

IN THE GENERAL COURT OF JUSTICE

NORTH CAROLINA

SUPERIOR COURT DIVISION
FILE NO: 01CVS 7570

CUMBERLAND COUNTY

JANE PHILLIPS, Individually and as the)
Administratrix of the Estate of)
JOHN ALAN PHILLIPS, deceased,)

Plaintiff,)

vs.)

ROBERT J. KASTNER, M.D. and CAPE FEAR)
CARDIOLOGY ASSOCIATES, P.A.,)

Defendants.)

The deposition upon oral examination of
JOHN M. MILLER, M.D., a witness produced and sworn before me,
Joyce M. Robinson, Notary Public in and for the County of
Hendricks, State of Indiana, taken on the 7th day of August, 2002
in the offices of Krannert Institute of Cardiology, 1800 North
Capitol Avenue, Indianapolis, Marion County, Indiana, pursuant to
the applicable Rules of Trial Procedure. This deposition was
taken on behalf of the Defendants in the above-captioned matter.

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APPEARANCES

FOR THE PLAINTIFF:

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FOR THE DEFENDANTS:
(VIA TELEPHONE)

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1 JOHN M. MILLER, M.D., the witness herein, having been first
2 duly sworn to tell the truth, the whole truth and nothing but the
3 truth, was examined and testified as follows:

4 EXAMINATION,

5 QUESTIONS BY MR. WALKER:

6 Q Good morning, Dr. Miller.

7 A Good morning, Mr. Walker.

8 Q My name, as you know, is Bob Walker and I represent Dr.
9 Kastner, a cardiologist practicing in North Carolina and
10 we're here to talk with you about your opinions concerning a
11 malpractice case pending against him in this state. You are
12 aware of that, are you not, sir?

13 A I am.

14 Q Have you had the occasion to give deposition testimony
15 previously?

16 A Yes, sir.

17 Q Let me tell what I will be doing in the short period of time
18 we'll be talking together today, and that is I'll be trying
19 to get all the opinions that you believe are medically
20 significant in connection with this case. I'm not here to
21 argue with you or pull out literature and compare tracings
22 or anything of that nature. I'm purely here for the purpose
23 of finding out what you have to say so I'll know in advance
24 what your testimony will be at trial. Does that make sense?

25 A Yes, sir.

1 Q In that spirit, the last question I will probably ask you
2 this morning will be, "Do I have all of your medically
3 significant opinions?" And if you answer that question
4 "Yes" we'll be through and if you say "No" we'll keep on
5 talking. Okay?

6 A All right.

7 Q Does that make sense to you, sir?

8 A Yes.

9 Q Would you mind telling me how it was that Ms. Lawing found
10 you, sir?

11 A I believe I got a fax from Byrd & Lawing, Wade Byrd
12 Associates, wondering if I would be willing to serve as an
13 expert witness in this case.

14 Q Do you know how it was that that law firm had your name?

15 A I don't.

16 Q I take it you've never done any reviews for them in the
17 past?

18 A No. That's correct.

19 Q Have you had an occasion to review cases for other lawyers
20 in the past and cases that involved the review of the
21 conduct of a physician?

22 A Yes.

23 Q Could you tell me about how many times?

24 A Less than half a dozen.

25 Q Okay. Have you ever had an occasion to give a deposition in

1 a medical malpractice case before?

2 A Yes, sir.

3 Q How many times?

4 A Again, less than half a dozen.

5 Q When was the last time?

6 A Boy. Probably, three, no, four years ago. Four years ago.

7 Q All right, sir. Have you ever reviewed a case prior to this
8 case that involved the conduct of a physician who practiced
9 in North Carolina?

10 A No, sir.

11 Q Have you ever worked with any North Carolina lawyers prior
12 to this particular case?

13 A Not that I'm aware of.

14 Q Okay. Let me read you just the names of some other
15 individuals that have been identified by Ms. Lawing as being
16 potential expert witnesses in this case and I just want to
17 see if you are acquainted with any of them. First of all,
18 Dr. Robert M. Stark from Greenwich, Connecticut?

19 A What was the last name again, sir?

20 Q Stark, S-T-A-R-K.

21 A No, sir.

22 Q Dr. Stephen A. Roberts from Philadelphia?

23 A No, sir.

24 Q I'm sorry, I didn't hear you.

25 A No. No, I'm not familiar with him.

1 Q And lastly a Dr. Ernest Madu, M-A-D-U, in Nashville?

2 A No, sir.

3 Q Have you spoken with anyone about this case other than Ms.
4 Lawing or a representative of her firm?

5 A No, sir.

6 Q Do you know any physicians who practice medicine in the
7 State of North Carolina?

8 A Many.

9 Q Let's narrow it down a little bit. Do you know any
10 cardiologists practicing in this state?

11 A Oh, yes.

12 Q Would you name a few of them for me?

13 A Dr. Tom Bashore at Duke University. Dr. Marshall Stanton at
14 Duke University. Dr. -- A whole bunch of them at Duke and
15 at Chapel Hill. Oh, cardiologists. Cardiologists we're
16 talking about. Let's see. Dr. Kirk Adams in Chapel Hill.
17 Dr. Tom Stuckey in Greensboro, Winston Salem. Dr. -- Let's
18 see. A guy in Greenville. I can't recall his name right
19 off, in Greenville. Rehan Mahmud, R-E-H-A-N, M-A-H-M-U-D,
20 in Greenville. A bunch of guys at Duke and Chapel Hill,
21 some in Ashville and scattered throughout the state. Dr. --

22 Q The ones in Ashville, would those be the Sanger Clinic
23 physicians?

24 A In Ashville? No. That's in Charlotte.

25 Q I'm sorry, you're correct. In Charlotte.

1 A I know some people there as well. Dr. Lazlo Littmann, Dr.
2 Bob Svenson, Dr. John Gallagher, Dr. Mark Kremers,
3 K-R-E-M-E-R-S. Others would you like?

4 Q That's fine. Tell me how it is that you happen to know this
5 many physician in our state.

6 A Well, I did some of my training in North Carolina and I know
7 a variety of guys with whom I trained in the past or with
8 whom I have professional association through professional
9 societies and so forth.

10 Q Do have you with you a current copy of your curriculum
11 vitae?

12 A Yes.

13 Q I have not yet been furnished one and I would ask if you
14 wouldn't mind would you give a copy to the court reporter so
15 she can make it a part of the transcript for this
16 proceeding?

17 A It has been done.

18 Q Tell me briefly about the training that you had in North
19 Carolina.

20 A I did my internal medicine residency training there from
21 June of 1979 to June of 1982.

22 Q At which institution?

23 A University of North Carolina, Chapel Hill.

24 Q And is that the extent of your medical training in our
25 state?

1 A Yes, sir.

2 Q And where did you get your undergraduate degree?

3 A My undergraduate was from Penn State University.

4 Q And how about your medical degree?

5 A Also Penn State in Hershey.

6 Q Okay. Do you have a particular area of interest in
7 cardiology?

8 A Specifically electrophysiology, analysis of
9 electrocardiograms, heart rate rhythm disturbances.

10 Q How would you compare your practice to that of Dr.
11 Kastner's?

12 A He would be more of a general cardiologist. He also had I
13 believe a nuclear license for stress testing and things like
14 that and I believe he did diagnostic catheterizations for
15 coronary arteriography. I'm more of a diagnostitian and
16 interventionalist in heart rhythm disturbances, stress
17 testing, electrophysiology studies, pacemakers,
18 catheterablation, implantible defibrillators.

19 Q Would you say that you and he have similar practices?

20 A Different emphasis.

21 Q And what do you mean by that?

22 A Well, he is more concerned with I believe clinical
23 cardiology, coronary artery disease management, risk factor
24 modification, that sort of thing. Most of my patients have
25 heart rhythm disturbance problems, but they also have these

1 other problems as well. It's not like a patient who has a
2 rhythm disturbance in isolation. They also very often have
3 coronary artery disease and heart failure.

4 Q Doctor, I want to move now and talk about the case for just
5 a minute, and let me share with you the way I prefer to do
6 it if you don't mind.

7 A Please.

8 Q To use a metaphor, if you were to write a book, "Things that
9 I Found Dr. Kastner Did Wrong," if that were the title of a
10 book, I'd like you to give me the table of contents so that
11 I can make a decision about which chapters we need to
12 discuss in detail. Some of them I'll already understand and
13 we won't need to discuss at all. Does that make sense?

14 A Okay.

15 Q Would you just give me then your summary of what you believe
16 Dr. Kastner did wrong in the management of this patient?

17 A First and foremost would be incorrect interpretation of the
18 results of the stress test, the electrocardiographic portion
19 of the stress test. Second, and following therefrom
20 directly, not referring the patient for cardiac
21 catheterization. And further treatment I think would not
22 have been within his purview, probably bypass surgery,
23 perhaps percutaneous coronary intervention, but his not
24 setting the ball in motion from that initial step was where
25 I think he went wrong.

1 Q All right. Have you been given a copy of and have you
2 reviewed the autopsy that was done on this patient?

3 A Yes, sir.

4 Q Let's go back and talk about first of all number one, that
5 is, your belief that he incorrectly interpreted the EKG. In
6 summary form tell me what he incorrectly interpreted.

7 A He viewed the results of the stress test as not indicative
8 of ischemia and in fact the stress test was positive,
9 suggesting myocardial ischemia.

10 Q Tell me what portion of the test was positive indicating
11 evidence of ischemia.

12 A There were several elements, including ST depression of 1.7
13 millimeters in Lead V6.

14 Q All right, sir. That would number one.

15 A Okay. ST depression of 1.4 millimeters in Lead II. ST
16 depression of 1.1 millimeters in Lead I and ST elevation of
17 2 millimeters in Lead V1.

18 Q Let me read back to you what you just told me to make sure
19 that I have it complete.

20 A Okay.

21 Q You believe that this strip is a positive strip and that it
22 indicates ischemia and the leads that document that on this
23 particular stress test are as follows: Number one, on Lead
24 V6 there is an ST depression of 1.7 millimeters?

25 A Yes.

1 Q On Lead II there is an ST depression of 1.4 millimeters. On
2 Lead I there is an ST depression of 1.1 millimeters. And
3 finally on Lead V1 there is an ST depression of 2
4 millimeters. Have I correctly read it back?

5 A You have. I've omitted a couple of elements though, if I
6 may.

7 Q Please add those now.

8 MS. LAWING: Bob, you said on the ST, you said,
9 "depression."

10 MR. WALKER: Correct.

11 MS. LAWING: His testimony was elevation.

12 A On V1.

13 Q Okay. Of 2 millimeters in elevation in V1.

14 A Yes. I'm sorry if I misunderstood that.

15 Q Okay. We're square. That's what we're here to do is to
16 make sure I have it exactly as you want it to be.

17 A Okay. I also would reference 1.3 millimeters of ST
18 depression in Lead V5 and to further clarify these, the type
19 of ST depression was up-sloping in Leads V5 and Lead II and
20 flat in Leads V6 and Lead I.

21 Q Now, let me read it back to you and I'd like for you to make
22 sure I have this absolutely correct.

23 A All right.

24 Q You found evidence of ischemia on this strip that is
25 diagnosed by ST depressions and ST elevations as follows:

1 There is an ST depression of 1.7 millimeters at Lead V6;
2 correct?

3 A Correct.

4 Q ST depression of 1.4 millimeters on Lead II?

5 A Correct.

6 Q An ST depression of 1.1 millimeters at Lead I?

7 A Correct.

8 Q An ST elevation of 2 millimeters at Lead V1?

9 A Correct.

10 Q An ST depression of 1.2 millimeters on Lead V5?

11 A 1.3.

12 Q And with respect to the depressions at V5 and Lead II, they
13 are up-sloping in nature?

14 A Correct.

15 Q And with respect to the depression at Lead I and the
16 depression at Lead V6, it appears to you to be a flat --

17 A Yes.

18 Q -- ST segment depression?

19 A Horizontal would be a more specific term. I'm sorry.

20 Q Now, let's go back. Any other abnormalities that you found
21 in connection with this stress test?

22 A I found some peaking, P-E-A-K-I-N-G, of the T-waves in Leads
23 V2 and V3 at peak exercise.

24 Q At peak?

25 A Yes.

1 Q Did you find those abnormalities to be diagnostic or
2 prognostic?

3 A I found them to be suggestive of ischemia. They are not
4 generally viewed as strong positive findings because they're
5 quite uncommon, but they are abnormal nonetheless.

6 Q Are they diagnostic of ischemia?

7 A I would not say they are themselves diagnostic of ischemia.

8 Q Are the ST depressions and elevations that you've described
9 for me in your opinion diagnostic of acute ischemia?

10 A Yes.

11 Q Would you share with me and explain to me why this patient's
12 cardiac enzymes were normal?

13 A Because he had not had enough damage to his myocardial cells
14 to have their membranes rupture and leak some of the
15 internal contents into the circulation. One can have
16 ischemia without infarction or actual muscle cell death.

17 Q What is your understanding as to the length of time this
18 patient reported a history of chest pain prior to his
19 presentation to the emergency department?

20 A I'm not sure I am aware of how long his pain had lasted
21 before that, but I can look that up.

22 Q Would that be important information?

23 A It's of some importance.

24 Q And why is that?

25 A The longer the pain lasts the more it's likely to be

1 infarction.

2 Q Would it also be true to say that the longer the pain the
3 more likely one would have abnormal enzymes and perhaps
4 elevated troponin levels?

5 A Yes.

6 Q How long would it take if a patient is having chest pain due
7 to ischemic changes in the heart for you routinely or
8 normally to expect there would be enzyme changes or troponin
9 level elevations?

10 A That's a difficult thing to answer. If one suddenly
11 occludes an artery and there is no so-called collateral
12 blood supply to give additional kind of rescue oxygen supply
13 to that portion of myocardium originally supplied by the
14 occluded artery it can take only fifteen or twenty minutes
15 for cell death to occur and irreversible cell damage to
16 occur resulting in muscle enzyme release. However, if the
17 occlusion is intermittent, establishing resumption of some
18 element of blood supply such that the cells are starving but
19 not completely dead, the pain can go on for quite some
20 length of time and not result in actual cell necrosis and
21 release of enzymes.

22 Q Were you able to locate the information as to how long this
23 patient complained of chest pain?

24 A I was able to locate the documents, but I don't find any
25 specification for length of time, sir.

1 Q Let's use some time and see if it impacts at all your
2 opinion about the enzymes and this troponin. Let us suppose
3 that he complained of this type of chest pain, say, for
4 thirty minutes. What information would that give you, if
5 any?

6 A That's kind of on the borderline, Mr. Walker. If it had
7 lasted significantly shorter than that, say, only five
8 minutes, I would be very surprised for there to be any
9 enzyme leak.

10 Q How about if it lasted an hour and a half?

11 A That would be much more suggestive of enzyme leak if it had
12 been continuous and unabating for that length of time.

13 Q Let me ask that you turn to the medical records that you
14 have.

15 A Okay.

16 Q And you'll find a paper or document that I will tell you is
17 entitled in my copy, has the nomenclature, "Triage Nurse
18 Assessment."

19 A Okay.

20 Q Do you have that document in front of you?

21 A It's a form with some handwriting on it?

22 Q Correct.

23 A Okay.

24 Q Let's look under the category, "Triage Nurse Assessment."

25 Do you see that?

1 A I do.

2 Q It say, "Patient had episode of chest pain, mid-sternal
3 yesterday"?

4 A Yes.

5 Q Are we on the same page?

6 A We are.

7 Q Look down at the bottom where it describes "location of
8 pain." Does it say, "Sternal and left arm"?

9 A Yes.

10 Q And does it under "quality of pain" describe that as being
11 burning?

12 A It does.

13 Q And under "associated symptoms" does it show a check for
14 diaphoresis and nausea?

15 A It does.

16 Q Are those pieces of information consistent with chest pain
17 in a patient who is having ischemia?

18 A Oh, yes.

19 Q And does it say "onset of symptoms is an hour and a half"?

20 A Yes, it does.

21 Q Now, ordinarily would you not expect a patient who presented
22 with these symptoms if they were caused by ischemic changes,
23 for that patient to have an elevation in his troponin level
24 and/or elevations in his enzymes?

25 A If that was how long the pain had lasted. However, the

1 duration is left blank and when I see "onset of symptoms,
2 one and a half hours," that means symptoms had their onset
3 one and a half hours before this assessment was made.

4 Q Can we agree that the enzymes and troponin levels were
5 absolutely normal?

6 A Yes.

7 Q Can we agree that there were three sets drawn?

8 A I believe so. I can confirm that for you if you'd like.

9 Q That's okay. Let's talk about the ST changes that you gave
10 me earlier. Would you mind telling me the time frames for
11 each of them? And to make it easy on you I'll just start
12 and read you each one at a time and I want you to tell me
13 where you see on this strip the elevations that you're
14 talking about or the depressions; okay?

15 A Okay.

16 Q With respect to the ST depressions on Lead V6 tell me what
17 time they are noted, what part of the test. And I have a
18 copy of the strip with me so it will quite simple once you
19 can share with me the location by time.

20 A Okay. We're starting with V6?

21 Q Correct.

22 A Okay. That would be during stage four and let me find
23 the -- because they're really not on -- Oh, yes, they are
24 paged numbered. This would be --

25 Q Well, mine has a time in the upper right-hand corner.

1 A Well, yes, and there's also a stamped number going sideways.
2 This would be 00143.

3 Q Oh, those would be her stamps, not mine, so let's do it by
4 time.

5 A Oh, okay. I'm sorry. This would be 9:05:19.

6 Q And this would be the fourth stage?

7 A Yes, sir.

8 Q It looks like fifty seconds into the fourth stage and nine
9 and a half minutes into the test?

10 A That's correct. Well, nine minutes, fifty seconds.

11 Q Sir?

12 A Nine minutes, fifty seconds.

13 Q Yes. I thought that's what I said. And on Lead V6 here you
14 see an ST depression of 1.7 millimeters; is that correct?

15 A That's correct.

16 Q Is this the only place that you see an ST depression in this
17 lead?

18 A No, but of that magnitude.

19 Q And is there a criteria or definition that one uses to
20 determine whether or not an ST depression is diagnostic or
21 not?

22 A Greater than 1 millimeter.

23 Q And the same question, is there such a criteria for an
24 elevation?

25 A Yes. It's 1 millimeter.

1 Q All right. If I wanted to go look that up, that is, if I
2 wanted to go read an article or treatise or a book or a
3 publication that said, "Here's the definition of an ST
4 elevation and a definition of an ST depression for the
5 purposes of diagnosing whether or not that is significant in
6 connection with the possibility of ischemia" where would I
7 go to look?

8 A Practically any textbook of cardiology would work.

9 Q Guidelines put out by any authority that you know of that
10 sets out those definitions?

11 A Absolutely. The American College of Cardiology has some
12 guidelines that they publish on their web page, as well as
13 in written form.

14 Q And it's your understanding that an ST depression by
15 definition is diagnostic if it is greater than 1 millimeter?

16 A It's an abnormal stress test and suggests the presence of
17 ischemia. There are other things that can do that, of
18 course.

19 Q Such as what?

20 A Such as left ventricular hypertrophy, digitalis effect,
21 hyperventilation, some electrolyte disturbances. A variety
22 of things.

23 Q Okay. Tell me, I take it with respect to V6 what you're
24 sharing with me is that the most significant ST depression
25 in this lead was a maximum of 1.7 millimeters; is that

1 correct?

2 A That's its greatest extent, yes.

3 Q Okay. Just talking about now about V6, just list for me if
4 you would, if you'd just flip through, give me all of the
5 portions of the strip where you believe there's an ST
6 depression on Lead V6.

7 A All right.

8 Q And if you'll just read me the times I'll make a note and
9 just go look at them later and it will save us a lot of
10 time.

11 A Okay. There start to be some changes at stage two, one
12 minute and fifty seconds into stage two, which the time of
13 that recording is 9:00:19.

14 Q All right. If you'll do it just like that, tell me it
15 starts there and continues and then tell me when it stops,
16 if it stops.

17 A Okay. It is progressive thereafter throughout the rest of
18 the test and then reverts back towards normal and by five
19 minutes into recovery which is 9:11:29, the ST segments are
20 back to normal.

21 Q Can you look at the point in time when the test is, the
22 stress portion of the test is terminated and recovery
23 begins? Will you find that section for me? I believe it's
24 at 9:06:31.

25 A That is one, although I would prefer looking at next one,

1 9:06:14.

2 Q Well, I don't have a 9:06:14. I have a 9:06:44.

3 A I'm sorry. 44 is what I meant.

4 Q Okay. We'll do that in a second. Let's first look at
5 9:06:31 and in particular Lead V6.

6 A Okay.

7 Q At this point in time has the stress portion of the test
8 stopped?

9 A It has.

10 Q And the patient's heart rate is 137?

11 A Yes.

12 Q Still elevated?

13 A Still depressed. Or which is elevated? His heart rate is
14 elevated. His ST segments are depressed.

15 Q Correct. That's my next question to you. How would you
16 describe the extent of the ST depression on lead V6 at
17 9:06:31?

18 A I would estimate that it is about 1.5 to 1.7. There's a lot
19 of baseline artifact there, but clearly it is depressed
20 greater than 1 millivolt, 1 millimeter.

21 Q All right. You wanted to look at 9:06:44. Let's go there.

22 A Okay. I prefer this one because there's not as much
23 baseline artifact and it's a little bit more clear.

24 Q All right. Tell me what you see on Lead V6 at 9:06:44.

25 A There are five beats to look at and it varies from about

1 1. 3 to 1.6, 1.7 millimeters. Each of them is in excess of
2 1 millimeter, however, of depression.

3 Q Okay. Let's now go to Lead II.

4 A Okay.

5 Q And if you would, tell me where the ST depressions begin
6 that you believe are diagnostic of the presence of ischemia
7 and where they end.

8 A Okay. We start seeing some ST depressions that meet
9 criteria for abnormal, that is, in excess of 1 millivolt
10 depression, at at least stage three. This is tracing
11 9:02:19.

12 Q All right, sir.

13 A And from there they continue and are probably at their worst
14 at about peak exercise or early recovery and that is on
15 stage four and let's have that as 9:05:19 as about the worst
16 they get. And you wanted to know when they returned to
17 normal?

18 Q Correct.

19 A All right. By five minutes, the same resumption of normal
20 for V6, these are normal.

21 Q And would you give me that panel number, please, or time
22 number?

23 A I'm sorry. 9:11:29.

24 Q Thank you, sir. The second question as to Lead I. And for
25 the record I'm asking when the ST depressions become

1 diagnostic for ongoing ischemia and when they end.

2 A Okay. We achieved diagnostic changes in Lead I in stage
3 three at 9:04:19. They continue therefrom and reach their
4 maximum extent during early recovery and I would have this
5 at about 9:06:44, and their return normalcy is at four
6 minutes into recovery, 9:10:29.

7 Q Okay. Now let's do on my list is number four which would be
8 ST elevations in Lead VI.

9 A Okay. All right. I have these as meeting diagnostic
10 criteria by about stage two and this is at 9:01:19. They
11 continue to be abnormal with their maximum degree of
12 elevation during the recovery phase. This would be at the
13 9:06:44 again, and their resumption of normal is not quite
14 complete by five minutes. And I believe that's the last
15 tracing we have. I'm sorry, and that is at 9:11:29.

16 Q Next I'd like for to you to please, sir, share with me the
17 information with respect to Lead Vb, that is, when the ST
18 depressions become diagnostic for ischemia, when they reach
19 their maximum and when they return to normal.

20 A I would say the beginning is in stage four at 9:05:19.
21 That's where it at least becomes clear. Their maximum is
22 reached probably at early recovery at 9:06:31 and their
23 return to normal is definite by four minutes into recovery
24 at 9:10:29.

25 Q My last two questions on this subject matter would be with

1 respect to the description of the type of depressions that
2 you saw on Lead V5 and Lead II, what you described as
3 up-sloping. Would you just simply look through the strip,
4 find the best example of that up-sloping and just give me
5 the time for it so I can look at it, please?

6 A (The witness complies with counsel's request.) I think
7 probably your clearest representation is going to be that
8 early recovery tracing at 9:06:44.

9 Q All right, sir. The same question, that is, the best
10 example or best illustration of the horizontal or flat
11 portion of the V6 and V I lead that you believe is an ST
12 depression.

13 A Lead I can either be that same tracing or the 9:06:31. The
14 V6 flat portion is best seen on the 9:06:31. These are both
15 early recovery.

16 Q Doctor, with respect to this stress test that you just
17 reviewed, is it completely unambiguous to you?

18 A In what regard, sir?

19 Q Is it clearly diagnostic to you of an ischemic event?

20 A It's clearly abnormal.

21 Q And I specifically asked the question "ischemic event" for a
22 reason and so let's start over and make sure we're on the
23 same page. You see on this strip representations that are
24 abnormal to you; correct?

25 A Correct.

1 Q And if one uses that information can you reach the diagnosis
2 that this patient has an ongoing ischemic event?

3 A One can suspect strongly that ischemia is present and it is
4 incumbent upon either the physician doing the study or the
5 physician taking care of the patient to find some other
6 reason why it is not ischemia because it is indicative of
7 ischemia. It's not diagnostic of ischemia. As I said,
8 there are other things that can cause ST segment
9 depressions.

10 Q Such as what?

11 A Such as the list I gave you earlier. Left ventricular
12 hypertrophy, digitalis effect, electrolyte disturbances,
13 some other medications, hyperventilation. But it is, as I
14 said, incumbent upon the person taking care of this
15 individual to show that those are not what's, that those are
16 what's going on and that it's not ischemia using other
17 testing modes such as cardiac catheterization.

18 Q Would it be a fair statement to say this test suggests to
19 you that there are changes or representations in the stress
20 test that are consistent with the ischemia, but not
21 diagnostic of ischemia?

22 A I think that's fair.

23 Q Therefore you believe the physician interpreting this test
24 has the duty to take additional steps to determine what's
25 causing these representations?

1 A Well, he's responsible for either taking those steps himself
2 or communicating that information to the individuals who are
3 primarily taking care of the patient.

4 Q Do you have an opinion as to the time frame within which
5 that should have been done?

6 A I would envision cardiac catheterization occurring sometime
7 within the following week.

8 Q And do you have an opinion satisfactory to yourself and
9 based upon reasonable medical certainty as to what the
10 findings of that cardiac catheterization would have been had
11 it been done within a week?

12 A Yes.

13 Q And tell me what your opinions are.

14 A I think he would have had significant left anterior
15 descending disease and perhaps right coronary disease.

16 Q Circumflex?

17 A Doubtful, but I should add that the ability of the
18 electrocardiogram taken during a stress test to localize
19 which artery or which segments of myocardium are involved is
20 imperfect. It says that there is indicative of ischemia or
21 suggestive of ischemia, but it's not quite so clear at
22 specifying the region.

23 Q Are there any other abnormalities in the strip as you see it
24 that we have not discussed?

25 A There are other abnormalities, yes.

1 Q Would you share those, tell me about those, please?

2 A We've spoken of the T-wave peaking which I find to be mildly
3 suggestive of ischemia, but I wouldn't say that's
4 diagnostic. There are some premature complexes that occur
5 from time to time. I don't assign a lot of diagnostic or
6 prognostic information or significance to them.

7 Q There was a stress test done in July of the same year. Did
8 you see that strip as well?

9 A Yes, I did.

10 Q And have you read that strip and interpreted it?

11 A I have.

12 Q Did you find any abnormalities on that strip?

13 A There were some mild abnormalities.

14 Q Any of the same abnormalities that you've described for me
15 here today with respect to the September strip?

16 A They were present in similar type, but not extent.

17 Q And what does that mean?

18 A That means that there were depressions in some of the same
19 leads, but they were not to the same extent as they were on
20 the September 18th stress test.

21 Q And "extent," do you mean duration or do you mean by
22 measurement?

23 A I'm sorry, I didn't clarify that. The actual amount of
24 depression. The number of millimeters of depression.

25 Q Okay. Do you have that strip in front of you or available

1 to you?

2 A I do.

3 MS. LAWING: Are you there?

4 MR. WALKER: Yeah.

5 THE WITNESS: We're here.

6 MR. WALKER: Oh, I'm just waiting for you to tell me
7 you had the strip available.

8 THE WITNESS: Oh, I'm sorry. I did.

9 MR. WALKER: Okay. I'm sorry. I did not hear that.

10 THE WITNESS: I'm sorry.

11 MR. WALKER: That's okay. We're back on the same waive
12 length now.

13 Q What I'd like to do, Doctor, is just take that strip and
14 quickly I'll read to you what you've told me about the strip
15 that Dr. Kastner interpreted and I just want to compare the
16 two. And for example the first thing we talked about was
17 that in the strip Dr. Kastner reviewed you saw on the Lead
18 V6 ST depressions that reached a maximum millivolt or
19 millimeter depression of 1.7 millimeters.

20 A Uh-huh. (Indicating affirmatively)

21 Q And I just want you to kind of compare the two strips lead
22 by lead and tell me what you see. Does that make sense?

23 A Yeah.

24 Q All right. Let's start with V6. Tell me how they compare.

25 A Okay. I'm looking at a couple of tracings here from the

1 July 15th study. Unfortunately these are both at 3:59 p.m.
2 I don't know how specific that gets, but they are both in
3 recovery, one at 0.06, or six seconds into recovery, and the
4 other is twenty seconds into recovery. And in V6 I see
5 about 0.5 millimeters on average. There is some variation.

6 Q All right. And let me feed it back to you.

7 A Okay.

8 Q In the July strip you see ST segment depressions on the V6
9 lead. The maximum amount though is approximately 0.5
10 millimeters?

11 A Correct.

12 Q Let's do the same thing with Lead II.

13 A Lead II, I can make a maximum of about 0.5 there as well on
14 Lead II.

15 Q And Lead I?

16 A I really don't see any depression there.

17 Q Lead V1 with respect to elevations?

18 A 0.5.

19 Q Lead V5 with respect to ST depressions?

20 A 0.2.

21 Q Now, using the 1 millimeter definition then clearly the July
22 15th stress test was not only non-diagnostic, but normal?

23 A I wouldn't say it's normal. A normal individual could
24 certainly have this stress test result. The ST segments do
25 change somewhat, but not of a diagnostic degree.

1 Q Can we then agree that the July 15th strip to your
2 interpretation was non-diagnostic?

3 A Correct.

4 Q Can we agree it's non-prognostic?

5 A No.

6 Q Tell me then what type of prognosis one could get from that
7 strip, July 15th strip?

8 A Well, ordinarily someone that has no chest discomfort, no ST
9 segment, diagnostic ST segment shifts and has a good work
10 load reaching their target heart rate has a very good
11 prognosis.

12 Q Are there classifications for prognosis for cardiac
13 patients?

14 A Yes.

15 Q And this particular patient, if you put him in such a
16 classification or could stratify his risk for a subsequent
17 MI as of September 17th, 1999, where would you place him?

18 A That is difficult to know. He probably has, I would just be
19 estimating at this point, but a ten percent chance of having
20 a myocardial infarction within the next two years.

21 Q Let's now change that our focus just slightly and I'd like
22 to talk to you about it and make sure I understand your
23 analysis of this particular patient as he presented to Dr.
24 Kastner. First of all, what is your understanding of Dr.
25 Kastner's role in visiting and seeing this patient?

1 A My understanding is that he was called at night about the
2 patient's having presented to the emergency room and having
3 had his myocardial infarction excluded and what his ECG's
4 and exam were like and the request was made by emergency
5 room personnel that Dr. Kastner would perform a stress test
6 the following day.

7 Q Can we agree that at the time Dr. Kastner saw this patient
8 he obviously had the information that was available to the
9 emergency department physicians?

10 A I think that's a reasonable assumption.

11 Q So if we make two columns, column number one being "pieces
12 of information suggesting a cardiac event" and "pieces of
13 information suggesting a non-cardiac event," under the
14 column "pieces of information suggesting a cardiac event"
15 what would you list?

16 MS. LAWING: I just want to object to the form of that
17 question.

18 MR. WALKER: Sure.

19 MS. LAWING: Go ahead.

20 A The features of Mr. Phillips' presentation suggesting a
21 cardiac event; correct?

22 Q Correct.

23 A The nature of his chest pain.

24 Q By description?

25 A The description of the chest pain.

1 Q All right.

2 A The fact that it occurred during exertion. The fact that it
3 was associated with nausea and diaphoresis. Those are
4 suggestive. And his previous history of having had a
5 myocardial infarction; his lack of significant efforts
6 toward risk factor modification, cessation of smoking,
7 cholesterol management.

8 Q And can we add to that list of course your interpretation of
9 the stress test?

10 A Well, I'm, I was a little confused here. I was thinking
11 that you were asking for what my interpretation was of what
12 information Dr. Kastner had at the time he first saw him.

13 Q Okay. I probably, I thank you for making that distinction.
14 Let me start over and make sure you and I are on the same
15 page.

16 A Okay.

17 Q It's your opinion and belief that at the time this patient
18 left the hospital, left the care of Dr. Kastner, left the
19 care of the emergency department, that he had significant
20 coronary artery disease; correct?

21 A Correct.

22 Q And it's your opinion at that point in time he had had
23 ongoing ischemia that started probably at the time of his
24 first complaints of chest pain and continued through the
25 stress test; is that correct?

1 A Let me clarify that. I believe he had ischemia which
2 prompted him to come to the emergency room that was
3 substantially gone by the time he got to the emergency room
4 and had not resulted in any cell death to the extent that
5 any measurable amounts of myocardial cell enzymes had been
6 released or were detectable. I believe he had ischemia
7 during the stress test, but I would not agree with the
8 statement that he had ongoing ischemia. That's too broad
9 for me.

10 Q Okay. Fair enough. You believe that he had ischemia
11 sufficient to cause clinical signs and symptoms which
12 brought him to the emergency room?

13 A I believe so.

14 Q But they didn't last long enough to cause any elevation in
15 his enzymes or his troponin levels?

16 A Correct.

17 Q But they did cause chest pain and other medical signs and
18 symptoms?

19 A Correct.

20 Q You also believe that based upon his history and his
21 presentation and the results of the stress test that he had
22 an acute cardiac problem?

23 A I would like you to clarify what you mean by "an acute
24 cardiac problem."

25 Q During the stress test he had an ongoing ischemic event?

1 A Well, he had ischemia induced by the exertion. That
2 ischemia was relieved when he stopped exerting, much as it
3 would if he'd taken a walk or taken a vigorous bike ride he
4 would have had some ischemia that when he stopped exerting
5 himself he would have relieved the ischemia. When we talk
6 in terms of an acute event that denotes more like an acute
7 myocardial infarction, which I don't believe he did have at
8 that time.

9 Q Okay. If we look on the side of the ledger of information
10 that suggests his presentation was non-cardiac what would
11 you put on the list?

12 A Lack of chest discomfort during exertion, during his stress
13 test I should say, his ability to have a good workload.

14 Q He did about eleven mets I think, did he not?

15 A Something like that, yes, sir.

16 Q Okay.

17 A He reached a good heart rate. It was not his target heart
18 rate, but he reached a good heart rate and mounted a good
19 blood pressure response. And that's it.

20 Q And his enzymes of course were normal?

21 A That doesn't tell me that he didn't have ischemia. That
22 tells me that he didn't have an infarction.

23 Q All right. Let me feed back to you what you just told me.
24 With respect to just looking at the stress test can we agree
25 that his exercise capacity was inconsistent with ischemia?

1 A No. We can't agree on that at all.

2 Q I'm sorry?

3 A We cannot agree on that.

4 Q And tell me why.

5 A Because individuals may have ischemia and still be able to
6 function quite well.

7 Q All right. Let's do it this way. How would you describe
8 his exercise capability in this test?

9 A Quite good.

10 Q How would you describe his clinical response to the stress
11 test?

12 A The fact that he didn't have any chest pain is good.

13 Q How would you describe his hemodynamic response to the
14 stress test?

15 A Good.

16 THE WITNESS: Are you still there, Mr. Walker?

17 MR. WALKER: Yes. I was waiting for you to respond.

18 A Oh, I'm sorry. I said his hemodynamic response was good.

19 Q I'm sorry, I didn't hear you.

20 A I'm sorry. Now, one can have all of those things, no chest
21 pain, good heart rate response, good exercise capacity, good
22 hemodynamic response, and have ischemia. If you have a poor
23 exercise response, including chest discomfort, a drop in
24 blood pressure or failure to increase your blood pressure,
25 lack of good heart rate response, those are more indicative

1 of ischemia, but even if all of those parameters look good
2 that doesn't mean an individual doesn't have ischemia.

3 Q Did you see any ST depressions or ST elevations at Leads V2,
4 V3 or V4?

5 A I saw a little bit of ST elevation in Lead V2 and V3, but it
6 was in the setting of the T-wave starting to go up and so I
7 didn't make as much of that as I might have. Is that
8 understandable?

9 Q Yes, sir, I understood it completely, your response. With
10 respect to the ST depression in V6, if I understood you
11 correctly that ST depression became progressively worse
12 throughout the stress portion of the test and then
13 diminished back to normal approximately five minutes into
14 the recovery period; is that correct?

15 A I'm just checking on the five-minute aspect, but all the
16 other elements are correct. Yes, I would say that's
17 entirely correct.

18 Q What information, if any, does that suggest to you?

19 A It is consistent with ischemia. The earlier an abnormality
20 occurs and the longer it persists into recovery the more
21 likely it is to represent ischemia and not some normal
22 variance. You can think of it as incurring a debt. The
23 myocardium as it becomes more ischemic is having more and
24 more oxygen debt and it takes longer and longer to pay back
25 to debt the more severe the ischemia has been.

1 Q And would you turn for me to the dictated report produced by
2 Dr. Kastner?

3 A If you'll give me a moment.

4 Q Surely.

5 A I have it here, sir.

6 Q Under the category "Results" would you read to yourself that
7 language that starts out with, quote, resting heart beat was
8 63 beats per minute?

9 A And I'll continue on if you wish.

10 Q I'll tell you what. The question I'm going to ask you is I
11 want to know if you agree with what he said in that
12 paragraph.

13 A Okay. "Basically an ECG, EKG revealed normal sinus rhythm
14 with minimal T-wave inversion in Lead III." Well, I don't
15 think I'd even call that. "Normal ST and T-waves. No
16 evidence of prior T-waves." That is correct.

17 Q With the exception of his description of the minimal T-wave
18 inversion in Lead III you basically agree with that
19 paragraph?

20 A As I look at it here he may have a Q-wave in Lead AVL, but
21 aside from that I'm not going to quibble.

22 Q Have we now discussed, Doctor, all of the ways in which you
23 believe Dr. Kastner misinterpreted the strip?

24 A I believe so.

25 Q In our state there is a requirement I believe that Ms.

1 Lawing has a duty to supplement me if you should change your
2 opinions in any way, and assuming for the purpose of
3 discussion that I'm correct in that she can't do so without
4 your help. So if after today if you change your opinions in
5 any way about this case or modify them in any way would you
6 please agree that you will notify her of that so she can
7 make a decision as to what do to?

8 A Yes.

9 Q Do you believe the information that you shared with me you
10 found in Lead V1 is specific for ischemic changes?

11 A No.

12 Q Is it just consistent with?

13 A Yes.

14 Q Would you share with me, and what little reading I've done I
15 was under the impression that V1 and AVR, those two leads,
16 were not used in looking at ST depressions as evidence of
17 ischemia. Am I incorrect about that?

18 A There is controversy about using those leads for ST
19 elevation. AVR is almost uniformly disregarded. V1 in some
20 resources is cast, aspersions are cast on its utility, but
21 others suggest that diagnostic information exists with ST
22 elevation in Lead V1. This goes back to the early 1980's,
23 in fact.

24 Q And I take it you are of the school of thought that Lead V1
25 can be used if there are ST elevations present as a

1 diagnostic tool?

2 A I am of that school.

3 Q Did you read in reading this strip a Xerox copy of the
4 stress test graph?

5 A That's all I have is the Xerox copies of the stress test.
6 I'm not sure what you're asking.

7 Q As opposed to a color copy.

8 A Oh, no. It's Xerox'd.

9 Q Okay. Did you read Dr. Kastner's deposition?

10 A Yes sir.

11 Q I think I may have shared this question with you or asked
12 this question of you earlier, but I take it other than Ms.
13 Lawing you've had no discussions with anyone about this
14 case; is that correct?

15 A That's correct.

16 Q I'm going to read to you a definition, Doctor, and I think
17 this is what you just told me earlier. I just want you to
18 tell me that I'm correct in assuming that. And the
19 statement I want to read you is as follows: "The most
20 commonly used definition for a positive exercise test result
21 from an electrocardiographic standpoint is greater than or
22 equal to 1 millimeter of horizontal or down-sloping ST
23 segment depression or elevation for at least 60 to 80
24 milliseconds after the end of the QRS complex." Do you
25 agree with that?

1 A I do, yes.

2 Q And when you gave me the interpretation of the strip with
3 respect to ST segment depressions or elevations did they
4 last at least 60 to 80 milliseconds?

5 A Yes, sir.

6 MR. WALKER: Now, the phone has gotten quiet again.
7 Are you looking?

8 THE WITNESS: I'm sorry. I said, "Yes, sir." I'm
9 sorry.

10 MR. WALKER: No, it's not your fault. For some reason
11 the phone sometimes does not work correctly. Just give me a
12 second. I believe I'm almost through if you'll hold on a
13 second.

14 THE WITNESS: I'm fine. Go ahead.

15 Q Doctor, I cannot find it in my notes, but I was looking for
16 a protocol that was developed at Duke for stratification of
17 patients. Are you familiar with what I'm talking about?

18 A There are several different. This is using results of
19 exercise testing?

20 Q Correct.

21 A Yes.

22 Q And if I can't find it we'll just talk about it at a later
23 date, but I was under the impression there was a
24 stratification that was used and I wanted to see if you
25 could use that stratification and apply it to this patient.

1 MS. LAWING: Are you asking him to do that?

2 MR. WALKER: If he knows what I'm talking about I am,
3 but if he don't know and I can't find it we'll talk about it
4 I guess at trial.

5 A I don't recall the specifics of the Duke stratification
6 scheme. There have been several published over the years
7 that have slight variations.

8 Q Okay. From the record there were indications by the
9 emergency room department physician, and if you need me to
10 refer you to a specific page I'll do so, but there was a
11 track used for this patient. Are you familiar with that
12 system, that is track one, track two, track three?

13 A Patients are sometimes put into clinic care maps or clinical
14 pathways where a certain set of orders or procedures are
15 carried out. I don't know what it was particularly in this
16 case, but that happens.

17 Q Okay. Let me read to you, save us a little time, what the
18 emergency department physician checked. She checked track
19 three which reads, quote, patients with atypical
20 non-diagnostic EKG, typical symptoms, cocaine use with
21 normal EKG, presumed non-cardiac calls, closed quote. I'll
22 read you the other two tracks if you'd like.

23 A I see it here, sir.

24 Q Okay. Good. I didn't know you had in front of you. Now,
25 do you agree with her placement of this patient in a track

1 three?

2 A Yes.

3 Q Okay. Do you have any other criticisms or comments about
4 the care Dr. Kastner rendered to this patient other than
5 what we've already talked about?

6 A I'm wondering why he was, the patient was not given any
7 specific advice or medications at the time of his discharge.

8 Q Okay. What's your information about that?

9 A Well, I don't think he was given anything in particular.

10 Q Medication-wise?

11 A Yes.

12 Q And what about instruction-wise?

13 A To follow up with his cardiologist I believe, but I would
14 have to, it's only my recollection here.

15 Q Other than the fact that you believe this patient should
16 have been offered subsequent testing, I assume in the form
17 of a cardiac catheterization; is that correct?

18 A Yes.

19 Q Is there anything else that you think Dr. Kastner should
20 have recommended to the patient?

21 A Well, if you'd recognize it as a positive stress test I
22 would have put him on some medications.

23 Q Such as what?

24 A Such as a beta blocker. I would have had him on some,
25 nitrates of a different variety are all reasonable.

1 Q Would you give me some examples?

2 A Isosorbide dinitrate, some sublingual nitroglycerin to take
3 in the event chest pain occurred. There are nitroglycerin
4 patches, long-acting mononitrate preparations. A variety of
5 things could be used for that, but some form of nitrate and
6 a beta blocker, again, a variety of those medications can be
7 used.

8 Q Doctor, I'll ask you what may be a very difficult question.
9 If you can't answer it I'll understand. It's just kind of
10 almost a personal question. I'll share with you that we've
11 had cardiologists look at this same strip and get completely
12 different interpretations and I guess my question I want to
13 ask you is is there in your experience a wide variation in
14 interpretation of strips like this among cardiologists?

15 A No, there isn't.

16 Q Do you believe that most cardiologists that you would
17 respect who would look at this strip would interpret it in
18 the same way you've interpreted it for me today?

19 A Yes, sir.

20 Q In addition, do you believe most cardiologists whose
21 opinions you would respect would not only interpret it the
22 same way, but conclude that the course of action you've
23 outlined for me would be the appropriate thing to do?

24 A Yes, sir.

25 Q And that the failure to do so would be a deviation of the

1 standard of care?

2 A Yes, sir.

3 Q Could you define the phrase "standard of care" for me?

4 A The usual practice carried out by individuals qualified in
5 their given field. Usual and customary care.

6 Q Other than the medical records from the office of the
7 cardiologist and the medical records from his '93 myocardial
8 infarction and this '99 presentation and the autopsy report
9 have you read any other materials about this case?

10 A I don't believe so.

11 Q Okay. Have you done --

12 A I'm sorry, I --

13 Q -- any research in connection with this case or gone back
14 and reviewed any articles to refresh your memory or anything
15 like that?

16 A Mr. Walker, I misspoke. I have two other documents.

17 Q Okay. Just tell me what they are.

18 A The deposition of Dr. Kastner.

19 Q Okay. Well, you mentioned that already. I counted that.
20 Anything else?

21 A Okay. And the Complaint by Mrs. Phillips.

22 Q Okay. Now, let's go back to the question about research
23 materials. Have you gone back and taken a look at any
24 research materials?

25 A Yes, sir, I have.

1 Q Tell me what you have looked at.

2 A I've looked at, refreshed my recollection on the utility of
3 leads AVR or specifically Lead V1 in the medical literature,
4 and this is some papers that are from about 1980, '81 in the
5 medical literature.

6 Q Just how many do you have?

7 A I found two or three.

8 Q And the purpose of your reading those materials was the
9 purpose of examining the question of the utility of those
10 two leads?

11 A Lead V1 in particular since that was some point of
12 controversy here.

13 Q And did you find those articles yourself or were they given
14 to you?

15 A No, I found them myself.

16 Q And would you just read the citations to the court reporter,
17 please, for me?

18 A I don't have them with me, but I can produce them if you'd
19 like.

20 Q Okay. I thought you had them in front of you.

21 A I don't.

22 Q If you could just give us the citations that will be fine.
23 I'll be glad to look them up.

24 A I'll have to do that afterward, sir.

25 Q That will be fine. Any other articles that you reviewed?

1 A No.

2 Q Journals, textbooks, anything like that?

3 A No.

4 Q It was your understanding prior to looking at those articles
5 that there was going to be some discussion about whether or
6 not V1 was specific for ischemia?

7 A After looking at what Dr. Kastner was thinking I was
8 surprised at his interpretation so I did look from that
9 perspective.

10 Q That's what caused you to take a look?

11 A Yes, sir.

12 Q Is that correct?

13 A Yes, sir. I'm sorry.

14 Q That's okay. Sometimes this telephone deposition stuff
15 doesn't exactly work out the way we want it to.

16 A I know.

17 Q I'm going to read you a sentence and you tell me if you
18 agree with it or not. And if I need to read more you just
19 let me know, but I'm curious with this V1 discussion we've
20 been having. The sentence reads as follows.

21 MS. LAWING: Can you tell us what you're reading from?

22 Q Let me read it first and then I'll be glad to. Quote,
23 exercise induced ST segment elevation is always considered
24 from the baseline ST level. You agree with that, I take it?

25 A Uh-huh. (Indicating affirmatively)

1 Q "ST elevation is relatively common after a Q-wave
2 infarction, but an ST elevation in leads without Q-waves
3 occurs in only one of a thousand patients seen in a typical
4 exercise laboratory."

5 A Okay.

6 Q And here's the last part: "ST elevation on a normal ECG
7 other than in the AVR or V1 that represents transmural
8 ischemia is very rare and in contrast an ST depression is
9 very arrhythmogenic and localizes the ischemia." Do you
10 agree with that?

11 A I'm not sure about the arrhythmogenic portion, but that is
12 correct, ST depression doesn't localize ischemia very well,
13 but ST elevation is much better at it. It is rare.

14 Q The reason I read you that and then I'll tell you where I --

15 A I'm sorry, may I continue?

16 Q It contains the language "Other than in AVR or V1."

17 A I had not finished. I'm sorry.

18 Q Okay. Go ahead.

19 A I can produce a variety of sources that say that V1 is a
20 reliable indicator so I have seen that in the literature as
21 well from the early days of my training.

22 Q Can we agree that that language suggests that AVR and V1 are
23 not specific for ischemia according to that sentence?

24 A We can agree that that's what that sentence says. That's
25 the opinion of the authors who wrote it. However, there is

1 significant variation in that opinion by equally qualified
2 authors.

3 Q Okay. This is from July 1997, the JACC. Do you take that
4 journal, by the way?

5 A Absolutely.

6 Q And this is a quote I got from the ACC and AHA Guidelines
7 for Exercise Testing. Are you familiar with that?

8 A I am, but I think they exclude AVR and not V1.

9 Q Well, we can take a look at it later. We won't argue about
10 it today. I just read it to you and I'll give you the page
11 and you can go look it up.

12 A Okay.

13 Q Page -- Actually it's twice listed, but the one I read to
14 you was from -- Here we go. Well, I actually can't give you
15 the page, but I can tell you it is under the category "ST
16 Segment Interpretation Issues," subparagraph "ST Elevation."

17 MS. LAWING: And it's from July of '97?

18 MR. WALKER: Correct. Looks like page 273 would be my
19 best guess, Volume 30, No. 1.

20 MS. LAWING: And did you say it was about exercise
21 stress testing?

22 MR. WALKER: I think if you look on page 273 you'll be
23 right there.

24 MS. LAWING: Can you tell us again the title of it?

25 MR. WALKER: Sure. "ACC and AHA Guidelines for

1 Exercise Testing, a Report of the American College of
2 Cardiology, the American Heart Association and the Task
3 Force of Practice Guidelines Committee on Exercise Testing."

4 MS. LAWING: Okay.

5 Q Doctor, any other medical opinions that you hold in this
6 case that you believe are significant?

7 A I don't believe so.

8 Q Have we now discussed all of the materials that you've
9 received and/or reviewed in connection with your work in
10 this case?

11 A I believe so.

12 Q All right, sir. Have you ever been involved in a
13 malpractice case as a defendant, Doctor?

14 A Yes, sir.

15 Q How many times?

16 A Twice.

17 Q If you answered I didn't hear it.

18 A I'm sorry. Twice.

19 Q Okay. Would you just give me a thumb nail sketch of what
20 was alleged in those cases?

21 A Well, I never actually saw the Complaints so I'm not sure.
22 I can tell you a little bit about them and let you decide
23 for yourself.

24 Q Sure. You said you were sued, but then you said you never
25 saw the Complaints. As far as you know was there actually

1 litigation involved in both of these matters?

2 A Well, yes. A suit was brought and I was deposed for one of
3 these.

4 Q Okay. And the other one you were not deposed?

5 A That's correct.

6 Q Would you just tell me if you can how they were resolved?

7 A Well, I believe they were both -- Well, I know the one was
8 resolved in a settlement, because the patient's chart had
9 been lost and there was no documentary evidence that either
10 side could produce. So that was somehow settled. I was
11 never privy to the details of that settlement.

12 Q All right, sir. And this other one?

13 A The second I was dismissed as a defendant because it was
14 determined that I didn't have any reasonable involvement.

15 Q Were you in Indiana at the time both of those matters came
16 to litigation?

17 A In neither case.

18 Q Where were you?

19 A I was in Philadelphia.

20 Q Okay. And do you remember whether they were brought in
21 state courts or in federal courts?

22 A I don't know, sir.

23 Q Okay. Tell me if you would, give me a one-sentence
24 description of each of the cases.

25 A The most recent one for which I was deposed my involvement

1 consisted of reading a couple of electrocardiograms on a
2 woman who came to the hospital. She subsequently died and
3 the reason I was involved at all was I had a stack of
4 electrocardiograms I was reading that day. Hers was, or a
5 couple of hers were among them and thus my name appeared on
6 her chart as having had, you know, read these
7 electrocardiograms. I was never part of her care giving
8 team, was never consulted in her care, never gave any
9 advice, and that was pretty quickly determined.

10 Q All right, sir. Were there any issues in that case as to
11 whether you had correctly or incorrectly interpreted her
12 strips?

13 A No.

14 Q Okay. And the second one?

15 A Was a case in Philadelphia in which a patient had a
16 life-threatening heart rhythm disturbance, ventricular
17 tachycardia. We were going to perform open heart surgery on
18 him on a certain day. My involvement was going to be the
19 cardiologist or electrophysiologist who was going to direct
20 the surgeon as to exactly where in the heart diseased tissue
21 should be removed in order to take care of the problem. The
22 patient the night before surgery started having much more in
23 the way of rhythm problems and had several cardiac arrests
24 in fact. I assembled the operating team, the
25 anesthesiologist, nurses, surgeons and so forth and my team

1 at about 2:00 in the morning getting everyone in on icy
2 roads in Philadelphia to try to save this man's life. The
3 operation went very well. He was cured. However, he had a
4 complication of his surgery a couple of days later and a
5 weakened portion of his heart muscle broke down and he had a
6 catastrophic event in the ICU. Emergency surgery couldn't
7 fix that, it was a hemodynamic problem, and he died. And
8 somewhere along the way his records vanished so his
9 hospitalization was quite a whirlwind and we had
10 recollections what was going on, but no one had any
11 documentary evidence so when his widow brought suit she
12 could only remember my name and the name of the cardiologist
13 who had taken care of the patient for about twelve hours
14 before his surgery. She couldn't remember the surgeon, the
15 anesthesiologist, anyone else, and there was nothing in
16 writing to say who was involved and who did what so that
17 was eventually apparently settled, again, the details of
18 which I'm not aware of.

19 Q Okay. And that litigation was filed in the state court of
20 Pennsylvania or federal court, or do you know?

21 A I just don't know, sir.

22 Q Okay. Fair enough. What is the county seat where you were
23 located at the time?

24 A That was Philadelphia.

25 Q Okay. Doctor, have you understood the questions that I've

1 asked you today?

2 A I believe so.

3 Q And have we discussed -- As I told you I'd ask you this when
4 we finished -- Have we discussed now all of the criticisms
5 that you have of Dr. Kastner?

6 A I believe so.

7 MR. WALKER: Okay. I thank you for giving me the
8 opportunity to speak with you today.

9 THE WITNESS: You've been most courteous.

10 MR. WALKER: Thank you, sir. Ms. Lawing, I'm through.

11 MS. LAWING: Okay. I don't have any questions.

12 MR. WALKER: Okay. Thank you very much.

13 MS. LAWING: Thank you.

14 (Exhibit 1 was marked for identification.)

15 AND FURTHER THE DEPONENT SAITH NOT.

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JOHN M. MILLER, M.D.

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STATE OF INDIANA)
) SS:
COUNTY OF MARION)

I, Joyce M. Robinson, Notary Public in Marion County, Indiana, do hereby certify that the deponent was by me sworn to tell the truth in the aforementioned matter;

That the deposition was taken on behalf of the Defendants at the time and place heretofore mentioned with counsel present as noted;

That the deposition was taken down by means of Stenograph notes, reduced to typewriting under my direction and is a true record of the testimony given by said deponent and was thereafter presented to the deponent for signature.

I do further certify that I am a disinterested person in this cause of action; that I am not a relative or attorney of any of the parties or otherwise interested in the event of this action

and am not in the employ of the attorneys for the respective parties.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal this _____ day of August, 2002.

Joyce M. Robinson, Notary Public

County of Residence:

Hendricks

My Commission Expires: January 22, 2008