialize in any particular type of radiology?

A No. I do what might be regarded as some subspecialty work in the sense that I do interventional radiology, which some persons consider that to be sort of a subspecialty, but beyond that I do the general practice *af* radiology, which includes neuroradiology, things like that.

Q How much of your time do you spend in interpretation of CT scans?

A I would say probably one-third, something like that.

Q Can yau give me any estimate of how many CT scans you reviewed in any particular time period you choose?

A I would say that over the last five years I have probably reviewed anywhere from five to ten CT scans a working day.

Q Five to ten a day?

A Yes.

Q Five days a week?

A Yes.
Q For five years?
A Yeah.
Q How many of those would be low back CT's?
A A lot.
Q Percentage.
A I would say at least 20 percent, maybe more, 20 to 30 percent.
Q Do you know if you are listed anywhere as being available to review medical malpractice situations?
A I am not.
Q You are not?
A I am not listed, to my knowledge, unless I am informally listed.
Q You haven't listed yourself?
A No, I have not.
Q You don't have a referral service that sends you cases to review?
A No.
Q Tell me what your process was that you used in working on this Martha Green case? What did you receive, in what order and how did you follow through with it?

A To the best of my recollection, I received a letter that asked me ta review the case. I either at that time or shortly thereafter received the x-rays, and then I looked at thase and gave an opinion of those x-rays.

I believe at the time that I received the x-rays, I also had a copy of Dr. Zelch's opinion, but I can't recall that far absolute certainty, whether I had it then or it was sent to me later.

Q Dr. Zelch's opinion?

A Yes, I can't recall when I actually saw chat, to be honest with you.

Q You mean hi5 interpretations?

A Yes, his interpretations.

Q When you were originally contacted were you told what the case was about?

A No, I wasn't. I don't even know if I knew it was a trauma case at that time,

Q So, all you knew is you were supposed to look at some films and read them?

A Right. There may have been something. I can't say that for sure. The letter may have said something like

please review these x-rays, and it may have had a brief history, like this patient was involved in an accident or an automobile accident. I don't hanestly recall. I think I probably, for some reason, was aware that there was trauma involved, but I can't say that for sure-

Q Well, what else da you know about the case other than what you have seen an the film and in Dr. Hartz' deposition, and maybe in Dr. Zelch's -- not Dr. Zelch's, but the interpretations of Dr. Zelch.

A Well, I understand that the case is involving trauma. There was an automobile accident. The patient has suffered some sort of damage as a result of the accident, and that there were findings described by another expert, that were called an acute spo'ndylolysis -- acute spondylolisthesis. excuse me, and an attempt was made, apparently, to surgically repair the injury resulting from the accident, and that attempt was not entirely successful,

Q Do you have an understanding about

when the surgery was done?

A To my knowledge, it was done somewhere in the range of six months after the original injury.

Q Do you have an understanding of the Millcrest Hospital?

A I have sort of a general idea in the sense that she was apparently, obviously, having some back pain. Apparently there was some question of abdominal injuries as well, and there may or may not have been some neurologic findings at that time, but I am not clear as to whether there were or weren't.

I have not seen any official report on it, so I don't know.

Q That clinical information isn't

anything you needed to reach your conclusions in the case, is that fair?

A That may be -- I would say that any amount of information that you have can sometimes help you in terms of focusing your attention to one area or another like, you know, certainly there is actually a very big difference about that amongst radiologist, as to whether or not clinical findings help you and should be used to arrive at a diagnosis or, perhaps, mislead you and cause you to lose your objectivity in evaluating the findings.

Q I guess what I am getting at is without clinical information do you have any understanding of why CT scans, for instance, were ordered?

A In the absence of' any clinical information, would I have known?

Q Yes.

A I don't think that I would have known, in the absence of clinical information, why they were ordered.

Q You would have some clinical information?

A Yes. You mean under ordinary circumstances, would you have some clinical information when you reviewed films for interpretation? Is that the question?

Q That is one question.

A Under ordinary circumstances you should have some.

Q And under the circumstances where you are reviewing films only for purposes of testify-ing as an expert, as in this case, what about the need for clinical information?

A If I understand your question, you can arrive at an opinion in the absence of clinical information.

Q Is it fair for me to understand that that is essentially what you did in this case, though?

A Not quite. I think I did have some history, that there was evidence of trauma, and I can't recall how precise the history was, but I didn't have much more than that.

Q Are you in a position to either agree

or disagree that Martha Green did have or didn't have a lumbosacral facet dislocation bilateral? Do you know whether she actually had that?

A It is my understanding that that is what was found at surgery.

Q Where did that come from?

A I asked one of the attorneys involved in the case, if there were any findings.

Q So, you didn't actually see any records of it, that is just an assumption?

A After I requested some information, I got a look at part of an operative note, I believe, that indicated what the operative findings were.

Q And did they show the dislocation?

A Yes. I believe the operative finding was something to the effect that there was a complete dislocation of the facet joint: at L-5, S-1, however, it did not say that there was an anterior locked dislocation of the facet joint.

Q What does that mean?

A I am not sure.

Q Is that possible?

A I kind of wondered about that myself, quite honestly, I mean in a theoretical sense you could dislocate anything and net have it over and locked. It may just simply be that that choice of wording was not quite as precise as it might have been, or maybe they were saying somehow that the facet joint was disrupted, which would be --

Q But not locked?

A Dislocated, but not actually reversed and locked.

Q Well, do you know what they were trying to de during that surgery?

A They were trying to reduce that dislocation.

Q And do you know from reading the records that you saw, whether they were able to?

A They were not successful.

Q So, they did a fusion in situ?

A That is correct.

(At this time a discussion was had off the record.)

BY MR. SCHARON:

Q You received a letter asking you to look at some films. There may have been some clinical information or some historical information in the letter.

A Yes.

Q You gat the films, read the films and interpreted them?

A Correct,

Q And at that point did you write a report or anything?

A Yes, I did.

Q You wrote a report. Is this the report that we have been given, dated January 18, 1989?

A Without reading it in detail, this certainly looks like the report,

Q Did you only write the one report?

A Yes, I did.

Q Then did you do anything else? Was it after that, that you got some records about the operation that was done at Metro?

A Yes.

Q And was it after that, after reading the films, that you got the deposition of

Dr. Hartz and the interpretations of the films?

A Correct.

Q By Dr. Zelch?

A I can't recall when I got Zelch's interpretations, but it was after that, that I received Dr. Hartz' deposition.

MR. GROEDEL: Just for the record, I think Dr. McNamee's report makes reference to Dr. Zelch's interpretation, or at least wards to that effect.

THE WITNESS: Yes.

MR. GROEDEL: So, I would assume you received this interpretation prior to the report?

THE WITNESS: Well, certainly I received it prior to me making my report, that is for sure, but as to whether or not I got it before I actually -- in other words, I would have reviewed the x-rays sometime thereafter.

I would have sat down and actually written my report, I would not necessarily have done it precisely at the same time.

BY MR. SCHARON:

Q Do you have any further work planned?

A I don't think I understand.

Q Do you expect to do anything else in respect to this case other than testify? I mean are you planning on revfewing any more materials or any more films?

A No.

Q Have you reviewed any medical literature?

A I have not.

Q Are you planning to?

A You know, as the circumstances indicate, if it seems like it would be indicated, I will.

Q So far nabody has asked you to?

A No.

Q If they ask, you will do it?

A Yes, or if I feel it is essential to the case for some reason.

Q If I can summarize your report in a word, what it says is that you agreed with Dr. Zelch's interpretations of the films that were done at Hillcrest Hospital?

A I agree with his conclusion that he

does not know for certain whether it was an acute or chronic spondylolisthesis, and specifically I think that my opinion was that hfs interpretations were within the standard of care that I would expect from a practicing radiologist interpreting most films.

Q Do you think that his interpretations, as reported, made it clear that there was an uncertainty about whether or not spondylolisthesis was long-standing or acute?

MR. GROEDEL: Objection. Wait. Why don't we have him look at the interpretations so he won't misunderstand?

MR. SCHARON: Sure. Do you have them out?

MR. GROEDEL: I have it. I am not sure if that is the exact one, but it is right in that section. John, I assume you are referrl'ng to the CT scan.

MR. SCHARON: Yes.

MR. GROEDEL: You might as well turn to that one,

BY MR. SCHARON:

Q I am not concerned with his interpretation of the chest films or the femur films or leg films. I am interested in the low back films and the plain and CT scans.

A Well, to start with, his interpretation of the lumbar spine films on 2-15, he specifically says that he cannot determine whether this is an acute change or represents a long-standing distortion, and he suggests a CT of the lumbar spine, but I think that is absolutely accurate. I couldn't tell from looking at the plain films how long it had been there.

Then there is a CT scan of the abdomen and pelvis, and he basically comes to the conclusian that he sees no evidence of peritoneal fluid or hemorrhage, and that the liver and spleen were normal, and I agree with those two findings.

Q Okay, and then there was the CT of the lumbar spine dated 2-16.

A Yes.

Q It may not be 2-16. Hold on. I am

sorry. Yes, it is dated 2-16. I think that is on the sheet that says CT scan after intravenous contrast.

A Here he describes a marked spondylolisthesis and nw hemorrhage into the fecal sac. He says, "I suspect the spondylolisthesis is long-standing," and that, taken in conjunction with his previous report of the lumbar spine, where he says he doesn't know whether it is acute or chronic, indicates to me that he isn't sure whether it is acute or chronic

Q And that is, in your opinion, the right message to send to the attending physician, the orthopedist?

MR. GROEOEL: Objection. Go ahead. Objection to right message.

A I don't believe, in looking at those films, that I would have been certain whether or not it was acute or chronic dislocation.

Q So that in your opinion, looking at all those films in conjunction, there is the possibility that that is an acute spondylolisthesis?

A Yes.

Q And for a radiologist to practice in accordance with acceptable standards, that policy has to be communicated to the orthopedist, would you agree?

A I would say I agree, and *my* answer is that he did communicate that to the orthopedist.

Q That is the next question. You feel that the interpretations that are found in this hospital record, and we have referred to them by date, do adequately convey that message?

A I believe they do,

Q Do *you* know Dr. Zelch?

A Yes, I do.

Q How do you know him, doctor?

A He was -- he trained at the Cleveland Clinic in radiology.

Q As did you?

A *Yes*, as did 1. He was in a different class, if you will, but he was there at least contemporaneously.

Q And is that when you first met him?

A That is correct.

Q Have you kept in touch with him since?

A Not really. On rare occasions I will bump into him but, no, I haven't-

Q Do you socialize with him?

A No, I don't.

Q Do you consider him to be a friend?

A Well, I guess, a friendly acquaintance.

Q A colleague?

A A colleague.

Q Have you ever been involved in any other cases with him?

A No.

Q Was he ahead of you or behind you at the Clinic?

A He was ahead of me.

Q Do you remember what the nature of his association with the Clinic was? Was he on the staff or was he a special fellow or what?

A He was a resident at that time, then he went on to be a member of the staff. I can't recall if -- he probably would have been a member of the staff at the time

that I was still a resident,

Q Did he have any responsibility for teaching you?

A Maybe in a very loose sense, in the sense that he would have, perhaps, just joined the staff as I was finishing my residency, so that would be about it.

Q The way the Clinic works, do the staff radiologists have responsibility for training the residents?

A They do, but I was far enough along at that time, that I was pretty much on my own, as a matter of fact, I was actually Teaching the residents behind me at that time.

Q What time period would this have been?

A This would have been -- I was there from '72 to -- actually '71 to '75.

Q In your report you make the statement that -- I have to find it here. This is on page two, and it is the last sentence in that first paragraph. It says, "The appearance of the spondylolisthesis is most compatible with a chronic

spondylolisthesis on a statistical basis and due to its severity." Can you explain that statement to me'? What statistical basis are we talking about and what is it about its severity that suggests it is long-standing?

A Most spondylolisthesis that we see -- it is not that unusual to see spondylolisthesis that are ordinarily chronic. They have been there for a long period of time, and the extent to which this was approximately a Grade II, give or take a little bit, would indicate that it has been there for some time, generally, because it has had time to slide forward during time.

In other wards, what generally will happen is that the pars interarticularis is disrupted, and once that bridge is cracked, then the vertebral bodies and portions of the elements are free to begin to slide from the normal position, and to the extent that they have slid very far from their normal position you would sort of assume that they have

had time to do that.

Q In that situation where there is a defect in the pars, the facets stay in the normal alignment, don't they?

A They do generally, yes.

Q What would you expect the extent of the spondylolisthesis to be, or the grade of the spondylolisthesis to be, with an acute dislocation of the lumbosacral facet joints?

A I don't know that there is a hard and fast rule that I could give you, but in general I wouldn't expect that it would be that severe, as severe as I saw it in this case.

Q You mean as severe as a Grade II?

A Yes.

Q The spondylolisthesis that was exhibited here was a Grade I to II?

A As I recall, it looked like a Grade II to III is my recollection. That was my opinion of the lumbar spine.

Q How do you measure the grades, you personally? Then we will talk about how other people do it, because I have heard

of a way of measuring it with three degrees, and I have also heard of a way of measuring it with four degrees.

A I measured it with four degrees each.

Q Each degree representing --

A A quarter of the vertebral body.

Q And one being less slippage than four?

A Correct.

Q Your reading of Martha Green's films was that she had a close to three degree spondylolisthesis?

A Between a two and a three.

Q Between a two and three, so more than half way?

A Probably a little more-

Q But less than three-quarters of the way?

A Yes.

Q Would the degree of spondylolisthesis, if it were due to an acute dislocation, depend on the significance of the trauma?

A If I understand your question, you are saying would a greater

spondylolisthesis more likely be due to greater trauma?

Q Yes.

A I would say yes.

Q Statistically I understand that you see more chronic spondylolisthesis than you do acute spondylolisthesis.

A Yes.

Q And is it that simple statistic that leads you to say that the appearance of the spondylolisthesis in Martha Green's case is most compatible with a chronic spondylolisthesis?

A That and the fact that -- yes. It was, you know, two to three spondylolisthesis, and generally these -- the ones that I see are chronic.

Q How many of the spondylolisthesis patients do you see immediately post-trauma?

A That would be hard to say. I mean I might not even know it always, to be honest with you. I might get a history of low back pain and I wouldn't know whether it was acute low back pain or chronic low

back pain or what, so that would be a difficult thing to answer. I mean we see them typically coming through the emergency room, I can tell you that, and we will also see some of them referred from doctor's uffices.

Q Are there associated radiologic findings that indicate that a spondylolisthesis is more likely to be acute than chronic?

A I am not sure what you would be getting at.

Q I am wondering whether there is anything else that usually shows up on films of someone's lumbosacral spine when they have acute spondylolisthesis?

A Not necessarily. I think *you* could have acute spondylolisthesis without a lot of other findings.

Q I understand that that is a possibility, but I am looking for a statistical incidence of acute spondylolisthesis and no associated other radiologic findings. Do you know?

A Perhaps if I would see some evidence

of fractures in a lumbar spine, that would be, you know, associated fractures, that would be more of an indication that it were acute.

Q And there were no fractures in any of the films from Willcrest Hospital, that you saw?

A I was not convinced there were.

Q Did you see some that were suggestive of fractures?

A I didn't think so.

Q No process fractures?

A I didn't think so.

Q Did you see a pars interarticularis defect in any of the films at Hillcrest?

A Yes, but that was -- wait a minute. I saw the spondylolisthesis, yes, and I -- I don't know if I saw oblique views of the lumbar spine to actually see the pars or not. I can't remember if I did see the pars precisely on that.

Q Well, do you feel that all of the requisite views were done at Hillcrest Hospital to show whether or not this was a chronic or acute spondylolisthesis?

MR. GROEDEL: Within the tests that were ordered themselves?

MR. SCHARQN: Right. Well, within the ones he saw.

BY MR. SCHARON:

Q I presume you saw them all.

A Yeah, I did see them all. I can't recall the oblique views. If oblique views were done, those would help in terms of demonstrating the pars interarticularis. On plain films I am talking about.

Q Well, let me ask you this: Is it important for the radiologist to reach a conclusion about whether a spondylolisthesis is acute or long-standing in a patient like Martha Green?

A It can be, yes.

Q Can it change the way the problem is treated?

A Yes, it can.

Q Do *you* have an understanding *of* whether an acute spondylolisthesis may be a surgical case?

A Yes, it can be, as it was in this

case.

Q And that is because the spine may be unstable?

A Correct.

Q And in need of reduction of the dislocation and fusion, perhaps?

A Correct.

Q If it is a long-standing spondylolisthesis, on the other hand, it may be a situation that does not require any surgical treatment?

A Or it may. I mean there may be neurologic changes very similar to what there would be in an acute situation, that have now progressed to the point where it does need surgical intervention and very quickly:

Q So, a situation where the spondylolisthesis will be long-standing --

A For whatever reason, right, that the spondylolisthesis has now deteriorated where they now require relatively immediate intervention.

Q Do you have an opinion or do you know whether an acute spondylolisthesis due to

facet dislocation requires reduction and/or fusion?

MR. GROEDEL: Objection.

BY MR. SCHARON:

Q Do you have any opinion?

A I don't think that it is -- I don't believe that it is within *my* area of expertise.

Q What I am trying to find out is whether you expect to offer any opinions on that particular issue.

A I don't think so.

Q Are you aware of any studies or literature, or do you have any experience that would indicate either the likelihood or unlikelihood of having successful reduction in fusion in Mrs. Green's case if surgery had been done at an earlier point in time?

A I have not reviewed the literature with regard to that.

Q Nor do you have anything in your own experience, that would help you reach a conclusion on that?

A I don't believe that I do.

Q So, again, that is not something you would expect to render an opinion about?

A No.

Q If you have a long-standing spondylolisthesis, statistically are you more likely to see disc space narrowing in that patient?

A I don't know if I can say that categorically. I would answer that question this way, depending upon the patient's weight, their level of activity, what they do for a living, you would either be more or less likely to see disc space narrowing.

In other words, what I am getting at is if someone were relatively athletic and they were aut playing, say, tennis, doing things that were exposing the spine to a lot of movement, those types of persons will wind up, much more likely, with a narrowing of the disc.

Someone who is relatively sedentary, who doesn't do a lot, could have spondylolisthesis with very much less, if any, narrowing of the disc space.

Q You mentioned weight, also. How would that impact? The heavier the person the more --

A It would wear down the disc, yes.

Q We talked over each other. Let's see if I understand you. They heavier the person the mare likely it would be that you would have some disc space narrowing if you had a chronic spondylolisthesis?

A Yes.

Q The activity level and weight, would that also have an effect on whether you are more likely to have either spur formation or lipping on the vertebra, on the vertebral bodies?

A Yes.

Q So, again, the more activity the person does, the heavier the person, the more likely it would be that you would have those degenerative changes?

Yes.

Q I asked you before about pars defects. Is it true that if you have a defect in the pars, that that is indicative of the likelihood that it is a

long-standing spondylolisthesis?

A No. That doesn't necessarily tell you. It could have been acutely disrupted or --

Q The typical, say the garden variety spondylolisthesis, is that usually associated with Facets that are in a normal alignment, but the pars is disrupted?

A That is correct.

Q I asked you before about Martha Green's films, and whether there was a disruption of the pars, and I mean this isn't a trick question, but let's just see the films. We don't have to be just dependant upon your memory, but I want you to look at the films, any of them and all of them, and tell me whether or not the pars was disrupted on her films.

What films would you want to look at to tell that?

A Well, let me start with the plain films of the lumbar spine.

Q Okay. It is marked Defendants' Exhibit --

A 8-1.

Q Those are all the plain films from Hillcrest. They are all labeled in series, 8-1, 2, 3 and 4.

A All right. There is some more lumbar spine films from Hillcrest, I am sure, that shows me the thoracic spine.

Q Do you have some more films from Hillcrest?

MR. GROEDEL: Why don't you take a look and see what you have there? Try and not mix yourself up.

(At this time a discussion was had off the record.)

THE WITNESS: Now, what: is the question?

BY MR. SCHARON:

Q Do you think you saw any other low back films from Hillcrest Hospital, plain films?

A I don't think so.

Q So, we have six?

A Right.

Q Number 8-1 through 6?

A Yeah.

Q Do you see any disruption of the pars interarticularis on any of those films?

A I don't, but they are not necessarily the best, you know, for demonstrating.

Q There aren't any obliques in that set?

A Right, but they may not have been able to get obliques, too, difficulty positioning the patient. I don't know why.

Q If you were going to try to determine whether the spondylolisthesis were chronic or long-standing, would you want to do obliques?

A It could be helpful.

Q The film on the right side there, that is Defendants' Exhibit B what?

A B-5.

Q That shows the spondylolisthesis, the slippage of L-5 over S-1?

A Yes, it does.

Q And to what degree do you read on that film?

A I would read this as a Grade II.

Q You are saying that it appears to you

that the anterior aspect of S-1 is through half of the vertebral body of L-5?

A Approximately.

Q Can you tell from that whether the facet joints are in normal location?

A I cannot clearly, no.

Q Can you tell that on any of those films?

A I don't believe that I can,

Q Do you agree that the appropriate way, in accordance with acceptable standards of radiology, to determine whether that spondylolisthesis is chronic or acute, is to follow-up with a CT scan?

A I don't think that I agree with that statement.

Q What ought to be done?

A I think --

Q To make that determination?

A I think the CT scan, depending upon what is being found clinically on physical exam of the patient, would probably be indicated, because there may be add-itianal information, there may be other damage to the spine, that is not clearly apparent on

these a/p and lateral views, but it is still possible that it might definitively determine the question as to whether or not it is acute or chronic.

Q So, what else would you do besides the CT scan, or what else ought to be done to make that determination?

A I think I would examine the patient.

Q You physically?

A No. I mean I would suggest that the patient be examined for neurologic deficits, things like that, as to whether or not, you know, some further intervention might be required.

Q You wouldn't, as a radiologist, suggest any other radiologic studies?

A I would have suggested probably a CT of the lumbar spine, is what I would have suggested.

Q But nothing more than that?

A I don't believe so, in the absence of any further information.

Q If you got back the information that the patient had numbness and tingling in the feet, and that on at least one

examination there was some reflex absences in the ankle, would that mean enough to you, as a radiologist, to suggest any further radiologic studies?

A I would think a CT would be the appropriate study.

Q You wouldn't suggest, for instance, a 1atera1 tomogram?

A I would prefer to get a CT. I think that would be more helpful than tomograms.

Q Is it true or not that a lateral tomogram would have shown the facet dislocation in Mrs. Green?

A It might have. I am really not being evasive, but tomograms are not always that clear and easy to read, they really aren't. That is why CT, I think, is so helpful. If they weren't that diagnostic routinely, I don't think a modality like CT would have ever got to be such a popular method of study.

Q Were you aware in this case that the emergency room diagnosis was dislocation lumbosacral?

A No. I did not know that.

Q As a radiologist reviewing films ordered in the emergency room, would you, as a matter of practice, know what the emergency room diagnosis was?

A No.

Q Would you just assume that whatever x-rays that you were reviewing had been ordered as a result: of what: was done in the emergency room?

A I don't know how to answer that question specifically. What I would be doing routinely in reviewing emergency room films is I would look at the clinical information, whatever information there was, and very frequently in a case like this it would be something like trauma or MVA. That would be a typical one, and I would not necessarily have actually a diagnosis by any means. I would be surprised if I had a diagnosis, because ordinarily they would be getting the x-rays to help them arrive at a diagnosis.

Q Do you know what the timing of Dr. Zelch's review of the x-rays taken in the emergency room was?

A I do not know.
Q If you assume that Dr. Zelch had seen the plain films of the lumbar spine, not on the evening of the 14th, but when he came in to routinely review films the next day --
A Which is a possibility.
Q Just assume that to be true, and assume also that this diagnosis of dislocation lumbosacral was on the emergency room chart at the time. Would that change any of your opinions in the case about whether the correct methodology of diagnosis was followed, and whether the interpretations were correct?
A It really wouldn't, and I will tell you why. What is on the emergency room chart is not is what is communicated to the x-ray department generally, certainly not necessarily. They have their own chart. They send over an x-ray requisition, and on that requisition is what would be communicated ordinarily to the radiologist, so that regardless of whether he reads those immediately upon

their having been obtained, or the next day, the high likelihood, unless you can tell me something else happened, is that he read those films only with reference to whatever bit of clinical information was on the x-ray requisition.

Unless he specifically talked to the emergency room doctor or some other things occurred, that is the way it would happen here, and that is the way it is in any department of x-ray that I have worked in.

Q Because you are answering that way, you are assuming that he did not know that the diagnosis was dislocation lumbosacral?

A I guess I am saying I would assume he would not have seen the emergency room chart.

Q Let's assume it the other way and see what you have to say about it. Assume that he did see it at the time of his reading.

A That he was aware that the clinical diagnosis by the emergency room was dislocation?

A Right.

MR. GROEDEL: Objection for the record.

BY MR. SCHARON:

Q Wave you seen this?

A No, I have not.

Q This emergency room record?

A No, I haven't. Is that x-ray?

Q It is x-r.

A Equals lumbosacral dislocation, and then laceration sutures by Dr. someone,

Q Heller.

A Heller, maybe.

Q Also over here it looks like the initial something "K." It looks like it says, "K" as the physician's signature.

A Yes.

Q Question fracture L-4 on lateral view.

That is correct, and I am not sure what line that goes with. I think there is like a line coming up from Dr. Heller to that, which might indicate what Dr. Heller felt.

Q Then in the diagnosis boxes it says

dislocation lumbosacral.

A That is absolutely right. I haven't seen that.

Q Well, assume that Dr. Zelch knew that that was in this emergency room chart when he came in the next day to routinely view emergency room films from the night before, okay?

A Yes.

Q Do you think that would have changed anything in this case?

MR. GROEDEL: Objection.

BY MR. SCHARON:

Q That you have said so far?

MR. GROEDEL: Objection.

BY MR. SCHARON:

Q Or that you said in your report?

A I don't know if it would have changed his -- the objective interpretation of the x-ray films, because I think the objective findings on the x-ray films are relatively indeterminate, sa faced with relatively indeterminate objective findings where you are not sure that it is acute or chronic, and someone is telling you, by the exam,

that it is an acute dislocation, you might say you should go with the physical exam, because I am not really sure.

Q Looking at those plain films, the B series, 1 through 6 -- are there six?

MR. GROEDEL: He took one down.

BY MR. SCHARON:

Q Oh, you have one down, I am sorry.

A Yes. Here is three.

Q Looking at that B series, 1 through 6, do *you* see any degenerative changes in Martha Green's lumbosacral spine?

A Slight.

Q What do *you* see?

A There is some eburnation of the end plates at L-5, 3 and 2.

Q What do you mean by eburnation?

A A little bit of increased density, sclerosis, and there is a mild degree on the superior, anterior and end plates of L-5.

Q That is at the L-5, L-4 junction?

A Correct, which would be the superior one.

Q And nothing at L-5, S-1 other than the spondylolisthesis?

A Well, there is probably some narrowing of L-5, S-1, not a marked degree, but there is some narrow-ing. It has lost its wedged shape contour.

Q What has?

A The L-5, S-1 intervertebral d-isk.

Q Can you tell that is because of the shifting or --

A It is kind of hard to say, but it does not have a normal width to it.

Q That is passibly due to the spondylolisthesis?

A It may be but, once again, as I say, I wouldn't be sure whether it was due to an old or recent condition.

Q You said that the way that you read these films, you cannot be sure whether the spondylolisthesis was acute or long-standing, and so if you had a physician, who clinically felt that it was a dislocation of the lumbosacral joint, as a radiologist it would be -- I want to make sure I understand what you said.

A5 a radiologist you said we will go with the clinical feeling, in other words, that might tip the scale in favor of it being acute?

A Yes. In the normal circumstances what would happen is that that would probably be some sort of a verbal communication and, you know, he would ask you about reports, in other words, based on the objective findings of the film, what you think, and after that, as sort of an informal type of an opinion, you would say to him typically, well, you know, I can't really tell you, which is what I said in my report, so if it looks to you like there is something like that going on, you might be better advised to --

Q To treat it that way?

A Treat it with what I see fit as the physical findings.

Q The plain films and the CT scans of Martha Green certainly don't rule out an acute dislocation of the lumbosacral spine?

A No, they do not.

Q If the orthopedist in this case, who ordered the studies, felt that the radiologist was communicating to him that this spondylolisthesis was probably long-standing and not acute, would you disagree or would you think that the radiologist did not communicate the right message to the orthopedist?

MR. GROEDEL: Objection. Go ahead and answer.

A That is sort of a compound question you asked me. In my reading of the radiologist's interpretation, my conclusion would be, if I were reading that, that the radiologist doesn't know whether it is acute or chronic, At one time he says he thinks it could be either/or. The other time he suspects that it may be chronic, but that is far from being a definitive opinion, because if he suspects that it may be, he suspects that it also may not be.

Q Actually he said "I suspect the spondylolisthesis is long-standing,"

A Yes.

Q He didn't say maybe.

A Yeah, that is correct. I agree. I am sorry, but in any event his choice of words, I suspect is long-standing, to me indicates that it may be long-standing, and he is leaning, maybe, a little more that way on the basis of a CT scan, than the other way, but it is a fine call.

The word suspect is not a very strong word in terms of communicating what he is sure of to treat the patient.

Q You would expect in that situation that there would be verbal communication in addition to this typewritten report?

A Yes.

Q Between the radiologist and the orthopedist?

A If the orthopedist were unsure as to what the level of certainty was in Dr. Zelch's mind, I would expect that he would have sought: aut Dr. Zelch and asked him, is there anything more here? I think what he would typically do is say can you be any more specific?

Q The orthopedist said he was present

in the CT scanning room when the scanning was done and the films were being interpreted.

A That I can't speak to, I don't know what all occurred there.

Q Do I understand correctly -- before I leave this point, I want to make sure I have got the right idea, If Dr. Zelch communicated to the orthopedist, that he felt it was more likely that this problem was long-standing than acute, that that would be wrong according to your reading of the films?

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

A That is not what I said, and let me go on to say that I think from the orthopedist's standpoint in a treatment perspective, that his choice of saying I suspect the spondylolisthesis *is* long-standing is not of sufficient certitude for the orthopedist to simply take that as the end disposition of the case with respect to treatment.

I think it necessarily states a

great deal of uncertainty, although you can say that maybe what it means is that it is a little more probable than not probable, but that is as much as it means, and that certainly is not what I would consider to be definitive with respect to treatment, particularly taking it in conjunction with the previous uncertainties with respect to the x-ray findings on the first set of plain films.

The radiologist says that he cannot determine whether it is acute or long-standing, and then on the second lumbar spine he says -- he goes the other way and he says that the possibility of an acute fracture of the posterior support should be considered, so he doesn't really -- he is waffling back and forth, and then the third time he comes down and says he suspects one of the prior two options.

In short, I think the x-ray interpretations and findings were just replete with uncertainty.

Q Did you see in Dr. Hartz' deposition, that he looked at Exhibit 8-5 and felt

there was a possibility only of a free bone fragment on that film?

A I do recall seeing that in his deposition,

Q And can you identify what he was talking about on that film?

A I don't think I can-

Q And you see no possibility of free bone fragment on that film, B-5?

A I don't see anything that I would diagnose as a free bone fragment here.

Q Well, not diagnose. I am talking about is there something that is suggestive of the possibility that there is one? It doesn't have to be diagnostic.

MR. GROEDEL: Objection to the question.

A I really don't think that I do.

BY MR. SCHARON:

Q Looking at B-5 do you see any abnormality in the position of the L-5, S-I facet joints?

A I can't determine that.

MR. SCHARON: I am finished with the plain films from the

14th.

BY MR. SCHARON:

Q This is CT scan and this is C series. Let me see if I have any others in that series, C-1 and C-2, I think, is a17 I have. That is an abdominal CT.

A That is correct.

(At this time a short recess was had.)

BY MR. SCHARON:

Q CT slice No. 18, can you find that one?

A Yes.

Q I am looking at your report, and you stated in this that there is no abnormal fluid collection identified. Are there any abnormal fluid collections?

A This is --

Q The right CT scan?

A No. That is the report of the CT of

of abnormal mass, and there is no focal defects in the liver, and so on, and no evidence of free intraperitoneal fluid.

Q Does that CT scan show acute soft tissue abnormality behind the spinous process?

A There is soft tissue density which, I think, is abnormal, but I don't know if it is acute or chronic. I don't know what it represents.

Q Do you have the information that this is a trauma from a motor vehicle accident?

A Uh-huh.

Q Is that an indication that it could be hematoma?

A It certainly could be.

Q And is that present in slide 17, 18, 19, 20 and 21?

A Yes, but as to whether or not -- having been asked, as I was, to give my opinion as to whether or not the standard of care is breached by not mentioning that in a CT scan of the abdomen, I don't believe that it is, because when an abdominal CT scan is obtained, what persons are looking for is abdominal pathology, not pathology in the posterior soft tissues of the low back.

Q So, if you are told I want a CT scan of the abdomen, because I am worried about organ damage, and *you* see hematoma in the back, or you see a soft tissue abnormality in the back, then it is okay not to report it?

A I just don't think that it would have been noticed by a radiologist.

Q And that is up to standard?

A And I think that is honestly within the standard of care.

Q On C-2 in slice No. 7 are the facet joints at L-5 and S-1 portrayed in that slice?

A I really don't know. I can't tell.

Q I am finished with that CT. The other one is the D series, 1 through 4. Would you agree in looking at D-1, that the size of the abnormality in the soft tissues between the spinous process is larger than it was on the previous CT?

A I am not convinced. These are not entirely equivalent cuts. One is more magnified than the other one. It is a little more larger image, and I am not

convinced that it is any larger.

Q The D series, at any rate, *is* a low back CT, lumbosacral spine CT series?

A No, not entirely. The D series is partially an abdominal series here, or D-1 *is* abdominal, and D-2 is for the lumbar spine, and D-3 is part an abdominal series, **and** D-4 is reconstructions of the lumbar series.

Q From looking at the interpretation is it clear that both an abdominal and lumbar spine CT was ordered for that particular time? They are both recorded, for instance, an the same interpretation sheet.

A I guess that is the way it occurred.

Q So, knowing that the attending physician wanted a lumbosacral spine CT done, do you think it was in accordance with acceptable standards to not report the presence of the hematoma behind the spinous processes, that showed up, albeit on the abdominal portion of the study?

A I think it was. I don't know that it would have been reported routinely, I

really don't.

Q On D-2, slice 7 right in the center', are the facets of L-5, S-1 shown on that: slice?

A I th-ink they are.

Q Are they, in your interpretation, in normal position?

A I am not sura. I really am not sure.

Q Have you ever seen this study *by* Manaster & Osborne, called "CT Patterns of Facet Fracture Dislocations in the Thoraco-Lumbar Region"?

A I don't recall if I seen this or not-

Q If you will look at figure 2 and the films that correspond with figure 2 in the study -- do you have that?

A Yes.

MR. GROEDEL: Excuse me. What is the published date of that article, just: for the record?

MR. SCHARON: It depends on what publication you are talking about. It is either November of 1986 in American Journal of Neuroradiology, or February of '87 in the American Journal of Radiology.

MR. GROEDEL: Thanks.

BY MR. SCHARON:

Q Comparing figure 2 and the picture of the CT in the study, to slice No. 7, doesn't it appear that those facets are abnormally positioned, that they have been reversed?

MR. GROEDEL: Are you asking that question based upon his review of that article at the same time?

MR. SCHARON: Right.

MR. GROEDEL: Okay. Well, I will object, but go ahead.

A It is similar, but not exactly the same. That is all I can tell you. What they are calling the inferior facet being up and over the superior facet has a more oblique, I guess you would say, orientation of what would be the facet surface, than this one does. This is much 'less oblique.

Q Aren't they saying here in the normal alignment, which is what you expect to see, is this angled -- let's call that the angled surface, I think you said, oblique.

A Yes.

Q That oblique surface paralleling the oblique surface of the --

A Of the other one.

Q Of the other facet?

A Yes, you know, here they are.

Q Well, on the left side.

A And an the right side they are paralleling, and on the other side actually they are --

Q You are talking now about tho surface that runs horimontally?

A Right.

Q Not the surface that runs obliquely. In this study doesn't it also show that the surface that runs horizontally is parallel, but that the surface that runs obliquely is opposite?

A It shows that the interface between these two surfaces is essentially horizontal to the eye here, which it is approximately on the left side on our scan, but on the right side it is not really, it is somewhat oblique.

Q Let me ask you this, having seen this

study and that figure, do you still think that slice No. 7 shows normally aligned lumbosacral facet joints?

MR. GROEDEL: Objection. Go ahead.

A I am not sure that I can tell you. It is suggestive, comparing them with this, but I am not really certain that it is dislocated,

Q Do you think that this Manaster & Osborne study, which was published at the end of '86, the beginning of '87, is something brand-new in the literature, that is expounding CT interpretations that were not known to radiologists before that date?

A I don't know how often anybody has written on this subject, to be honest with you. I doubt that there is a lot of literature available on it but, you know, it may be that somebody else has attacked the problem.

Q In interpreting CT scans of the lumbosacral spine to determine whether the Facets are normal, were you taught that

you need to be able to identify the facets and know what their normal alignment looks like?

A Yes. You would certainly want to know that.

Q And you learned of that long before this study was published?

A I don't know that I learned it -- I would say that that would be something that you would attempt to do as you interpret CT scans.

Q What I am saying is what is contained in this study isn't anything new in the

like if they are normally aligned.

A I would not call it a part of the

standard radiologic residency program. You may come across that, or you may not. It is an unusual type of a thing. That is all I can tell you. This is not a garden variety injury.

Q In this study the statement is made, "One must be farniliar with the normal appearance of facets on CT in order to recognize abnormal relationships." Would you agree with that?

A I think it is just sort of stating a historнologic fact dealing with how you could best interpret x-rays.

Q Do you know what the usual mechanism of a lumbosacral facet dislocation is?

A I believe, typically, the inferior -- or the superior facet of the inferior body lies up over the inferior facet of the superior body.

Q What body movement is associated with that occurring in the spins?

A I believe it would be an acute forward flexion.

Q if Mrs. Green was on the hood of a car with her legs in front of her, and was

propelled into the side of a Winnebago and flexed her spine acutely, would that be an appropriate mechanism, as far as you know, to produce lumbosacral facet dislocation?

A Given all those assumptions, I suppose it could.

Q On slices 6, 7 and 9 Dr. Hartz has said that he thinks he sees some small bone fragment. I take it that you do not?

A What he -- in his deposition he makes reference to the fact that as you are coming through lumbar or any bones you will see parts of bone either on a cut above or below the reference frame, and you can't always be sure whether that actually represents a separate fragment, or whether it is just simply the bottom part of a slightly asymetric projection of the bone, and that is my difficulty in identifying what he thinks are free Fragments-

In other words, any structure of bone here that is not clearly attached to same other bone on any individual frame here could simply be part of a bone on a

frame above or below.

Q Then how do you tell if there are bone fragments in the lumbosacral spine?

A That could be a very tricky thing.

Q You can't do it?

A You can da it, but it *is* tricky. It can be a difficult thing to determine.

Q Is there nothing in the D-2 series that suggests the possibility that you have got same free bone fragments?

A I think that what Dr. Xartz was referring to, as you said, was 6, 7 and 9, and the only parts of bones that I can see -- I don't know what he was referring to, quite honestly, but trying to reconstruct his thinking, here is one that *is* not clearly attached to that bone, and here is another one that is not, so I am assuming that those are the ones that: he is referring to, however, there is also on film No. 8, three fragments that aren't clearly attached ta a bone, which he did not decide were bone fractures for some reason.

Q What about you?

A That is my point. If any of these are, you know, why aren't these fractures, both these are.

Q Can you find whether those are attached above and below on the next slice?

A No.

Q And that is also true of, for instance, this spot, you can't tell whether that is attached to something above or below?

A Right, but I can on these. He has decided that those are not fractures so--

Q This and this?

A Right.

Q Aren't those pretty much --

A There is a class.

Q On slice No. 8, these triangular bones, you are saying you can't tell whether those are free fragments or normal bony elements either?

A Correct.

Q Are any of those artifacts?

A No, I don't think so.

Q On the abdorninal series do you see

any free fluid there?

A In the abdomen?

Q Right, either on 0-1 or D-3?

A I don't believe there is free fluid in the abdomen.

Q And in the lateral reconstruction?

A Yes.

Q In the upper right-hand corner is there any representation of the facets at L-5, S-1?

A I can't tell where the facets are on that.

Q So, you can't tell whether those facets are normal or abnormal on that reconstruction?

A No.

Q In saggital reconstruction No. 9, can you point that one out to us? Do you see anyth-ing that looks like a free bone fragment?

A Not really. I don't think these are really helpful, to be very honest with you.

Q Let: me just: clear up what you have opinions about and don't have opinions

about. Do you have an opinion as to whether surgery would have been necessary or done sooner if a dislocation at L-5, S-I had been diagnosed from the films at Willcrest Hospital?

MR. GROEDEL: Objection.

A I think, really, that is a surgical judgment.

BY MR. SCHARON:

Q That is not something you have an opinion about?

A NO.

Q Do you think that the rarity of a lumbosacral Facet dislocation excuses a radiologist from seeing it or not?

MR. EROEDEL: Objection.

BY MR. SCWARON:

Q Or from not seeing it?

MR. GROEDEL.: Objection.

In this case or in every other case?

MR. SCHARQN: Let's start out in general and become specific.

A I think the fact that it is rare, it is difficult to identify it even when it is present, it makes it very unlikely that

the radiologist is going to pick it up without some really gross findings.

BY MR. SCHARON:

Q Gross radiologic findings?

A Yes, and I think that is exactly what would happen in the everyday practice of radiology, including at good institutions.

Q And you also think that is true in this case?

A Yes, I do.

Q You don't see any gross evidence of lumbosacral facet dislocation in any of these films?

A No.

Q Do you agree with the statement that in order to see hemorrhage into the fecal sac, you usually need to have a CT done with contrast in the spinal canal?

A In the fecal sac, actually injected, like you would a myelogram?

Q Right.

A You said usually?

Q Yes.

A I think it would make it more -- it would make it easier to diagnose that,

yes, if that is in answer to your question.

Q It is, and the following question would be if you were looking at the CT scan in this D series, and looking for hemorrhage into the fecal sac, do you think it likely that you would see it on that study if it was there?

A You might or you might not. I couldn't be sure of that.

Q Going back to that statement in that Manaster & Osborne study --

A Yes.

Q -- that a radiologist should be able to identify the facets and know what their normal relationship is --

A Yes.

Q -- do I understand you to say that even a hoard certified radiologist, prior to the publication of that study, would not have been trained or able to identify that?

MR. GROEDEL: Excuse me. In this case or generally?

MR. SCHARON: We will do

both.

A I think that in general it is a subtle enough finding, that a lot of radiologists might not have come across it in their training, would not be expert at discerning the few degrees difference in the orientation of what appears to be the facet when it really isn't the facet, the facet joint that is.

BY MR. SCHARON:

Q Board certified or not?

A That is correct. It is a subtle distinction. If you look at the orientation between the normal facet joint and what they are describing as sort of an abnormal, pseudo facet joint, it isn't something that smacks you right between the eyes-

(At this time a discussion was had off the record.)

BY MR. SCHARON:

Q Do you remember anything else? I guess this is sort of a memory test, although it is *not* meant to be that way. Do you remember anything else that Dr.

Hartz said, that you disagree with? I am not asking you to remember everything in his deposition.

MR. GROEDEL: Yes, you are.

MR. SCHARON: No, I am not. If he later says I don't remember that and I disagree with it, that is okay and that is on the record.

A The only thing that I remember fairly clearly is his general conclusion, and that is that it was his opinion that there was an acute facet dislocation that was clearly demonstrated on the x-ray findings, and that it was, therefore, not within the standard of care not to have diagnosed that, and I don't agree with that.

Q As I understand it, you are not willing to admit that those films show it?

A I think they are suggestive on that one film, the one.

Q Slice 7 on D-2?

Slice 7, that there is a question as to the normal orientation of what is

either the facet or pseudo facet joints.

Q You are saying that is suggestive of a dislocation?

A I think that it is.

Q But it is not below acceptable standards not to interpret that?

A That is what I think.

Q Pars defects, can you see any pars defects on these?

A I don't see any clear pars defects, but that also, by the way, could be difficult to identify on a CT. In this case were it something entirely different, like it actually were an acute pars defect, and we are going through the same process, it is quite possible that it would be a subtle thing that either was not demonstrated or faintly suggested, and that we could have had the reverse situation where it was an acute pars and we had not diagnosed it.

(At this time a discussion was had off the record.)

BY MR. SCHARON:

Q Am I right, you have not seen these

films from Metro?

A That is correct.

Q This is 8-8-86. That is a plain film, lateral.

A Now, this is approximately how long after?

Q A little over five months, and 8-11-86.

Q Let me give you the rest of the plain films, and I don't know if you have any more, marked 8-8, 8-11-86, which look to be intra-operative or post-operative films.

A Right.

Q Can you tell what they are doing in those films?

A There are some sort of rods and surgical instruments that are demonstrated on these films, and unless yau told me wouldn't know.

Q You don't know what an intra-operative film of a fusion looks like, do you?

A Well, it could be that you have a placement of Harrington rads, and a fusion would be compatible with that.

Q There are two films dated 8-8-86, plain films.

A Okay.

Q What do they tell us about the spondylolisthesis in a little over five months?

A I think it is more exaggerated.

Q Well, more like third degree now?

A Yes, closer to that.

Q Can you determine whether there are any pars defects?

A I can't really tell. There appears to be a defect in bony continuity back here between L-5 and S-1, and I don't know if that is a crack in that pars, or what it is, but it does look like there is a defect.

Q Can you tell whether the lumbosacral facets are normal or abnormally aliyned?

A I can't really tell. I don't know.

Q You can't: tell from this 8-8-86 set, whether the spondylolisthesis is chronic

or acute solely from the film?

A No, I don't think you can.

Q You don't see any transverse process fractures?

A No. You would never be able to see that on this.

Q And this series is marked D-1 through 4. Before we go to that, I found a smaller film dated 8-8-86. What do we have here?

A We have some needles with tubing, and we have some radiopaque contrast material that has been injected by those needles.

Q What part of the spine are we looking at?

A I think we are looking at the low lumbar spine.

Q Posterior-anterior?

A Yes.

Q From back to front?

A Yes.

Q And can you tall anything about the alignment of the facets on that film?

A I can't diagnose a facet dislocation, if that is what *you* mean.

Q Well, do they look to be normal?

A These facet5 that I do see, which are probably L-3, L-4, look like they are aligned to me.

Q What about as you yo down L-5, S-1?

A I can't see it clearly.

Q Again, no transverse process fractures on those films?

A I might question whether or not there is on the right side here at what I think represents L-4.

MR. SCHARON: Let's mark that as F-1.

(At this time Defendants' Exhibit [redacted] was marked by the reporter.)

BY MR. SCHARON:

Q Now, as respects the lumbosacral spine on this series E-1 through 4, what is your interpretation of this series? What do you see here? Let's start with pars defects, or is it, again, tough to see on the CT?

A I th-ink it is, I mean I don't see anything real clearly on a cursory examination of this, that looks like it.

There is some discontinuity, once again, of bony structures, but they may or may not represent fragments or portions of bone you are coming in and out of, and it is difficult for me to diagnose a facet dislocation on these.

Q On E-1 let's identify that slice. Is that the lumbosacral level again?

A Yes.

Q L-5, S-1?

because you may be seeing one facet here through 4 would you, as a radiologist, report: a suspicion that you have got lumbosacral facet dislocation?

A No, I wouldn't.

Q Would you want to report anything about whether the spondylolisthesis was long-standing or acute?

A I would probably suspect it was long-standing again.

Q And, again, I am looking at this particular set. What kind of films are those?

A These are reconstructions.

Q Those reconstructions on E-2, which are the bottom frames.

A I don't think they are helpful in diagnosing that.

Q Nor do they show any bone fragments?

A Not unequivocally, no.

Q And as a radiologist you would want to report any suggestion of bone Fragments?

A I miyht wonder if some of *these* back here -"- I don't: even know what numbers these are here.

Q Let's see, you are referring to E--2 and -- why don't you just refer to them by their location?

A On the bottom six there are some ends of the bones which are not clearly attached and, you know, perhaps could represent -Fractures, but I don't know that I would have confidence enough to say that.

Q Understanding the difference between confidence enough to say it and not, in a diagnostic sense would you suggest their possibility if you were the radiologist?

A I don't th-ink so.

(At this time a discussion was had off the record.)

BY MR. SCHARON:

Q Do you have any interest in seeing the April, '87 films?

A I will pass on that.

Q Just so you can't say you haven't seen it --

MR. GROEDEL: Suburban?

MR. SCHARON: Yes.

BY MR. SCHARON:

Q Have you seen the Suburban films?

A No.

Q This is marked Defendants' Exhibit A-

3, and it is dated 9-20-85, and A-1, which is also 9-20-85, and A-2, and that one, I don't think, has a date on it. There are two other films that haven't been marked in that series.

Assuming that this is marked the Green spine, what is your interpretation of this?

A These show a little mild eburnation here at L-4 and 5.

Q The same as we saw at Hillcrest?

A Yes, pretty much, and beyond that it looks essentially like a negative lumbar spine.

Q She has got no spondylolisthesis in November, '85?

A I don't see any.

MR. GROEDEL: September, '85.

MR. SCHARON: What did I say?

MR. GROEDEL: November.

A No, I don't see any.

BY MR. SCHARON:

Q No obliques here either?

A No obliques.

(At this time a discussion was had off the record.)

MR. SCHARON: Let's go back on the record.

BY MR. SCHARON:

Q We have films from October of '86. Included in those are obliques.

A Yes. What was the date of the first surgery?

MR. GROEDEL: April.

MR. SCHARON: Was April the first surgery?

MR. GROEDEL: I think so. No, I am sorry, it was August.

MR. SCHARON: August of '86 was the first surgery?

MR. GROEDEL: august of '86

MR. SCHARON: It was an attempted fusion in situ, and they were unable to reduce the dislocation.

BY MR. SCHARON:

Q Can you tell me whether or not there is what we talked about before as being a

garden variety spondylolisthesis with a pars defect at L-5, S-1?

A I can't say that there -- I can see a spondylolisthesis. I don't see a clear disruption of the pars, but it is also kind of difficult to see down here. I think this is probably one pars, and more or less I see the other one, but I don't see a clear disruption.

Q As a layman is it appropriate to identify the pars by looking at the shape of this bone as being like a dog?

A Right. That is a common way to say it.

Q And if you have a disruption of the pars, it looks like the dog is wearing a collar?

A Correct. There is a break in the neck.

Q And the dogs in this film from 10-'86 all have solid necks?

A They appear to. It is hard to see at L-5, S-1, but I don't see a clear break.

Q There?

Yes.

Q Based on seeing the films from Metra would you, if you were the radiologist, diagnose a pars defect?

A Probably not. That one side is not as well demonstrated as the other, and I might have wondered about the other. There is not a real clear demonstration of a pars defect.

MR. SCHARON: I don't have any other questions.

MR. GROEDEL: Mary, do you have any questions?

MS. GOLRICK: No questions.

(At this time a discussion was had off the record.)

MR. SCHARON: Doctor, do you waive s-ignature?

THE WITNESS: I will waive signature.

---oOo---

CERTIFICATE

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

I, Ronald Stahl, a Notary Public within and far the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named witness, DR. BRIAN F. McNAMEE, was by me first duly sworn to testify to the truth, the whole truth and nothing but the truth in the cause aforesaid; that the testimony then given by the above-referenced witness was by me reduced to stenotype -in the presence of said witness; afterwards transcribed, correct transcription of the testimony so given by the above-referenced witness.

I do further certify that this deposition was taken at the time and place in the foregoing caption specified and was

completed without adjournment.

I do further certify that I am not a relative, counsel or attorney for either party, or otherwise interested *in* the event of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office in Cleveland, Ohio, this 4th day of May, A.D., 1989.

Ronald Stahl

RONALD STAHL, Notary Public
Within and *for* the **State** of Ohio
My commission expires 7-26-91

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