IN THE COURT OF COMMON PLEAS
CUYAHOGA COUNTY, OHIO

JAN S. GLASSER, et al., Plaintiffs, vs. NOEL ABOOD, M.D., et al., Defendants,	Case No. 350062

DEPOSITION

of **GARY** L. **REA**, M.D., Ph.D.

Taken at the offices of
The Ohio State University Hospitals
Division of Neurologic Surgery
N1011 Doan Hall
410 West 10th Avenue
Columbus, Ohio 43210

on June 23, 1999, at 6:00 p.m

Reported by: Christine-Ann B. Marr, RDR

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APPEARANCES:

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on behalf of the Plaintiffs

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on behalf of the Defendants

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STIPULATIONS

It is stipulated by and between counsel for the respective parties that the deposition of GARY L. REA, M.D., Ph.D., the witness herein, called by the Plaintiff under the applicable Rules of Civil Procedure, may be taken at this time by the notary pursuant to notice; that said deposition may be reduced to writing in stenotypy by the notary, whose notes thereafter may be transcribed out of the presence of the witness; and that the proof of the official character and qualification of the notary is waived.

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GARY L. REA, M.D., Ph.D.

being first duly sworn, as hereinafter certified, deposes and says as follows:

EXAMINATION

BY MR. RUF:

Q. Doctor, my name is Mark Ruf. I am representing Jan Glasser in a chiropractic malpractice case brought against Dr. Abood. If at any time I ask you a question and you do not understand my question, please tell me, If you give me an answer to a question, I'll assume that you've understood the question, okay?

A. Yes, sir.

Q. Could you state your name and spell your name.

A. Gary Lynn Rea, Last name is Rea, R-e-a,

Q. And what is your professional address?

A, I'm at Ohio State University, Division of Neurosurgery, 1037 Doan Hall, Columbus, Ohio 43210.

Q. Have you ever written on lumbar

spine herniations?

A. Right off the top of my head, I can't think of any specific paper I've written dealing with it. I've probably given some talks on it, but never any refereed papers.

Q. In your paper, "Spinal trauma: Current evaluation and management," did you discuss the types of trauma that could cause lumbar spinal herniations?

A. No, that was -- actually, that was cervical trauma, neck trauma.

Q. Have you ever written on the types of trauma that can cause lumbar herniations?

A. Not in any of my refereed journals I can think of. I talk a lot about trauma, but not written, researched, that sort of thing.

Q. Are there any neurosurgical textbooks that you use in your practice?

A. I use several. Wilkins and Rengachery -- that's W-i-l-k-i-n-s, and Rengachery is R-e-n-g-a-c-h-e-r-y, I think -- their textbook on neurosurgery.

There's Youman's, Y-o-u-rn-a-n-s, text on neurosurgery. Those are generic texts that can be referred to. They are like all other textbooks. They have some inaccuracies and some things that are not completely clear, but those are textbooks that I look at.

Q. Do you regularly use those in your practice?

A. No.

Q. Do you ever refer to those in your practice?

A. Almost never.

Q. Did you use those books during your training?

A. Yes.

Q. Where did you receive your medical training?

A. I went to Baylor College of Medicine in Houston, where I did medical school, and I did my year of general surgery at the University of Texas at Houston. Then I did my neurosurgery training at University of Minnesota and did a fellowship in Zurich, Switzerland after that, and then I came to

Ohio State.

Q. Are there any orthopedic textbooks that you use in your practice?

A. I use Simeone's book on the spine. Other -- also there's the textbook by Ed Benzel, B-e-n-z-e-1, who is a neurosurgeon who also wrote a book on the spine, and I use his. And there's another newer one out by Sonntag, S-o-n-n-t-a-g, that also I've looked at. I have to admit I haven't looked at it lately.

Q. I went over to the library before the deposition, Do you go over to the library on occasion?

A. Not the university library, no.

Q. Is the book by Simeone -- Rothman-Simeone, The Spine?

A. That's a book, yes.

Q. Is that the book you were referring to?

A. I think so, yes.

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(Deposition Exhibit 1 marked.)

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Q. Doctor, this is the cover page of the book we were just discussing that's been marked as Plaintiff's Exhibit 1.

A. Okay.

Q. Have you found the information in the book by Simeone to be accurate and reliable?

A. There is no book that I would agree entirely with, I can't think of anything off the top of my head in that book that I disagree with, but I know from experience that every book that you read has things in it that I don't agree with. No book is perfect, no book is completely factual, and all contain the opinions of the authors. Even the books and chapters that I've written have my opinions in them that other people would disagree with.

Q. So there's no neurosurgery textbook or orthopedic textbook that you would be willing to say is authoritative or accurate and reliable?

A. 100 percent, no, that's correct. There is no 100 percent authoritative

textbook in probably any area of science, or in any area.

Q. Is there a textbook that you have found to be consistently accurate and reliable in either neurosurgery or orthopedics?

MS. VANCE: Objection.

A. "Consistently," what do you mean?

Q. Well, you said not 100 percent.

A. Correct.

Q. Are there either neurosurgery textbooks or orthopedic textbooks that you consider to be reliable sources of information?

A. All --

MS. VANCE: Objection

A, A11 textbooks have all sorts of information. And most of their data is reliable, but not all of it is correct. All of it, like I said, reflects the opinions of the authors, which is not always backed up by scientific fact.

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(Deposition Exhibit 2 marked.)

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Q. I'm handing you what's been marked as Exhibit 2. Are you familiar with that textbook, The Lumbar Spine?

A. No, I don't think this one I'm familiar with.

Q. Are there any medical periodicals that you receive and regularly review?

A. The one I review the most probably and the easiest is The Back Letter, which is a -- almost a newspaper on -- that talks about research that's going on in the spine. I also read the Journal of Spinal Disorders and Spine. Those are the journals that I read the most. Also, of course, I read Neurosurgery and the Journal of Neurosurgery.

Q. Why do you read those journals?

A. For information.

Q. Is it to keep current on what's going on in medicine?

A. Yes.

Q. Do you think that a physician has an obligation to stay current on the medical

literature?

MS. VANCE: Objection.

A. You want to try to. It's hard to stay up. I don't stay up perfectly. I don't think anyone does. But you try to.

Q. And what's the purpose of staying current on the medical literature?

A. So you can treat your patients better.

Q. Have you studied the complications that can occur from chiropractic manipulations?

A. Not specifically.

Q. Have you reviewed any literature on potential complications that can result from chiropractic manipulation?

A. No.

Q. Have you treated patients that have had complications from chiropractic manipulations?

MS. VANCE: Objection.

A. I can't think of anybody that I've treated that I thought had a problem associated with chiropractic manipulation.

Q. Do you know whether chiropractic manipulation of the lumbar spine in a patient with a herniated disk at L4-5 can result in further herniation or an aggravation of that disk?

MS. VANCE: Objection.

A. I'm sorry, could you say that again.

MR. RUF: Could you read the question back, please.

(Record read back as requested.)

MS. VANCE: Objection.

A. Okay, So is it possible -- can I restate the way I understand it?

Q. Yes.

A, So is it possible that someone can have manipulation and a disk herniate out further with chiropractic manipulation?

Q. Yes.

A. Okay. Just -- and I would say the answer is yes, it is possible that that could occur at the same time.

Q. What do you mean, "that could occur at the same time"?

A. The same way it can occur with

someone sneezing or having a bowel movement or lifting something or anything -- any activity of life, those things can occur together.

Q. So do you agree that a herniated disk at L4-5 could be aggravated due to a lumbar manipulation by a chiropractor?

MS. VANCE: Objection.

A. Could it be? I mean, is it possible? Anything is possible.

Q. In the medical literature, are you aware of what complications are reported as a result of chiropractic manipulation of the lumbar spine?

A. From my memory, I am -- I can remember that it has been reported that you could have -- you know, the chiropractic manipulation can be associated with herniated disks, but, like I said, just as -- just as any other activity can as well.

Q. What about aggravation of a herniated disk through manipulation?

MS. VANCE: Objection.

A. What do you mean by "aggravation"?

Q. Can you have further extrusion of disk material from a chiropractic manipulation?

MS. VANCE: Objection.

A. Can you? Is it possible? I suppose anything is possible, yes.

Q. Do you agree that if rotational force was applied to Jan Glasser's spine from August 7 through September 24, that would cause a further herniation of her disk?

MS. VANCE: Objection.

A. That --

MS. VANCE: No basis.

THE WITNESS: Sorry.

A, That, I don't know.

BY MR. RUF:

Q. Do you know what type of movement would cause a further aggravation of Jan Glasser's disk starting from August 7 of 19963

A. Any movement of the lumbar spine that we do by, like I said, sitting,

standing, having a bowel movement, coughing., sneezing. All of those can be associated with further herniation of the lumbar disk, and I've heard all of those descriptions with people telling me that's when their pain started. So any movement of the spine can be associated with further herniation.

Q. Are you saying that flexion and extension of the lumbar spine could have caused further herniation?

A. Any movement can be associated with further herniation.

Q. Have you performed osteopathic manipulation in your practice?

A, No.

Q. Are you familiar with the type of techniques that can be used in osteopathic manipulation?

MS. VANCE: You're drawing a distinction between osteopathic and. chiropractic?

MR. RUF: Yes, since he is a medical doctor, I'm asking him about osteopathic.

A. No.

BY MR. RUF:

Q. Have you ever performed osteopathic manipulation on a patient?

MS. VANCE: Objection.

A. No.

Q. Have you studied the types of forces or trauma that can cause injury to the spine?

A, Yes.

Q. Could you tell me what types of trauma or force could cause an aggravation or additional herniation of disk material.

A, I may have misunderstood your question, your question before. When I was talking about -- you were talking about injuries to the spine, I was thinking about injuries to the bony elements of the spine, such as automobile accidents, flexion/extension injuries, those sorts of forces, not particularly associated with lumbar disks.

Q. Okay, Let me ask you --

A, *Go* ahead,

Q. -- about lumbar disks.

A. Go ahead,

Q. Have you studied the effect force and trauma has on the disks in the lumbar spine?

A. No.

Q. Are you familiar with what types of force can cause a herniation of a disk in the lumbar spine?

A. Are you talking about the amount of force like in, you know --

Q. First of all, why don't we ask about the amount of force.

A. Okay. No, don't know.

PIS. VANCE: Can I just go back to clarify, When you were saying have you studied, do you mean textbook study, research study, or study based on experience?

MR. RUF: Any of the above.

A. I've read about them. I don't remember the details of especially the amount of joules or whatever, you know, foot-pounds or whatever it would use to measure that, but I don't remember what they

are.

Q. Do you know whether rotational force of the lumbar spine in a patient with an L4-5 herniated disk has a greater probability of causing further extrusion of the disk than a flexion/extension motion of the lumbar spine?

MS. VANCE: Objection.

A. From what I know, the rotational force is the force that the disk is least able to deal with. Flexion/extension, it has -- it's a little better -- it's a little easier for the disk to handle flexion/extension, and rotational forces it is less able to handle.

Q. Do you agree that a herniated disk is weaker than a nonherniated disk?

A. Weaker in what way?

Q. Well, is a herniated disk more susceptible to injury than a normal disk?

A. Once they are herniated, if it's true herniation and the disk is already out, I'm not sure that it's more susceptible -- it kind of has to do with your definition of

it, I suppose. A disk that's already out or partially out, is it more susceptible to other problems? I don't know the answer to that.

Biomechanically, I know that when you have to do a diskectomy, for example, that the disk functions about the same whether it's herniated or it's not herniated. So I don't really know -- I guess I don't understand the question.

Q. Well, do you agree, with a herniated disk the integrity of the annulus has been compromised?

A. Correct.

Q. In other words, the disk extrudes out through the annulus?

A. Correct.

Q. What is the consistency of disk material? Is it like crabmeat or chopped-up meat?

A. Crabmeat is the classic description of it. I always say it's more like an oyster. It's a little more watery. But it depends on how old it is, and how long it's

been out, and those sorts of things, how dry it is.

Q. What --

A. It --

Q. Are you finished?

A. Yes, sorry.

Q. What is the consistency of the annulus?

A. Very tough.

Q. So would you agree when there's a herniation, that tough outer layer has been compromised?

A. Correct,

Q. And does that make the disk subject to further extrusion by forces exerted on that disk?

A. It could, yes.

Q. And that's because this tough outer layer has been compromised?

A. Correct.

Q. Is that something that a physician should take into consideration before manipulating the spine --

MS. VANCE: Objection.

Q. -- in a patient with a preexisting herniated disk?

MS. VANCE: Objection.

A. I don't manipulate the spine.

Q. So you would have no opinion on that?

A. Well, I do know that I have patients who have herniated disks that are manipulated by chiropractors.

Q. And do you know what types of manipulations are indicated in a patient with a herniated disk?

A, No.

Q. I noted that after your medical fellowships, you became an assistant professor.

A. Correct.

Q. Is there a full professorship here at Ohio State?

A. Yes.

Q. What's the difference between an assistant professor and a full professor?

A. You go assistant, associate, and then full professor. So it's usually about

10 or 15 years' difference.

Q. And at what stage are you at currently?

A. I'm an assistant professor.

Q. How long have you been practicing neurosurgery here at Ohio State?

A. Since '86.

Q. And the level of professorship is based on your experience?

A. No, based partly on your experience, partly on your research, kind of a combination of all those things.

Q. Are you an employee of the university?

A. Yes, partially.

Q. Do you have your own private practice?

A. No, not entirely. We have a -- it's -- the department of surgery has a large multispecialty group practice, and so part of my salary comes from the university, and part of it comes from the department of surgery.

Q. Have you ever practiced neurosurgery

outside of the university?
A. No.
Q. Could you describe for me your current practice,
A. 95 percent of it is work on the spine.
Q. What other areas of the body do you operate on?
A. I do craniotomies for trauma, but don't do much of the elective work on the brain. Here we, all of us, subspecialize.
Q. Are you involved in teaching residents and interns?
A. Yes.
Q. What percentage of your time is spent performing surgery?
A. You mean as opposed to doing -- seeing patients in clinic and --
Q. Yes.
A. Okay. I have -- I operate two and a half days a week. I see patients in the clinic two days a week. And then the other half day is spent in meetings.
Q. What types of spinal surgery do you

perform on the lumbar spine?

A. I do fusions, decompressions, diskectomies, instrumentation, for trauma, infection, tumor, degenerative disease.

Q. How often do you perform laminectomies and diskectomies?

A. They --

MS. VANCE: Lumbar?

MR. RUF: Yes, of the lumbar spine.

A. Yes, if you talk -- I do primarily micro diskectomies. They probably make up 20 percent of the work that I do in the lumbar spine. Actually overall, over all my work, they probably make up 20 percent, maybe 25 percent of what I do. It's a sizable chunk of what I do, is lumbar spine.

BY MR. RUF:

Q. On a monthly basis, how often would you perform either a laminectomy or a diskectomy of the lumbar spine?

A, Between 10 and 15 a month, I'd say. Let me see if that adds up right. So ... that's close. You could say 8 to -- 8 to 14, somewhere around that, a month.

Q. Could you tell me the acceptable complications that can result from a laminectomy or a diskectomy.

A. I suppose you'd have to say what is acceptable.

Q. Well, if there's another term you would prefer to use, go ahead.

A. There are recognized complications of a diskectomy. And they range all the way from death, which is very unlikely, to minor complications such as skin infections.

The other complications are worsening of your condition or of pain. We usually tell our patients there's about a 1 percent risk of that. There's the risk of a reherniation. If you take out a disk, we never take out all of the -- of the nucleus. And so there probably is -- over the lifetime of the patient, there's probably a 2 or 3 percent chance of having another disk fragment from the same level.

There's also the risk of a spinal fluid leak, that you injured the dura and get into a spinal leak. That's pretty rare,

but that's probably about half a percent or so.

The risk of infection is around 3 percent. The risk of an injury to the blood vessels, the iliac blood vessels, such that you can have bleeding in the abdomen, is probably about a third of a percent, maybe a little bit less. I will say a third of a percent,

That's the ones I can think of off the top of my head.

Q. Do you have an opinion as to whether Jan Glasser suffered a complication from her surgery performed by Dr. Likavec on Qctober 14, 1996?

A. From the information I have, she -- it looks like she got some better but did not get completely better after the surgery.

Q. Doctor, my question is do you have an opinion as to whether she suffered from a complication from the surgery performed by Dr. Likavec on October 14?

MS. VAN'CE: I think he answered that.

A. I didn't see a complication in there that I could say this was a true complication.

Q. Do you have any criticisms of the technique of Dr. Likavec in performing the surgery on October 14?

A. No.

Q. Would you agree that due to the massive size of the disk, it was a technically difficult surgery?

A. Sounds like it was.

Q. Do you have an opinion as to whether Dr. Likavec deviated from acceptable medical practice during the time Jan Glasser was under his care and treatment?

A. No.

Q. Based on your review of the records, did any doctor advise Jan Glasser that she needed surgery before October 14, 1996 during the year 1996?

A. So we're just talking about the year of 1996 and not before that?

Q. Correct.

MS. VANCE: You are referring just

to the records or to anything else?

MR. RUF: Correct, just to the records.

MS. VANCE: Just to the records.

A. I don't remember anybody saying that she needed surgery in 1996 other than Dr. -- I think Dr. Likavec and --

BY MR. RUF:

Q. Let me reask the question --

A, Okay.

Q. -- so it's more clear.

From August 1, 1996 to October 14, 1996, based on the records, did any physician advise Jan Glasser that she needed surgery before October 14, 1996?

MS. VANCE: Objection.

A. I don't remember anybody else asking her -- telling her that -- advising -- I'm sorry. I don't remember anybody advising her to have surgery during that period of time other than Dr. Likavec.

Q. Based on your review of the records, did Jan Glasser fail to follow medical advice between August 1, 1996 and

October 14, 1996?

MS. VANCE: Objection.

A. Can I look at that?

Q. Sure.

A. I want to ...

(Pause in proceedings.)

MR. RUF: Let's go off the record one second.

(Discussion off the record.)

Q. Now that you've had a chance to review the records, can you answer the question, Doctor?

A. Could you repeat it, please.

(Record read back as requested.)

MS. VANCE: Objection.

A, Not that I know of,

MR. RUF: I thought I said August, so let me reask. Could you read back the question with August in it and have him answer it.

(Record read back as requested.)

MS. VANCE: Again, based only on records, I object.

A. Not that I know of.

BY MR. RUF:

Q. Based on any other information that you're aware of, did she fail to follow medical advice from August 1, 1996 to October 14, 1996?

MS. VANCE: Objection.

A. Yeah, I don't have any other evidence.

Q. In a patient that you suspect has a herniated disk in the lumbar spine, do you perform a physical examination on that patient?

A. Yes.

Q. What's the importance of a physical examination for a person that you suspect has a herniation in the lumbar spine?

MS. VANCE: Objection

A. I do a complete exam of the arms and legs, but the most crucial parts are the straight leg raising, the reflexes at the ankles and the knees, and the testing of strength in the lower extremity.

Q. In the straight leg raising test, what do you have the patient do?

A. I usually just have them sit down, and then I raise the leg up till either it causes pain or it gets to 90 degrees.

Q. And if that test is positive, what does that tell you?

A. It tells you that a nerve root is being aggravated.

Q. When you test the reflexes, what are you looking for?

A. I'm looking to see if they are equal on both sides, if one set of nerves is being affected by some pathology or something is wrong and the reflex is different on one side versus the other.

Q. Are you also looking for absence of reflex?

A. Correct.

Q. And if there's a problem with the reflexes in the patient, then what is that telling you?

A. It may tell me nothing. I mean, it may tell me they have had an old problem. Many people have -- for example, have herniated disks, lose their reflex, and it

never comes back even after you decompress them and they are doing well.

But if it's absent, it does make -- it helps you localize, sometimes, what level is being involved. An L5-S1 disk often will cause reflex changes at the ankles. An L4-5 disk, if it is large, can cause reflex changes as well. Or --

Q. When --

A. I'm sorry. Or if the disk is in just a particular place, it can -- not even be large. Either one of those levels can cause reflex changes,

Q. When you're testing for reflexes, you're testing for that as evidence of impingement on the nerve?

A. Correct.

Q. What strength tests do you perform on a person in which you suspect a herniated disk at L4-5?

A. The most sensitive is the extensor hallucis longus, testing the toe. You have them pull their toe up and hold it, and most people, you can't overcome their strength.

But that's almost we -- we like to think that is almost pure L5, or fifth lumbar nerve involvement.

Then we also test the foot dorsiflexion, or the ability of the person to hold their foot up, That is often normal, and the toe may be weak, but I test both of those for an L4-5 disk,

Q. And when you are testing for strength, again, you perform those tests for evidence of impingement on the nerve that's exiting at that level of the lumbar spine, right?

(Beeper sounds.)

A. Well, certainly the level below it, but yes, that's essentially it.

THE WITNESS: I have to stop. I'll be right back.

(Recess taken.)

(Record read back as requested.)

Q. So when you test reflexes, strength, and straight leg raising, you are evaluating the person neurologically?

A. Correct.

Q. What orthopedic tests do you perform on a person who you suspect has a herniation of the lumbar spine?

A. I kind of consider all of the spine exams, not necessarily neurosurgical or orthopedic. I've never heard them described as one or the other. I also do other things, such as flex and extend the spine.

Q. What are you looking for there?

A. Really, just about the same as a straight leg raising. But also I -- I'm loolting for other things as well to see if they have stenosis-type symptoms. Often when they bend backwards, they will get pain down their leg as well, whereas with most herniated disks you don't.

Also I do -- I look for disease of the hips as well, externally rotating the hips and internally rotating them. I suppose that is an orthopedic test, but I really consider all those spine tests not neurosurgery or orthopedic, Just spine tests.

Q. Are there any other tests that you

do of the spine during your physical exam?

A. Yes, I do a test called Waddell's test.

Q. What is that test?

A. W-a-d-d-e-1-1, It supposedly is a test to see -- well, it has been associated with multiple Waddell's tests that are positive, There is a -- an increased likelihood that you will not find an organic cause for their pain.

Q. What is Waddell's test?

A. There's several. There's tenderness, overreaction to pain, regionalization, distraction, and simulation.

Q. Okay. Any other tests that you perform in a physical exam of the lumbar spine?

A. I will sometimes, although rarely, test for sensation. It's the least reliable of all the tests, I think.

Q. And what's the importance of assessing a patient neurologically when you're performing your physical exam on the

lumbar spine?

MS. VANCE: Objection.

A. To make a diagnosis, to document as best you can objectively the disease process or the severity of the disease.

Q. You do not hold yourself out as an expert in chiropractic adjustments or manipulations?

A. That is correct,

Q. Do you know the type of adjustments or manipulations that were being performed by Dr. Abood on Jan Glasser?

A" No.

Q. Do you know the number of times Dr. Abood manipulated Jan Glasser?

A. No.

Q. Do you know if he manipulated her more than once a day?

A. No. No, I don't know.

Q. Do you know how Jan Glasser felt after the manipulations?

A. Don't know.

Q. Do you know if she had a worsening of her condition after the manipulations?

A. Don't know.

MS. VANCE: I want to just interject. He's been provided with her deposition testimony.

MR. RUF: I'll get to that.

MS. VANCE: Okay.

BY MR. RUF:

Q. Do you know if there was any rotation of the lumbar spine when Dr. Abood performed his manipulations?

A. Don't know.

Q. Do you agree that when there's rotation of the lumbar spine, it causes increased pressure on the disk?

MS. VANCE: Objection.

A. I don't know.

(Pause in proceedings.)

A. I did say earlier that rotation, the disk doesn't handle as well. But I don't know whether that translates into increased pressure.

Q. Does the lumbar spine rotate very well?

A. No. Especially at the lower levels,

it doesn't rotate well.

Q. Do you agree that based upon all the information that you've reviewed, there's no evidence of trauma to Jan Glasser's spine from September 24, 1996, which is the last date of treatment by Dr. Abood, according to his bills, until the date of surgery?

MS. VANCE: How do you define "trauma"?

A. That's the question, really, is how do you define "trauma."

Q. Well, if you need to explain your answer or qualify it, please do so.

A. There's certainly -- as far as I know, there's no evidence of automobile accident or anything else. Trauma to the spine, of course, and herniated disks can occur with any trauma -- well, can occur with any activity, as I said, such as bending or lifting or stooping or any of those.

Those are commonly associated with herniated disks. If that's trauma, I imagine she did some of those things -- we

all do -- to put on her socks and shoes and things like that, But in terms of motor vehicle accidents, falls, those sorts of things, I don't know of any evidence of those.

Q. Did you find any evidence that any type of force was exerted on her spine from September 24, 1996 up until the date of surgery?

A. If you say "any kind of force," all of those -- you know, sitting increases the pressure inside the disk. Lifting and stooping increase the pressure inside the disk. Those are forces, and just the normal forces of life are -- have been exerted on her.

If you are talking about extra forces, such as -- like I said, trauma such as an automobile accident or falls, no.

Q. Do you agree that based an the medical records, there's no reference to sneezing, sitting, or rolling over causing a further herniation of Jan Glasser's disk?

A. I didn't see anything like that, no.

Q. Did you see any event recorded in the medical records from September 24, 1996 until the date of her surgery that could have caused an aggravation of her herniated disk?

A. Are you just talking about any incident specifically that said, "This is the incident that caused her to go numb just prior to her surgery" -- so I don't -- that was kind of the critical part, but I didn't see -- there wasn't any record in there that that moment several days before the surgery -- I didn't see an incident associated with that, no.

Q. Do you agree that Jan Glasser had a herniated disk of her lumbar spine back on July 30, 1994? That's the date the MRI was performed.

MS. VANCE: One of the MRIs.

A. I think she did, yes. Yes.

Q. And do you agree it's more probable than not that she coughed or sneezed many, many times between 1994 and 1996?

A. Probably did,

Q. Is there any evidence that coughing, sneezing, or any daily activity of living caused an aggravation of her disk from '94 to '96 before she began treating with Dr. Abood?

A. Well, something made it worse because she was going to see physicians because her pain was worsening. Rarely do people go see physicians or chiropractors if their pain is not getting worse. If it's the same, then they don't go see us. So I would assume that in there something happened and she began to worsen.

Q. Based on your review of the records, did she receive treatment for her back between 1994 and 1996?

MS. VANCE: Objection.

A. I can look and see.

(Pause in proceedings.)

MS. VANCE: What date do you want to use in '94? January? July?

MR. RUF: September.

BY MR. RUF:

Q. From September of '94 to August of

'96, based on the records, did Jan Glasser seek out medical treatment for her back?

MS. VANCE: Objection.

A. Let's see.

MS. VANCE: Does the fact that she is taking medications count? I don't know how you want to interpret that.

MR. RUF: (Indicates negatively.)

MS. VANCE: Somebody's prescribing them.

MR. RUF: Let's go off the record.

(Discussion off the record.)

MS. VANCE: Let me just interject. Dr. Rea's looked through some of these records, but the records will be in evidence, and they show what they show in terms of history. He hasn't had a chance to turn every page at this moment in time.

A, Don't see a visit there in between that period of time.

BY MR. RUF:

Q. Doctor, have you thoroughly reviewed the records in order to render your opinions in this case?

A. The records I have available to me, yes.

Q. What did you review in order to form your opinions in this case?

A. The deposition of Ms. Glasser; the deposition of Dr. Likavec; the records of Meridia Hospital; Dr. Ruch's records; Dr. Frolkis, F-r-o-l-k-i-s; Dr. Leb, L-e-b; Dr. Likavec's records; Mount Sinai Hospital records; Dr. Bell's records; the Cleveland Clinic records; Dr. Byers' records; Dr. Morganstern's records; and Dr. Marsolais', M-a-r-s-o-1-a-i-s, records. No -- oh, and then just a report from Dr. Gatlin.

MS. VANCE: This is the office note of Gordon Bell in July of '98.

THE WITNESS: I think that's already in there. Yeah.

A. And this is another report of Dr. Ruch, which I think was in the other records, That's already in the records.

MS. VANCE: He has got Dr. Likavec's report. To the extent it's not part of his

records, that's there,

A. These are all the same. That's essentially it.

BY MR. RUF:

Q. Did you review any of Jan Glasser's films?

A. Yes, I believe I did,

Q. Do you know what films you reviewed?

A. May I go get them?

MR. RUF: Sure,

MS. VANCE: You don't have them.

THE WITNESS: We don't have them anymore?

MS. VANCE: No, those are the original records. I've got them itemized.

Basically, it's everything that's been provided to defense counsel. The four MRIs, September of '90, July '94, October '96, and July 8 of '97. He also saw the x-ray from Dr. Abood's office in August '96 and some plain film x-rays from the Cleveland Clinic in July '98.

And in addition, besides the records he mentioned -- I don't know if he

specifically mentioned physical therapy records of Mr. Lepp, L-e-p-p, if they weren't already noted.

THE WITNESS: Yes, they were. I'm sorry.

MS. VANCE: Okay.

BY MR. RUF:

Q. Did you make any notes based on your review of the records, depositions, or films?

A. 1 made some little scribbly notes, but that's all.

Q. Could I see your notes.

A, Sure. Just a minute.

(Pause in proceedings.)

A. (Handing)

MR. RUF: I'd request, counsel, that I get a copy of the notes of the doctor.

MS. VANCE:: Okay.

BY MR. RUF:

Q. Did you make any comments based on your review of the films or did you take any notes based on your review of the films?

A. No, I didn't.

Q. Do you have an opinion as to whether there was a significant worsening or aggravation of Jan Glasser's L4-5 herniated disk from July 30, 1994 to October 7, 1996?

MS. VANCE: October 7?

MR. RUF: That's the date of the MRI at the Cleveland Clinic.

A. I didn't make a note of that.

BY MR. RUF:

Q. Do you know whether there was a substantial worsening?

A. I did see a picture, and from that picture it looked like it was bigger.

Q. Do you know how much bigger?

A. Don't know,

Q. Let me ask you if you have opinions in the following areas: No. 1, as to whether Dr. Abood met the acceptable standard of care.

MS. VANCE: Objection. I'm not offering Dr. Rea for that purpose.

A. I don't know.

Q. You have no opinion?

A. No opinion.

Q. No. 2, as to whether Dr. Abood's adjustments aggravated Jan Glasser's herniated disk at L4-5 or caused further extrusion of the disk material.

A. Don't know.

Q. So you have no opinion?

A. No opinion,

Q. Do you have an opinion as to the cause of Jan Glasser's current condition?

A, I think the -- I think the answer is yes, I do have an opinion on that.

Q. Okay.

A. I believe her disk herniated out further between the time that she was seen by Dr. Likavec and before she had her surgery. In reading through the notes, there's no report anywhere that I can see of perineal numbness until right before the surgery. It was at that time, I believe, that she worsened and her disk herniated out further, she became more symptomatic; and the problems that seemed to bother her the most, the perineal numbness, appeared to have occurred then, before her surgery.

Q. Do you have an opinion based on reasonable medical probability as to what caused the further extrusion of disk material?

A. It's not uncommon for people to have -- to -- it's not uncommon for people to worsen with no apparent cause, She certainly had a large herniated disk. She was stable, They looked at her, decided to have surgery, and then she worsened in between that time.

Q. So --

A. You don't -- I'm sorry. You don't have to have a specific moment in time that that happened, and --

Q. So it is --

MS. VANCE: Wait. Please let him answer.

A. But she did clearly get worse compared to all the other things in there at that time.

Q. So it is your opinion that there's no apparent cause as to what produced the further extrusion of disk material?

MS. VANCE: Objection.

A. There's nothing in there that says that, you know, "I coughed and sneezed, sat down, lied down, rolled over." She just called in and said, "My perineum or my groin region is numb." That's different, Everybody recognized it as different. And so something happened. It got worse.

Q. Do you have an opinion as to what specifically caused her aggravation?

A, Don't know,

Q. Do you have an opinion as to whether or not her condition is permanent?

A. If she still has it now, it probably is.

Q. Can you state based on reasonable medical certainty whether future surgery would alleviate either her perineal numbness or the numbness of her left leg?

A. I'd have to look at her films, see her, so I guess the answer is I don't know.

Q. Do you agree that if surgery were performed, there would be additional risks and her condition could be worse?

A. Absolutely. I agree with that

Q. Would you agree with Dr. Likavec that the risk of performing surgery is not worth the potential benefits?

MS. VANCE: Objection.

A. That, I don't know just because I haven't seen her, but that is a reasonable observation.

Q. Have you received referrals from chiropractors?

A. Periodically

Q. And have chiropractors referred patients to you when those patients have had spinal conditions that required surgery?

A, Yes, and sometimes when they didn't require surgery.

Q. So you have received referrals based on a chiropractor's recognition that a patient needs spinal surgery?

A. Their opinion is that they need surgery, and then they ask me to look at them and see if that's what I think as well, but yes, their opinion is they may need surgery or they do need surgery, and then

they ask my opinion as well.

Q. Do you have an opinion as to whether a chiropractor should be able to recognize when a patient requires a referral to a neurosurgeon?

MS. VANCE: Objection.

A. I guess the critical word is "requires" referral. The only time that I think that someone -- absolutely it is an absolute, unquestionable need for referral is a cauda equina syndrome where there's numbness in the perineum, often numbness in the feet, and some difficulty with voiding. That is probably the only condition where it's absolutely required. When you use the word "required," that's what I would think of for that.

Q. Well, as a doctor that's treating the spine, should a chiropractor be able to recognize when a patient should be referred to a neurosurgeon for evaluation?

MS. VANCE: Objection.

A. Still, it's a matter of "should be referred." Most of the chiropractors that I

see have treated the -- or patients that I have seen from chiropractors, they have treated the patient, the patient has not responded, and -- for some period of time, and then they ask that I take a look at them to see if surgery is an option.

Q. Assuming that Jan Glasser's condition worsened while she was being treated by Dr. Abood, at any point did the standard of care require him to refer her to a neurosurgeon?

MS. VANCE: Objection.

A. I'm not an expert in chiropractic care, but I know that my patients, I treat them, they get worse, I do physical therapy, sometimes they get worse. I do -- keep them on medications, sometimes they get worse. And so the fact that they worsen doesn't necessarily mean that they have to have surgery.

Q. Do you agree that if a patient's condition is worsening while the doctor is treating that patient, that the doctor needs to reassess whether his treatment's proper?

MS. VANCE: Objection.

A. It's reasonable to reassess. If my patients are not getting better, I should at least Look and see, do I want to continue on with this treatment or do I want to start on another treatment. It may be to stay the course, but we do reassess.

Q. Do you have an opinion as to whether at any time from August 7 through September 24, 1996, Dr. Abood should have referred Jan Glasser to a neurosurgeon or an orthopedic surgeon?

MS. VANCE: Objection.

A. I'm sorry, that -- as I remember, those are the times when he was seeing her until when?

Q. Correct. Assuming that Dr. Abood saw Jan Glasser and treated her October -- or August 7 through September 24 of 1996, at any period during that time should he have referred her to a neurosurgeon?

A. I don't have his records so I can't answer that.

Q. If you don't have an opinion, just

say, "No opinion."
A, Okay. No opinion.
Q. Do you agree that Dr. Abood did not monitor Jan Glasser's neurological status during the time he was treating her?
MS. VANCE: Objection,
A. Don't know. No opinion.
Q. Assuming that he did not monitor her neurological status, do you think that is acceptable for a physician that is treating a patient's spine?
MS. VANCE: Objection
A. It would not be ideal care.
Q. Do you know whether the subsequent chiropractor Randy Reed performed any orthopedic tests on Jan Glasser?
A. I don't think I saw Mr. Reed's records.
MS. VANCE: That's because Dr. Reed doesn't have any records.
Q. You did not review Dr. Reed's deposition?
A. Don't think so,
Q. So you have no knowledge of what

Dr. Reed did, correct?

A. Correct.

Q. So you can't comment on whether he performed any tests and what the results of those tests were?

A. Correct.

Q. Do you have an opinion as to whether a Jan Glasser needed surgery on September 24, 1996?

A. Let me look at September 24.

Q. That's the last date Dr. Abood saw her, according to his billing records.

A, Okay.

MS. VANCE: Do you want him to read through Jan's deposition?

THE WITNESS: That's okay.

A. From the records available to me -- and I'm primarily dealing with Dr. -- I believe Dr. Leb and Dr. Likavec's -- needed surgery is not -- is not exactly the word I would use. Spine surgery is rarely necessary or imperative, Even Dr. Likavec in his note talked about continuing conservative care with her as an option when

he saw her.

He rejected it because -- and she was -- did feel like she was getting worse, she did have a large herniated disk, and -- well, and she was taking lots of pain medicines. So it was reasonable to do the surgery then.

If she would have said, "I don't hurt that bad," then he probably would have said that he wouldn't operate on her. But "needed surgery" is not -- I'd say no, she didn't need. Or was it absolutely necessary? No. The only time that it became where you'd say it was -- surgery became necessary was before her surgery when she developed the perineal numbness.

BY MR. RUF:

Q. Are you talking about when she called Dr. Likavec?

A. The phone call, yes.

Q. So was surgery indicated for Jan Glasser on September 24, 1996, the last date of treatment by Dr. Abood?

A. "Indicated" is just like saying that

it's necessary. It was -- was it an option at that time? Probably was an option. But was it necessary or indicated or imperative? The answer is no. The only time it became where I would say it was imperative was when she developed the perineal numbness. Was it reasonable to do it before then? Just like Dr. Likavec said, yes, it was reasonable.

Q. So surgery was not imperative until October 9, 1996, when Jan Glasser called Dr. Likavec by telephone?

A. As far as I know, that was the first time that we heard about the perineal numbness, and we became -- became concerned about this being a cauda equina syndrome.

Q. Do you agree that not every herniated disk necessitates surgery?

A. Correct. In fact, many of them don't need surgery.

Q. Do you agree that the determination as to whether surgical intervention is necessary is based on neurological findings?

A. Partially on neurological findings, partially on the patient's symptoms, and

partially on their pain level.

Q. Do you know what Jan Glasser's neurological symptoms -- I'm sorry, what were those three, again, that you used to determine whether or not to perform surgery?

A. It's her pain level, the neurologic findings -- now I can't remember the other one. Pain level, neurologic findings, certainly radiographic findings. I think I left that out. But you'd have to read back to me what the third one was.

THE NOTARY: Would you like me to go back?

MR. RUF: Sure.

(Record read back as requested, from Page 58, Line 20, through Page 59, Line 1.)

A. Okay. So I left out symptoms.

BY MR. RUF:

Q. You do not know Jan Glasser's pain level, neurologic findings, or her symptoms from August 7, 1996 to September 24, 1996, correct? That's the period during which Dr. Abood was treating her.

A. And that was before Dr. Leb saw her

and before --

Q. Correct.

A. Correct. What you said is correct.

Q. You do not know either her pain level, neurologic findings, or symptoms during that period of time, correct?

MS. VANCE: Objection.

A. I think that's correct.

Q. So based on that, you can't determine whether or not surgery was indicated for her during that time period, correct?

MS. VANCE: Objection.

A. If she didn't have a cauda equina syndrome during that time, then I would say that surgery was not necessary during that time.

Q. Is your opinion that surgery is only necessary on a disk in a patient with cauda equina syndrome?

A. No, my opinion is that it depends on their pain level and on the other things we mentioned. But if you want something that says this is an absolute indication that

this requires surgery, a -- the perineal numbness, evidence of a cauda equina syndrome, then the surgery is indicated,

Q. Do you agree that permanent damage to a nerve exiting the lumbar spine can occur due to pressure from a disk?

A. Yes,

Q. Is it more probable than not that Jan Glasser's current condition is the result of pressure on the nerve exiting at the L4-5 level?

A. Well, it's due to a herniated disk at the 4-5 level, yes.

Q. Do you agree that there was enough compression of Jan Glasser's nerve exiting at the L4-5 level. to cause permanent damage to her?

MS. VANCE: At what time?

MR. RUF: At any time before October 14, 1996,

A. By definition, you can say that if you believe it's due to the herniated disk, then there was pressure and it was due -- we know she had a herniated disk.

BY MR. RUF:

Q. Do you have an opinion based on reasonable medical probability as to the specific date that occurred?

MS. VANCE: The date what occurred?

MR. RUF: The date that there was enough --

THE WITNESS: Permanent.

MR. RUF: -- compression to cause permanent nerve damage.

A. The only thing I can say is that prior to the phone call, she did not have the perineal numbness. If surgery or decompression or whatever would have occurred before that time, she would probably not have had the perineal numbness. So I can't tell you when that became permanent. Did that become permanent immediately as soon as she had it? I don't know, Did it become permanent an hour after it or two hours after that? I don't know. It's a combination probably of time and of pressure.

BY MR. RUF:

Q. But based on reasonable medical probability, can you give me a specific date when the damage became permanent?

A. I can tell you when -- all I can do is tell you that it was after -- it was sometime after the date that she called and said, "I've got numbness in my perineum." It was after that that it became permanent.

Q. Can you say with reasonable medical probability that there was not permanent damage to the nerve before October 11, 1996, the date of the phone call?

A. It would be -- it would be a different injury. The perineal numbness clearly occurred then, and so after that, the perineal numbness sometime in there became permanent. Any numbness that you want to talk about, numbness in the leg, that could have been -- that could have been permanent before that, and I can't tell you when that occurred.

Q. Do symptoms from compression of a nerve in the lumbar spine always correspond with how much of the disk material has

extruded?

A. No.

Q. Can you have extrusion of the disk material and not have corresponding symptoms until a later time period?

A. You mean does the disk herniate and then cause symptoms later?

Q. Correct.

A. Without herniating further?

Q. Correct.

A. I think no,

Q. So it's your opinion that if her disk herniated further, there would have to be corresponding symptoms?

A. Not necessarily. A disk can herniate and cause no symptoms. I have people who have herniated disks that are completely asymptomatic. So you can have herniated disks that have no symptoms. And so a disk can herniate and cause no symptoms. But if you have symptoms, you -- I believe you have them with the herniation of the disk. Is that -- does that make sense to you?

Q. Yes.
A. But I don't believe you can have the disk herniation and then it not change and then get a change in the exam. Now, I do believe that you can have a change in your symptoms, and your MRI scans stay exactly the same.
Q. Let me ask you this.
A. Okay.
Q. Could Jan Glasser -- strike that. Let me rephrase it,
Could the condition of Jan Glasser's spine found on October 14, 1996 have been present on September 30, 1996?
MS. VANCE: Could you read that back.
(Record read back as requested.)
MS. VANCE: Objection to foundation. Found radiographically, found on exam?
A. The last date was the surgical date?
Q. Correct.
A. I would say the answer is no. Was there a large disk there before -- there was a large disk there before on MRI scan. But

did something change before that surgery and the answer -- between that time and the surgery, yes. And she says it pretty clearly that something changed in there, and that's what changed and gave her her perineal numbness.

Q. Do you agree with Dr. Likavec's opinion that the findings shown on MRI on October 7, 1996 matched what he found at surgery on October 14, 1996?

A. He found a very large disk, The question is different. Can you have -- when I look at a very large disk -- and this was obviously very large, and his description is very large. Could it have been, you know, 3 grams bigger than the MRI scan -- or .3 milligrams bigger, I should say, than what's on the MRI scan? And he or I or no one of us would notice that, but that could be enough to cause her increasing symptoms.

I think what he said was true, is that it matched it. Did it match it exactly? That I don't know. And I doubt if he or I could tell that.

Q. Do you have an opinion as to the condition of Jan Glasser's lumbar spine from September of 1994 to August 1, 1996?

A. Can you define that a little bit for me.

Q. Sure. What was the condition of her herniation in L4-5?

MS. VANCE: What dates again?

MR. RUF: From September of '94 to August 1 of '96.

A. Not -- you mean just what we see on MRI scans?

Q. Correct, She had an MRI September -- July 30, 1994.

A. Correct.

Q. Do you have an opinion as to whether there was a worsening of her condition between '94 and '96?

MS. VANCE: Objection.

A. Well, in ninety -- give me another time in '96. Tell me when in '96.

Q. From September of '94 to August 1 of '96.

MS. VANCE: Objection,

A. I'd have to look at the scans again.
Q. There was no scan in between that time.
A. Okay. Then I don't think you can say if -- if the spine truly changed.
Q. What was your understanding of her ability to function during that time period?
A. Don't know. I don't have her -- his records on that.
Q. Was she able to use her back from September of '94 through August 1 of '96?
A. What do you mean, "use her back"?
Q. Did she have any trouble sitting during that time period?
A. Don't know.
Q. Did she have any trouble walking during that time period?
A. Don't know.
Q. Did she have any trouble dancing during that time period?
A. Don't know,
Q. Did she have any difficulty with any of the normal activities of daily living during that time period?

A. Don't know.

MS. VANCE: Let me object and interject. Obviously he is giving these answers now, but there are references in these medical records, and we reserve the right at trial to be able to point to specific entries and records that may not be --

THE WITNESS: Oh, sorry.

MS. VANCE: -- at the forefront of Dr. Rea's attention right now, but there are references in that time period that we will talk about at trial.

A, I'm sorry, I was under the -- I'm sorry, these dates, I'm trying to stay focused on those.

MR. RUF: Well, I'm going to object to that.

BY MR. RUF:

Q. Do you know what her ability to function with her back was between September of '94 and August 1 of '96?

A. Can I stop, and I'll look through the records again?

Q. Well, did you take that into consideration in rendering your opinion in this case?

A. Yes, but I need to -- but -- yes, but I need -- if you want me to look at those and answer specifically, I'll have to go back through those dates.

Q. Let me ask you this way: Assuming that she did not have any difficulties with daily living and she was able to use her back, would you agree it's more probable than not that there was not a worsening of her L4-5 disk during that time period?

A. Let me repeat that to make sure I understand it. If she had no problems with her back during that time, is it more probable than not that she would not have a worsening of her MRI scan -- or evidence of increased herniated disks on a radiographic study? Is that the question?

Q. If she had minimal problems during that time period.

MS. VANCE: Objection.

A. The answer is yes, more probable

than not, that she would not have a change. But she still could have a change, just as I talked about that people who have herniated disks or even worsening can have minimal symptoms. But if you say is it more likely than not, the answer is yes.

Q. Do you agree that there are no documented complaints of leg pain, leg numbness, and pelvic numbness from September of 1994 to August 1, 1996?

A, None that I know of.

Q. Do you agree that a herniated disk can lose moisture over time?

A. All disks lose moisture over time, and herniated disks do as well.

Q. Do you agree that when a disk loses moisture, the disk shrinks?

A. Correct.

Q. Do you agree that dehydration of disks is part of the natural aging process?

A. Correct.

Q. Do you agree that there could have been a shrinkage of Jan Glasser's herniation from September of '94 to August 1 of '96?

A. Are you saying is that a possibility?

Q. Yes.

A. Yes.

Q. Is it probable that given there's this aging process, there was a shrinkage of that disk?

A. Again, more likely than not.

MS. VANCE: Wait a minute. Let's check the time.

THE WITNESS: Okay,

MS. VANCE: What are the dates and what are the times again?

MR. RUF: September of '94 to August 1 of '96.

MS. VANCE: So the date of that second MRI to the time period when she comes under the care of Dr. Abood..

THE WITNESS: Correct.

MR. RUF: After she saw Ruch in '96 up until she saw Dr. Abood.

MS. VANCE: And you're asking is it more likely than not that the --

BY MR. RUF:

Q. Is it more likely than not that she had a shrinkage of the L4-5 disk since that is part of the natural aging process?

A. If she were -- and you do expect that, If, however, it is shrinking, then I would expect her symptoms to get better and her not to need any care for it.

Q. And during that time period, she wasn't getting care for it, and assuming that she was able to function normally, that would further support a shrinkage of the disk, correct?

MS. VANCE: Objection. It's inconsistent with the records.

A. If you -- yes, you do expect it to shrink over time, yes.

Q. And also wouldn't a lack of treatment during that time period and an ability to function further support that there was a shrinkage of that disk?

A. There may have been a shrinkage of the disk, yes.

Q. And if there was a shrinkage of the disk, would.. you agree that it's more likely

than not that her neurological findings would decrease?

A. Not necessarily. It's -- as I said, for example, with herniated disks, after we operate on them and take the pressure off, they may -- their reflex may stay gone even with no pressure.

Q. I want to go to August 7, 1996 when Dr. Abood first started treating her, Do you have an opinion as to whether Jan Glasser's L4-5 disk was impinging on the nerve at that point?

A. I'd have to see the records and see what it said about them on that day.

(Pause in proceedings.)

Q. I want you to assume that on that day Jan Glasser had leg cramps, muscle spasms, and muscle spasms of the foot, according to the patient information form of Dr. Abood.

MS. VANCE: Why don't you take a look for a second before you answer the question.

(Pause in proceedings.)

MS. VANCE: You can turn it around.

(Pause in proceedings.)

A. Okay. *Go* ahead. Can you ask that again, please.

Q. Do you have an opinion as to whether the L4-5 disk was impinging on the nerve on August 7, 1996, the first date Dr. Abood started treating her?

A. She has finding -- she has history here that he reports that is consistent with a disk protrusion or an aggravation *of* a nerve root. She has leg cramps, pain in the buttock, describes it as pain down her leg on the left, on the side of the leg, with pins and needles on the left leg on the side, also even going down into her foot.

So that's not -- that's a description that I look for when I'm looking for a herniated disk, so it is consistent with a herniated disk on that day.

Q. So would you agree it's more probable than not that the L4-5 disk herniation was impinging on the nerve exiting at that level?

A. It -- it's consistent with it, so I think yes.

Q. Do you have an opinion based on medical probability as to whether she had permanent nerve damage for the nerve exiting at L4-5 on that date?

A. No.

Q. From August 1, 1996 to September 24, 1996, the time during which Dr. Abood saw her, did Jan Glasser have any abnormality of the spine other than at L4-5?

A. On the basis of an MRI scan or on his plain films or --

Q. On the basis of anything.

A. I'd have to look and see the films during that time.

Q. Do you know whether she had any abnormalities of her cervical or thoracic spine during that time period?

A. Don't know.

MS. VANCE: He'd have to look at the films. That's what he said.

A, Yeah, I don't have that -- I'd have to look at those.

Q. Well, if there weren't any films taken during that time period, other than an x-ray, would you be able to render an opinion. on that?

A. I could look at an x-ray and make some opinion, but the answer is no.

Q. Were there any symptoms on August 7, 1996 that showed an abnormality of the cervical or thoracic spine?

A. She doesn't name any symptoms here, no.

Q. So would you agree it's more probable than not that she did not have an abnormality of her cervical or thoracic spine at that time?

MS. VANCE: Objection.

A. She may have had -- well, I'll say she -- she had abnormalities as defined by changes in the x-rays, such as disk degeneration and other things, but she -- it does not appear that she was complaining of those.

Q. But if there were abnormalities, they were not producing symptoms, correct?

MS. VANCE: As of that date?

MR. RUF: As of that date, August 7, 1996.

A. From this, I would say the answer is no, they were not causing symptoms,

BY MR. RUF:

Q. On August 7, 1996, did Jan Glasser have incapacitating pain from her back and left leg?

A. From the information here, I can't say that it's incapacitating.

Q. Do you know if she had incapacitating pain from her back and left leg from September 24, 1996, the last date of Dr. Abood's treatment, up until the date of surgery?

A. It -- she had --

MS. VANCE: Let me just interject. At any point, or are you saying consistently during that time period?

Q. I'm just asking you to answer the question to the best of your ability.

A. There are times in there where she -- the pain is described as severe, and

she was very uncomfortable. And that sounds incapacitating.

Q. Do you agree that from the beginning of October up until the date of surgery, the pain was so incapacitating that she spent most of her time in bed?

A. Just one second,

(Pause in proceedings.)

A. Yes, she -- Dr. Likavec at least made a notation that when he saw her on October 9, she had at least been at home in bed for the last week and was on steroids.

Q. Would you agree that that was a worsening of her condition from October 7, 1996?

A. I'm sorry. Dr. Likavec saw her on October 9. And --

Q. I'm -- what date?

MS. VANCE: You said October 7.

MR. RUF: Let me reask the question

MS. VANCE: August 7?

BY MR. RUF:

Q. Do you agree that there was a worsening of her symptoms from August 7,

1996 up until the date of her surgery on October 14, 1996?

A. Yes.

Q. And do you agree that that worsening of symptoms is recorded after September 24, 1996?

A. The notes I have say that -- from the notes from Dr. Abood on August 7, looking at those and then looking at Dr. Likavec's notes on October 9, she worsened during that time.

Q. I want you to assume that toward the end of Dr. Abood's treatment, Jan Glasser was in so much pain that she was not able to sit during a dinner with her friends. Would you agree that that is a worsening of her condition from August 7, 1996?

MS. VANCE: Objection.

A. She had trouble sitting in August, so I can't answer how severe that was. I can't say.

Q. Do you know --

A. Without --

Q. Do you know whether she had problems

sitting during her job in working for Dr. Abood?

A, That, I don't know. But she did say on August 7 that she was having trouble sitting then. The degree of that, I don't know.

Q. Do you know whether there was a substantial worsening of her symptoms from August 7, 1996 to September 24, 1996?

MS. VANCE: While under Dr. Abood's care.

A. I don't have -- this is the first time I've seen his records, and --

Q. If you don't know, tell me you don't know.

A. Don't know,

Q. So given that symptoms correspond with additional extrusion of disk material, you cannot tell me whether there was additional extrusion of disk material during that time period, correct?

A. If I don't have any information from that -- between the time he first saw her until the time that he quit seeing her, and

I have no other information, then I can't tell you.

Q. Do you agree that the potential causes of the additional extrusion of disk material between July 30, 1994 and October 7, 1996, when the two MRIs were taken, are, one, Dr. Abood's chiropractic manipulations, and two, the normal activities of daily living?

MS. VANCE: Oh, objection. Just those two things?

MR. RUF: Yeah.

BY MR. RUF:

Q. If you can think of any other potential causes, please tell me.

A. You mean causes that I know about?

Q. Yes.

A. No, not that I can think of.

Q. Based on the evidence you have in front of you, do you agree that the potential causes for the aggravation of the disk as shown on MRI from July of '94 to October of '96 are Dr. Abood's manipulations and the normal activities of daily living?

MS. VANCE: Objection.

A. If you say "potential causes," the -- and you look at -- and you look at statistically, when I see patients, for example, how many of those patients have chiropractic manipulation? A few. How many of those people complain of being worse after that? Every once in a while somebody does.

How many people do I see, then, who are worsened by other things or with nothing or with having no inciting event? That's much greater, So can something be associated with -- can pain be associated with chiropractic manipulation? That can happen. Can it be -- is it more likely that it's associated with normal activity? The answer is yes, it's much more likely to be associated with normal activity than it is with chiropractic manipulation.

Q. Well --

MS. VANCE: Don't cut him off.

Q. -- let me ask this, Doctor: I asked what the potential causes were. Do you

agree that the potential causes are Dr. Abood's manipulation and the normal activities of daily living?

MS. VANCE: And he also said nothing.

Q. Or nothing at all.

A, Or at least nothing we can identify, And if you look at the number of people who -- look at the number of people who say, "My pain worsened with this," the number of people statistically is much more likely to either be nothing or lifting, bending, stooping, the activities of normal life than it is to be associated with any type of manipulation.

Q. If Jan Glasser's symptoms worsened during the time she saw Dr. Abood, wouldn't it make it more likely than not that his manipulations caused a further extrusion of the disk material?

A. Not at all because those are relatively short periods of time, and many people are continuing to do their usual activities during that time. So that

doesn't -- the fact that she had an increase in her symptomatology is the same as if I have a patient that I do physical therapy on or I have patients doing physical therapy. Those people get worse, too. That's a very common thing. That's the reason I end up operating on them because they get worse with the physical therapy.

Q. Do you agree that you can have an insult or injury to a nerve, but some symptoms may take time to appear?

A. That is unlikely. There are symptoms that do take longer to occur, but numbness and pain are usually not them. If it --

Q. Do you know --

A. Sorry. If it is pain, it's a different kind of pain.

Q. Do you know what specific activities Jan Glasser engaged in from August 7, 1996 to October 14, 1996?

A. No.

Q. Are you aware of any specific activity that was likely to cause an

aggravation of her herniated disk during that time period?

MS. VANCE: What's the time period again?

MR. RUF: August 7, 1996 to October 14, 1996.

A. Well, she says here in her thing to Dr. Abood in August that the things that aggravate her condition, sitting, bending -- sorry! sitting, lifting, twisting, and coughing all increase her symptoms; and those are the things that increase symptomatology and can be associated with herniated disks.

BY MR. RUF:

Q. So do you agree that according to Dr. Abood's records, a twisting of the lumbar spine aggravated her condition?

MS. VANCE: Objection.

A. It does say that.

Q. So would you agree that any manipulation that involved a twisting of Jan Glasser's spine was contraindicated?

MS. VANCE: Objection.

A. I'm not a chiropractor. I don't know what extent they twist them.

Q. I'm asking you as a medical doctor. If there was twisting of her spine, wouldn't that be contraindicated since that aggravated her condition?

MS. VANCE: Objection.

A. Don't know. Not a chiropractor. Really can't give you an opinion on that.

Q. Do you have any reason to dispute the fact that Jan Glasser's herniated disk was the largest disk Dr. Likavec has seen in over 20 years of neurosurgical practice?

A, Don't know.

Q. Assuming that it is the largest disk he has ever seen in over 20 years of neurosurgical practice, wouldn't you agree that it's more likely than not that trauma or force on the spine caused the largest disk he's seen in over 20 years in practice?

A. No. I've seen patients with enormous herniated disks that had cauda equina syndrome with numbness in the perineum. We brought them in; we operated

on them immediately. And they had just coughed or sneezed or bent or whatever, so I don't think that that makes any difference. It just has to do with the size of the disk.

(Beeper sounds.)

Q. Have you ever operated on a patient with a disk larger than Jan Glasser's?

A. I've seen some that big. It's a large disk, though. There's no question about it.

Q. Did the person have any residual problems after the surgery?

MS. VANCE: Are you talking about Jan or his patients?

Q. Your patients.

MS. VANCE: At an L4-5 disk?

MR. RUF: Yes -- well, any disk in the lumbar spine.

MS. VANCE: Objection. I don't think he can compare two separate patients without knowing a lot more.

A. Do patients with large herniated disks -- I can just off the top of my head just think of one, and that was about two

years ago, and she continued to have some numbness in her leg. She came in with an enormous herniated disk very similar to this, as I remember it. And, like I said, talking about something that happened two or three years ago, and she, I think -- I think that she had some numbness, but can you expect that? Not unusual.

MS. VANCE: Do you need to take that page?

MR. RUF: I'm almost done.

MS. VANCE: He looked like he was --

THE WITNESS: We can go ahead.

BY MR. RUF:

Q. Do you agree that Dr. Likavec is in a better position to assess the status of her herniated disk at the time of surgery than you are?

MS. VANCE: What do you mean by status of the disk?

Q. If you can answer the question, answer it, If you need --

A, It's just -- it's the same thing. It depends on what you say. Can he decide

whether this was due to this or that? Probably not. But can he say it was a large disk? Absolutely. And he did.

Q. Since he's the one that actually did the surgery, is he in a better position to assess the degree of herniation or extrusion of the disk material on the date of the surgery than you are?

A. What do you mean by "degree"? Is it a large disk? Is it -- I mean, he said it was a large disk.

Q. How much of the material had extruded out of the disk'?

A. Looks like it was a big disk. Is he better -- is someone who looks at it directly -- if I do a disk, am I better able to judge that than someone who looks at the MRI scan? In many ways, no. We like to think we are, but we are probably not. But he said all the appropriate things. He says that it was a very large disk. And it was a large disk. You can look at the MRI scan and see it was a large disk.

Q. Since he actually did the surgery,

would he be in a better position to compare the findings of surgery to the MRI on October 7, 1996?

A. Maybe. Depends on what you were trying to compare.

Q. Do you agree that Jan Glasser kept in contact with Dr. Likavec as far as letting him know what her symptoms were?

A. Yeah, she called him before her surgery, yes.

Q. And based on Dr. Likavec's note of October 9, he told her that unless she was incontinent or could not urinate, to wait until the 14th to have the surgery, correct?

A, Correct,

Q. Do you have an opinion as to how much Jan Glasser's condition worsened just prior to surgery?

A. She became numb in her perineum.

Q. Can you quantify the degree of extrusion of disk material that occurred between October 9 and October 14?

A. No. Could be a small amount, but I believe it was something. It was just that

the disk was already quite large and it didn't take much.

Q. Do you have an opinion as to whether Dr. Likavec performed the surgery in a timely manner?

A. Sounded like he did. It's a matter of judgment. I would have thought real hard about operating on her on that day when she called in, but that's a judgment call.

Q. Although you've already testified that surgery on a disk is not an absolute necessity unless there's bowel or bladder problems, correct?

A. That's correct.

MS. VANCE: But he also testified that it was those complaints on that day that made this a surgical necessity and nothing before that date. It was the complaint --

MR. RUF: I object to counsel's statements.

MS. VANCE: I'm just making sure you remember what he said a couple hours ago about the fact that perineal numbness is the

event that made this a surgical necessity as of that date.

MR. RUF: You can explain your position at trial.

MS. VANCE: I'm just reminding you what has already occurred in this record.

BY MR. RUF:

Q. Did you read Dr. Likavec's deposition?

A. Yes.

Q. Is there anything that you disagree with in Dr. Likavec's deposition?

MS. VANCE: Objection. It's not a fair question.

A. Nothing I can remember specifically.

Q. And you did not read Dr. Dock's deposition?

A. No.

Q. Is there anything that you disagree with in the medical records?

MS. VANCE: Objection. Unfair question.

A. None that I can specifically say.

THE WITNESS: Let me just get this.

(Recess taken.)

Q. I have just one other question. Do you have any other opinions that we have not yet discussed?

A. (Indicates negatively.)

MS. VANCE: I'm going to object to that. Upon review of the transcript, I mean, if there are any opinions that haven't been thoroughly covered, we'll certainly advise you well before trial and give you an opportunity to redepose Dr. Rea.

A. None that I know of.

(Recess taken.)

BY MR. RUF:

Q. Do you have any opinion as to the value of the fluoroscopy that was performed and read by Dr. Gatlin?

A. To me, it just looks like a flexion/extension fluoroscopic exam, very standard in spine practices, looking for instability, can be done either under fluoroscopy or can be done with plain films.

Under fluoroscopy, which is, I believe, the way this was done, I think

there's not much information on what's normal as there is in Just routine flexion/extension films.

Q. Are you saying that there's no value to fluoroscopy of the lumbar spine?

A. I'm saying that it's not been studied enough to tell us that there is much value at all in it.

Q. Have you specifically studied whether there is value to performing fluoroscopy on a lumbar spine?

MS. VANCE: Objection.

A. Not done any research on it.

Q. Have you ever tried to assess a fluoroscopy that was performed of the lumbar spine?

A. We have looked at fluoroscopy ourselves for other reasons during myelography, myelograms, and other procedures, and I've found it not to be particularly helpful as compared to routine flexion/extension films.

Q. Any other opinions?

MS. VANCE: He'll talk about -- I

mean, nothing that we haven't already covered, essentially,

MR. RUF: All right. All set.

THE NOTARY: Doctor, would you like to read or waive?

MS. VANCE: I would like him to read the deposition.

-=O=-

Thereupon, the testimony of June 23, 1999, was concluded at 6:00 p.m.

-=O=-

"Attach to the deposition of GARY L. REA, M.D., Ph.D. Jan S. Glasser, et. al., vs. Noel Abood, M.D., et al. Case No. 350062

STATE OF OHIO:
ss:
COUNTY OF FRANKLIN:

I, GARY L. REA, M.D., Ph.D., do hereby certify that I have read the foregoing transcript of my deposition given on June 23, 1999; that together with the correction page attached hereto noting changes in form or substance, if any, it is true and correct.

_____

I do hereby certify that the foregoing transcript of GARY L. REA, M.D., Ph.D. was submitted for reading and signing; that after it was stated to the undersigned Notary Public that the deponent read and examined the deposition, the deponent signed the same in my presence on the _____ day of _____, 1999.

_____
NOTARY PUBLIC
My commission expires:

CERTIFICATE

STATE OF OHIO
SS:
COUNTY OF FRANKLIN :

I, Christine-Ann B. Marr, RDR, a Notary Public in and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named GARY L. REA, M.D., Ph.D., was 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 was reduced to stenotypy in the presence of said witness, afterwards transcribed; that the foregoing is a true and correct transcript of the testimony; and that this deposition was taken at the time and place in the foregoing caption specified,

I do further certify that I am not a relative, employee, or attorney of any of the parties hereto, and further that I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially interested in the action.

In witness whereof, I have hereunto set my hand and affixed my seal of office at Columbus, Ohio, on this 25th day of June, 1999.

Christine-Ann B. Marr

Christine-Ann B. Marr, RDR
Notary Public, State of Ohio

My commission expires: January 21, 2003

June 25, 1999

Dr. Gary L. Rea
c/o Ms. Victoria L. Vance
Arter & Hadden, L.L.P.
1100 Huntington Building
925 Euclid Avenue
Cleveland, Ohio 44115

Re: Jan S. Glasser, et al., vs.
Noel Abood, M.D., et al.

Dear Dr. Rea:

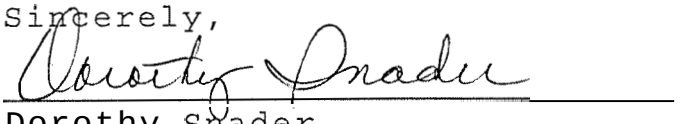
Attached you will find the transcript of your deposition which was taken in the above-styled cause on June 23, 1999, which is being sent to you for the purpose of reading and signing.

Please do not mark on the transcript. Any corrections/changes you may desire to make in your testimony should be typewritten or printed on the attached errata sheet, giving the page number, line number, and desired correction/change. After you have read the transcript, sign your name where indicated at the close of the testimony before a Notary Public.

The Rules of Civil Procedure allow 7 days for you to read and sign your transcript. Please return the transcript, signature page, and errata sheet(s) to Professional Reporters, Inc., 172 East State Street, Columbus, Ohio 43215, within that time.

Your cooperation in attending to this matter promptly is appreciated.

Sincerely,



Dorothy Snader

cc: Mr. Mark W. Ruf
Ms. Victoria L. Vance

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Fourth Edition

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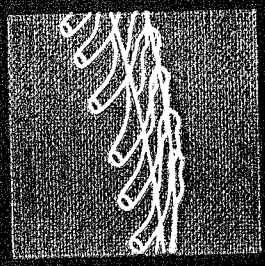

VOLUME 1

The Lumbar Spine

SECOND EDITION