IN THE COURT OF COMMON PLEAS

STARK COUNTY, OHIO

STEPHAN GERMANOFF,
Etc.,
Plaintiff,
vs. Case No.
AULTMAN HOSPITAL, 2000CV01475
et al.,
Defendants.

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The Deposition of NORMAN SCHNEIDERMAN, M.D., Witness herein, called by the Plaintiff for cross-examination pursuant to the Rules of Civil Procedure, taken before me, Beverly W. Dillman, a Notary Public in and for the State of Ohio, at Miami Valley Hospital, One Wyoming Street, Dayton, Ohio, on Thursday, July 5, 2001, at 1:58 o'clock p.m.

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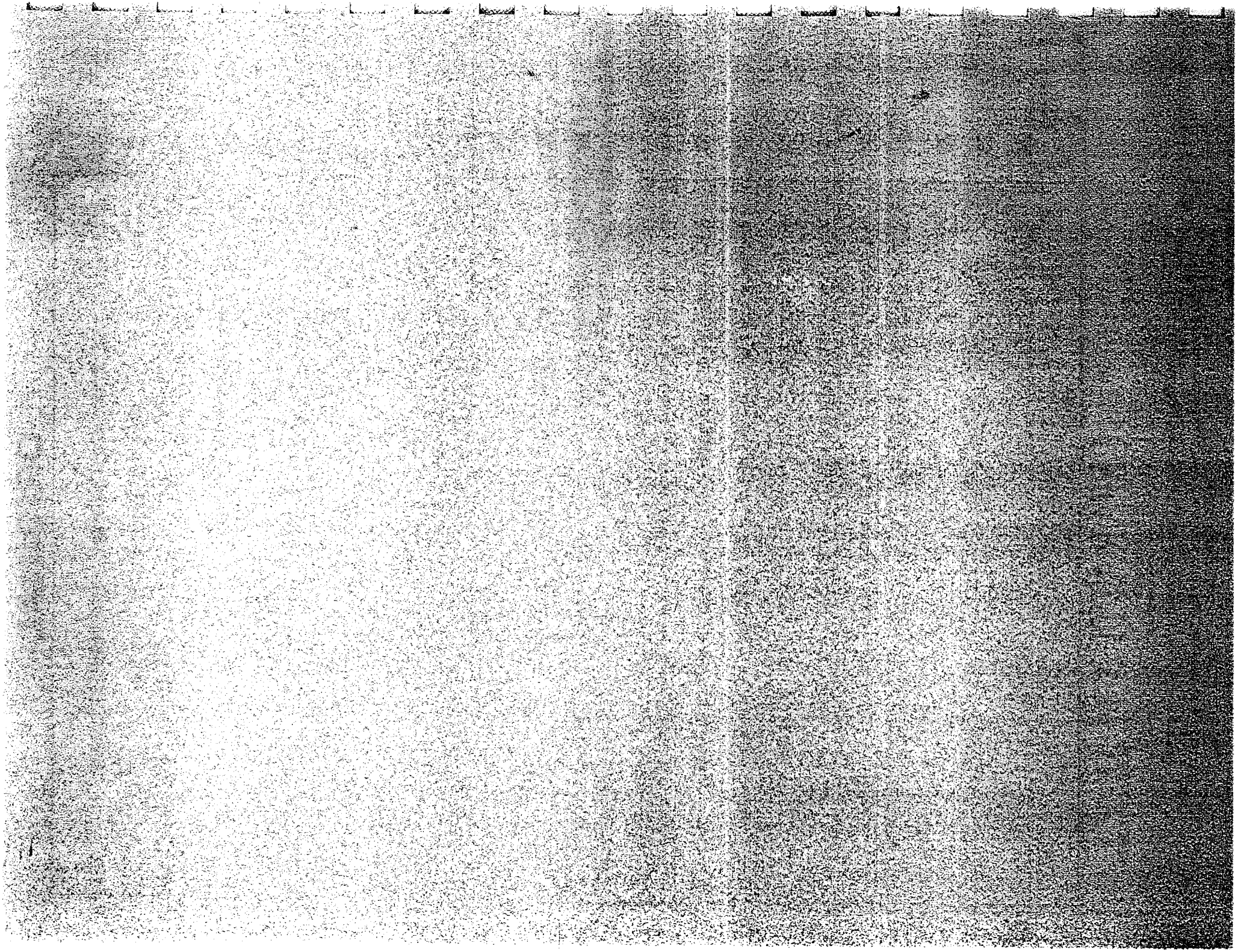

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NORMAN SCHNEIDERMAN,
M.D.of lawful age, Witness herein,
having been first duly cautioned and
sworn, as hereinafter certified, was
examined and said as follows:
CROSS-EXAMINATION OF
NORMAN SCHNEIDERMAN, M.D.
BY-MS.MATTHEWS:
Q. Hi, Doctor. I am Laurel
Matthews. We met once before --
A. Hi. We did. Hi.
Q. -- it now dawns on me. Nice
to see you again.
Could you state your full
name for the record, please.
A. Dr. Norman Schneiderman.
Q. Great. Well, as you know, I
have a series of questions for you. I
would just ask if you don't understand
one of my questions that you let me
know, okay?
A. Certainly.
Q. Is it reasonable for me to
assume that if you answer one of my
questions, you understood it?

A. I think that's reasonable.
MS. ATWELL: I just want to butt in, and then I will shut up. Laurel, you're extremely clear. The doctor is a little fainter. If you could angle the phone, anyone?
THE WITNESS: Yeah, I was leaning back, so I will sit closer.
MS. ATWELL: Okay. Thank you very much.
MR. KREMER: And this is Stefan, and I won't butt in again either, Laurel, but since there is a couple of us by phone, can we all agree that if there is an objection by one attorney, it counts as an objection by all defense counsel?
MS. MATTHEWS: That's fine with me.
MR. STRONG: Well, maybe Laurel will give us a continuing objection to the whole deposition, like Chuckdid.
MS. MATTHEWS: Yeah, I will, if you want one.

MR. KREMER: The only thing I am concerned about is if an objection doesn't come across on the phone, that's all.
MS, MATTHEWS: We will consider you phone people as joining everything; all right? Is that fair?
MR. KREMER: Thankyou, Laurel.
BY MS. MATTHEWS:
Q. Doctor, could you please state your address for the record.
A. My address here today is Miami Valley Hospital, One Wyoming Street, Dayton, Ohio 45409.
Q. All right. Now, before the deposition started I was informed that you don't have your file with you; correct?
A Yeah. I don't keep my file here when I am reviewing it. It's at my home.
Q. All right. Mr. Switzer did give me a chance to look at the materials he sent you and the

correspondence that he sent you, so I am just going to mark two things, if I may. They will be the only exhibits, 1 and 2.
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(Thereupon, Deposition Exhibit-1thru2 were marked for purposes of identification.)
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BY MS. MATTHEWS:
Q. Oh, I am sorry. Could you just identify these for the record, please.
A. Yes. One is a letter from Mr. Switzer, dated April 11th, and it talks about the trial date, etcetera. And the other is a bill that I sent, which is dated April 15th.
Q. And that's the date of your first report; correct?
A. That was the date -- it probably came around the date of my first report, yeah.
(Examining document.)

Yes, it's the date of the first report, correct.
Q. Am I correct, included in your bill, the date of the first report, is three hours to review the chart and the deposition of Dr. Hamrick?
A. Yeah. Three hours to review chart, deposition of Dr. Hamrick, that is correct, and a conference call.
Q. So it's reasonable to assume then that prior to preparing your first letter you read the chart and Dr. Hamrick's deposition?
A. That is probably true.
Q. At some point you prepared a second letter; correct?
A. That is correct.
Q. What did you read, prior to the second letter, that you hadn't read before the first?
A. Well, I can't tell you exactly, but there may have been some additional depositions and perhaps the path report. I can't tell you if I saw the path report with the first chart.

Q. Were you sent Dr. Waller's expert report?
A. No, because I have never seen Dr. Waller's expert report.
MS. MATTHEWS: Is there a transmittal letter Indicating when you sent the autopsy report?
MR. SWITZER: (Indicating.) Look on the first letter. Is it on the first letter?
MS. MATTHEWS: Oh, yeah, I am also enclosing the autopsy report.
THE WITNESS: Okay, so then I must have had the autopsy report, so that was not additional information.
But I do remember there was some additional information that I reviewed because I remember I was out of town when I reviewed it. And I can't tell you what it was, but it may have been some additional depositions, I don't know, maybe Dr. Hatcher's deposition? It wasn't the cardiologists' depositions because I know I read those later. But I can't tell you exactly,

but there was some additional Information.
BY MS. MATTHEWS:
Q. You're sure of that?
A. Oh, I'm quite sure.
Q. Okay. You say in your second letter that these opinions occurred to you after reviewing Dr. Hamrick's and Mrs. Germanoff's admissions just prior to her death. That's not accurate, is it, because you had already reviewed those?
A. I probably reviewed those, but I may have re-reviewed those, having gotten more information, and I formulated some additional opinions.
Q. Do you recall if you had a conversation with Mr. Switzer between the two expert letters that may have assisted you in having an additional opinion?
A. I don't think that was it. I don't recall that.
Q. And you have never seen Dr. Waller's report?

A. No, I have not.
Q. Have you seen any other expert reports, other than the plaintiff's experts?
A. I have reviewed the two cardiologists' who are involved, and I have reviewed more recently the deposition from the husband of Ms. Germanoff. I believe that's it.
Q. Okay. No other expert reports?
A. No. I have had -- there are two letters from the plaintiff experts, but not their depositions,
Q. Okay. And no expert letters from defense experts?
A. No.
Q. All right. Well, just -- do you know who Dr. Waller is?
A. It seems to me I have heard his name, and he may be a pathologist? Not sure.
Q. All right. If Dr. Waller said in his report that the troponin and myoglobin levels done between 12-16 and

12-18 were all abnormal, would you agree with him?
A. Between 12-16 and 12-18 were all abnormal? No, I would disagree with him on that.
Q. Would you agree or disagree if he said that the presence of continued chest pain and suspicious enzymes from 12-16 to 12-18 mandated a cardiac cath?
A. I would -- I would not necessarily agree with that but I would say that I am not a cardiologist.
Q. So you don't have an opinion one way or another as to whether, based on the enzyme changes, Connie Germanoff should have had a cardiac cath when she was admitted to the hospital?
A. I would not make a statement -- yeah, I am not a cardiologist. I am not in a position to judge that.
Q. Would you agree that cardiac cath is the gold standard for the diagnosis of coronary artery disease?

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A. I would -- I don't like to use the word gold standard. I would say that it is the best test we have. But that's not to say it's a gold standard.
Q. It's a better test than anything else available?
A. I think it is, yes.
Q. Would you agree with Dr. Kamen, the cardiologist who -- one of the cardiologists who treated Connie Germanoff, that even in the best series, 10 percent of patients with coronary artery disease can be missed by an adenosine stress test?
A. That's my understanding, that there is about 90 percent accuracy.
Q. And that's something you would expect an ER doctor, who practices emergency medicine, to be aware of?
A. I think an ER doctor would know that it's not a hundred percent.
Q. And I take it an ER doctor should know that you can't rely on a negative adenosine stress test in the

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presence of continued symptoms since it's not a hundred percent?
A. I think as an ER doctor I would say that you can't rely on a cardiac cath a hundred percent.
Q. Therefore, you have to always consider coronary artery disease in somebody with symptoms suggestive of coronary artery disease?
A. Always consider it and put it on your differential at some level.
Q. Would you agree that adenosine stress tests are particularly unreliable in women?
A. No. That's not my understanding.
Q. If Dr. Waller said that the failure to perform a cardiac cath on 12-18, before discharging Connie Germanoff, was below the standard of care and lead directly to Connie Germanoff's death, would you agree or disagree with that?
MR. STRONG: Objection.
THE WITNESS: I would not

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have an opinion since I am not a cardiologist.
BY MS. MATTHEWS:
Q. Would you agree with me that Connie had multiple cardiac risk factors?
A. Yes.
Q. Would you agree they are well set out in the medical record?
A. Yes.
Q. Would you agree with me if someone reviewed the medical record they would be aware of all her cardiac risk factors?
A. I wouldn't say all of them, but they would be aware that she had risk factors.
Q. Feel free to look at any records you want, Doctor.
A. I will, surely.
Q. Would you agree with me, when Connie presented to the emergency room on December 20th, her presentation raised the suspicion that she could have cardiac chest pain?

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A. On the 20th, this is when Dr. Hatcher saw her?
Q. Correct.
A. That she could have cardiac chest pain, yes, I think that that was possible, yes.
Q. In fact, that's something Dr. Hatcher considered; correct?
A. I believe he did because he did EKG and enzymes.
Q. And the symptoms she was having were that she was clenching her chest, she had midsternal chest pain radiating down the arm, and she vomited twice in the emergency room; correct?
A. I don't remember the vomiting, but that's possible.
Q. I think you will find it in the nurses' notes, if you would like --
A. I wouldn't -- it wouldn't surprise me necessarily. I know she, on previous times, had vomited.
Q. Would you agree those are fairly typical symptoms in someone presenting with cardiac chest pain?

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A. I think they are -- they can be consistent with chest -- with cardiac chest pain, as well as being consistent with other diagnoses.

Q. Right. But would you consider those typical symptoms, as opposed to atypical symptoms?

A. I would consider them to be typical for a cardiac chest pain, as they are also typical for GERD, as they are also typical for gallbladder disease.

Q. And that's the -- the issue when people come in with symptoms like that is the differential; correct?

A. Yes, that is the issue.

Q. And I think we already covered this, Dr. Hatcher thought she might be having an MI because he wrote an order for MI panel?

A. I think that when he first saw her, which is when he writes these initial orders, I think that that was in his differential.

Q. Right. And that's why -- I

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mean, he was suspicious enough to order an MI panel; correct?

A. Yes.

Q. And what is your understanding of what an MI panel consists off

A. The MI panel is not a universal panel throughout the United States. The MI panel at this hospital includes CPK, and then CPK-MB, if the CPK is elevated, a troponin and a myoglobin. That's the panel I believe at Aultman Hospital.

Q. And so she had all of those things; correct?

A. I believe she had all those things done, yes,

Q. Were you aware there is a chest pain unit at Aultman?

A. Yes, I became aware of that as I read through depositions.

Q. Would you agree that a patient you suspect is having an acute MI should go to the chest pain unit?

A. No.

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Q. Would you agree that the results of the MI panel done on the 20th of December were not normal?

A, That what was not normal?

Q. The MI panel.

A. That the MI panel was not normal? That's probably technically correct, but I believe that by the same token the MI panel was not abnormal,

Q. Well --

A. At least not meaningfully abnormal. For example --

Q. Uh-huh.

A. -- the myoglobin level, in my opinion, is a totally worthless test which we don't put on our MI panel. Are you okay?

Q. Uh-huh.

A. Oh, okay,

. And I think most hospitals don't because it's, unfortunately, too nonspecific a test. That's one example of why I responded to you the way I did.

Q. Okay. Well, let me just ask

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you a couple of questions about that. Based on the laboratory normal ranges that are given on the lab sheets at Aultman Hospital, would you agree that the myoglobin result falls outside the normal range?

A. Yes.

Q. Would you agree that the troponin level falls outside the normal range?

A. Based on the way they list it. For example, in our hospital, if the troponin level had been at that level, that would have been listed in the normal range. I think Aultman has an unusual way of categorizing troponins that the clinicians seem to sort of ignore, but the pathologists label as such.

Q. But based on the lab values printed on the sheet at Aultman Hospital, would you agree that the .04 falls outside the normal listed range for Aultman Hospital?

A. It falls into the -- how do

they -- what do they report it as? It falls outside of the drop-dead normal range and falls into the intermediate range, which is short of the abnormal range.

Q. You mean it's short of the diagnostic for acute MI range, is that what you mean?

A. Yes. Yes.

Q. Because by definition, if it's outside the normal range, it's abnormal; correct?

A. In this case I would not state it as such, as a clinician. And I think I can speak as the clinicians were thinking, also, who use this lab on a regular basis, and as they have said in their depositions time and time again, they did not consider this troponin to be abnormal.

Q. So if Dr. Waller considers a troponin of .04 to be abnormal, the other expert hired by the defense in this case, he is wrong?

A. That's his opinion.

Q. Is he wrong?

A. Is he wrong? No. That's his opinion.

Q. Well, it's either -- one of you has to be wrong.

A. Oh, no, no, no, no. We know that's not true in law. There is no right or wrong, there are opinions.

MR. HOWES: Well, I am going to object because I don't believe that Dr. Waller said that .04 was abnormal.

MR. STRONG: He sure didn't.

MS. MATTHEWS: He said all of the troponins done on Connie Germanoff were abnormal on the admission between 12-16 and 12-18. Wasn't one of them --

MR HOWES: I stand by my objection.

MS. MATTHEWS: Fine. All right. Let's move on.

BY MS. MATTHEWS:

Q. Are you familiar with any of

the studies that have talked about the prognostic significance of a troponin in the so-called gray zone?

A. I am not familiar with the studies, but I can tell you from years of experience and working with my 40 cardiologists here at this hospital, they have been very, very disappointed with troponins. Some of the groups don't even want us to do troponins, and they still consider the CPK-MB as the gold standard for the enzymes.

Q. I thought you didn't like that word.

A. I don't like that word. I just wanted to use it because you used it.

Q. So would you disagree that it's well established that an elevated troponin of .04 nanograms per milliliter or higher correlates with an increased mortality?

A. I have never read that. I would love to read articles that state that, but that has not been my

experience.

Q. Do you agree with Dr. Hatcher that you cannot rule out MI on the basis of one set of enzymes?

A. I agree with that.

Q. So these enzymes, whether they were normal or abnormal, didn't rule out MI; correct?

A. The enzymes in and of themselves would not rule out MI.

Q. Would you agree with me -- with the principle that a doctor's responsible for checking any labs he or she orders?

A. I think if you order a lab, at some point you need to find out the results.

Q. At a meaningful point, I would imagine?

A. At a meaningful point, and that's where it becomes debatable, but yes.

Q. You would expect, for instance, an ER doctor to know the results of their lab tests before they

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discharged the patient?
A. With the exception that there are sometimes some routine labs that we are ordering because a family doctor asks us to, like for example we might order thyroid studies, which don't come back right away. And with that exception, routine labs that maybe don't get done right away, I think that if we order labs, unless the patient is directly admitted and there is an understanding that the private attending will check them, that we should be checking the labs we order.
Q. Would you agree that up to 50 percent of EKGs may be normal in the early stages of a myocardial infarction?
A. Yes, I do.
Q. So the EKG that was done on the 20th didn't rule out an acute MI either?
A. No.
Q. Did the combination of the EKG and one set of enzymes rule out an acute MI?

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A. No.
Q. You wrote -- you were one of the authors of a book, correct, Emergency Medicine Risk Management, a Comprehensive Review?
A. I wrote one article for that.
Q. Is this a good book?
A. I think it's a decent book, yes.
Q. And it was published in 1991 by the American College of ER Physicians; correct?
A. That long ago? Oh, boy. It seems like only yesterday.
Q. Do you agree with this sentence from the book, Page 416: All enzyme testing is extremely unreliable in the early stages of a myocardial infarct and would not be positive in cases of unstable angina?
A. Yes. Unstable angina, the enzymes will not be positive, and the enzymes don't become positive in acute MIs at the earliest until about three

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hours after the actual infarct starts.
Q. All right. Would you agree with this sentence from the book, Page 416: If the emergency physician orders one CPK, the patient should be admitted or observed carefully, and a second CPK ordered at the proper time interval?
A. No, I wouldn't agree with that. I think in 1990-'91 that was the thinking. But I think that has changed.
Q. Isn't that the principle behind chest pain units?
A. No. The principle behind chest pain units or observation units is to create a situation where some intermediary patients that you really feel that you can't exclude, based on the history, and you want to observe for a period of time, I think that's what actually created the concept.
Q. Are you familiar with the protocols of the chest pain unit at Auitman Hospital?
A. No, I am not.
Q. Okay. Can we agree that

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Connie Germanoff, on the 20th, had symptoms for more than a half an hour?
A. I am not sure, but it's quite possible she did.
Q. If you would like to look at Dr. Hatcher's dictation, I think it might have --
A. I don't really need to. It doesn't -- it doesn't matter to me whether she had it more than a half hour or less than a half hour.
Q. Okay. We talked about -- the EKG, you would agree, is not diagnostic?
A. The EKG is not diagnostic unless it's absolutely positive.
Q. In this case.
A. A negative EKG is not diagnostic in and of itself.
Q. And this particular EKG is nondiagnostic?
A. This EKG I would read as normal.
Q. And, therefore, it's nondiagnostic?

A No, it's diagnostic of being normal. It's just it doesn't tell you a hundred percent the patient is not having coronary ischemic disease.

Q. Okay. If the Aultman Hospital Heart Attack Triage Guidelines provide that in patients who have symptoms more than 30 minutes, where the symptoms are typical symptoms --

A Right.

Q. -- and you have a nondiagnostic EKG, the mandated guidelines are serial EKGs, serial CPKs, myoglobins and troponins, and disposition to the CCU, would you disagree with that management for Connie Germanoff on 12-20?

A Would I disagree with the management that Dr. Hatcher provided on the 20th, you're saying in light of these criteria?

Q. Correct.

A Could I look at those criteria?

Q. Sure.

A Thankyou.

MR SWITZER: These are the hospital policies?

MS. MATTHEWS: Correct.

THE WITNESS: Okay, it says Aultman Hospital Heart Attack Triage Guidelines, and do we know whether this was created by the emergency department or the cardiologist? Do we have any idea?

MS. MATTHEWS: I was told that these are the ER chest pain center triage guidelines.

MR. SWITZER: Are these the hospital nursing policies?

MS. MATTHEWS: No. The hospital is here, do you --

MR HOWES: I am not prepared to comment one way or the other.

MS. MATTHEWS: They were provided to me in response for requests for production for any and all protocols from the chest pain center at Aultman emergency room. That's all I can tell

you.

MR SWITZER: Again, my question was -- and you may not know the answer -- are these hospital nursing policies for the ER?

MS. MATTHEWS: I don't know.

MR. SWITZER: You don't know. Okay.

MR STRONG: Can I see this?

MS. MATTHEWS: Sure.

THE WITNESS: Okay. Well, let me say this, it says here, Track 3-A, symptoms greater than 30 minutes. If the symptoms are typical, if the EKG is nondiagnostic, then they are saying serial EKG, serial CPK, myoglobin, troponin, positive or negative rest cardiolite with pain, and then it says disposition CCU. I am not sure what they mean by positive or negative rest cardiolite with pain. I am not saying -- I don't know whether they mean that that test must be done as part of

the evaluation, and that if it's positive or negative it doesn't make any difference, so I am at a little bit of a loss,

I will say this: I would be surprised that they would be admitting a patient to CCU with the paucity of these evaluations. Usually if you admit a patient like this they go to like a telemetry bed, because they are considered low risk, as opposed to definite EKG findings.

So I don't know how old this is. It says it was revised 6-5-98, so that's fairly recent. The only thing I would say is this: This says nondiagnostic EKG, and then they have another cardio -- another category which says normal EKG, under Track 4-A.

BY MS. MATTHEWS:

Q. But that's for symptoms less than 30 minutes; correct?

A. Right. But they also say under symptoms less than 30 minutes,

nondiagnostic EKG, on Track 4-B.
Q. Well, that's with atypical symptoms?
A. I understandthat. I understandthat. But my point is is that this patient, while they had typical symptoms, didn't have the nondiagnostic EKG, had a normal EKG. And I only brought the others up that they are creating a category of normal EKG. Nondiagnostic EKG, according to them, I assume, is not a perfectly normal EKG.
Q. Well, Connie Germanoff had a sinus arrhythmia; didn't she?
A. That's a normal finding. Sinus arrhythmia -- I have a sinus arrhythmia; you probably have a sinus arrhythmia.
Q. I hope not.
A. She had a normal EKG, and a sinus arrhythmia is part of a normal EKG. So a lot of this depends on what they meant by nondiagnostic. And as these other gentlemen have mentioned, we

need to find out were these nursing triage guidelines? But that's about all I can say, based on this.
Q. Okay. So my question is, again --
A. Yes?
Q. -- is based on these guidelines that you have before you, would you agree that the best track to place Connie Germanoff, given everything that's here, would be 3-A?
MS. ATWELL: Objection.
THE WITNESS: I would say that she doesn't fall into either Track 3-A or Track 3-B because -- she is not 3-B because her symptoms were not typically atypical. And she didn't have a nondiagnostic EKG, so she is not Track 3-A.
BY MS. MATTHEWS:
Q. So even though the normal EKG is nondiagnostic, you would not feel that she requires the serial EKGs and enzymes?
A. I would say that based on a

normal EKG she didn't fall into this cookbook.
Q. Uh-huh.
A. And, therefore, I wouldn't use this cookbook to make a decision on this patient.
Q. Well, if a normal EKG doesn't rule out acute MI, and a normal set of enzymes doesn't rule out acute MI, and acute MI was in the differential diagnosis for the patient on 12-20, what is it exactly that transpired that allowed Dr. Hatcher to determine this wasn't an acute MI -- was not an acute MI?
A. Well, we as clinicians are never able to totally rule out anything --
Q. Uh-huh.
A. -- by tests. Medicine is not a science, it's an art. And there is no question in this case that the patient's previous extensive cardiac workup, albeit not including a cardiac cath, did give the physician, Dr.

Hatcher, for example, a lot of information that he relied upon, including not just what had been done, but the fact that he knew two cardiologists who had gone over this patient quite carefully. And that influenced his decision, as it should.
If this patient had come in off the street as a total stranger and had never been -- previously had any cardiac evaluation, he might have done things differently. You would have to ask him. But there is no question the previous workup did give him a lot of information that a stranger wouldn't have.
Q. Well, he had all that information, everything you just talked about, he had all that information before he ordered the acute MI panel; didn't he?
A. Yes.
Q. So what information did he have after he got back the labs that he didn't have before?

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A. Well, he had a chance to observe the patient for a period of time. He had a patient -- an opportunity to examine the patient on a number of occasions, and he was reassured somewhat by what were considered normal studies, nondiagnostic studies, albeit, but not abnormal studies -- nonabnormal studies.

Q. You lost me on that. I mean, the myoglobin was abnormal; correct?

A. Myoglobin is a worthless test.

Q. He ordered it.

A. As part of the panel. He didn't specifically say myoglobin, he ordered the panel. The hospital pathology department creates that as part of the panel. It is a test that we don't even do, that we have never done. It is meaningless. I will go on the record by stating if I blow my nose now my myoglobin probably will go up,

Q. Well, in fact there are lots

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of authors of great stature that believe that the myoglobin, together with other cardiac markers, is a valuable test; correct?

A. I couldn't tell you that. I can't tell you any off the top of my head. It is a worthless test. We have never, ever done it here.

Q. And so if the American College of ER Physicians put out the -- a series of papers talking about the value, you would disagree?

A. I would disagree.

Q. And if the National Heart Attack Alert Program Working Group, published in the Annals of Surgery, felt the myoglobin was a useful test --

A. Surgery?

Q. Annals of Emergency Medicine, I am sorry -- you would disagree?

A. Oh, okay. I disagree. I think it's a confusing, worthless test that should be eliminated.

Q. And you disagree with Dr. Braunwald and Dr. Antman and all the

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other noted cardiologists --

A. I know Dr. Antman. I went to college with him.

Q. So you would disagree with him too?

A. I would disagree completely, I think it's a confusing test that should be eliminated.

Q. Would you disagree that every time a patient comes in with a presentation suggestive of acute myocardial infarction, you have to look at them as a new patient?

A. Well, you can look at them as a new patient, but you can't ignore extensive past evaluations. I mean, things can change, but you take it all into consideration and you look at the patient.

Q. Well, what was so extensive about her evaluation?

A. She had been having symptoms for at least three months, maybe longer. She saw at least two cardiologists.

Q. Uh-huh.

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A. She was admitted once for this.

Q. Uh-huh.

A. She had two stress tests. The first was inconclusive because it was not a maximal stress. It only went to about 72 percent, as I recall, of her maximal. She then had another stress test done three months later, which was normal.

She had, during this time period, many EKGs. She had a quite extensive evaluation. Now, we know that nothing is a hundred percent. But she had quite an extensive evaluation.

Q. Well, didn't she in fact -- didn't she in fact only have one meaningful stress test?

MR. STRONG: Objection.

THE WITNESS: She had one stress test that was absolutely 100-percent effective. She had one that was only 72-percent effective. That's not to say you ignore that first stress test, it just was not a hundred percent

stresstest.
BY MS. MATTHEWS:
Q. So essentially her extensive workup consisted of the same test twice?
A. Same test twice, both times normal, and seeing two highly respected, well-trained cardiologists.
Q. Both of whom have testified, have they not, that had they known she was back, they would have cathed her?
A. That's what they said.
Q. So, obviously, someone didn't communicate to Dr. Hatcher that the cardiologists weren't sure that this wasn't cardiac, did they?
A. Well, I am not sure why the cardiologists weren't sure it wasn't cardiac. If they weren't sure it wasn't cardiac, after having her in the hospital, why didn't they finish their evaluation? But I think it was reasonable for Dr. Hatcher to assume that they felt quite confident that this was not cardiac, when they released her.
As an emergency physician

I am here to attest to the fact that it is the standard of care, that the doctors met the standard of care in emergency medicine to rely on the fact that the cardiologists had had a chance to work her up, and let her go, that she was evaluated for cardiac disease.
Q. So, therefore, it's your opinion, I take it, that if the cardiologists weren't sure this was cardiac, they should have done whatever was necessary to make sure it wasn't cardiac?
MR STRONG: Objection.
THE WITNESS: I can't attest to the standard of care for cardiology. All I can say is it is the standard of care in emergency medicine for emergency physicians to rely on their cardiologists and their past workups.
BY MS. MATTHEWS:
Q. Well, then, I think it's reasonable for Connie Germanoff to rely on all her doctors, don't you?

A. Well, I think patients do that, but I think patients also know that nothing is a hundred percent, and that we can't root out and diagnose accurately every known disease to mankind, and that there is approximately a 2- to 4-percent failure rate to diagnose acute MI, and these patients die of sudden death. And that is an accepted, established percentage of failure,
Q. Right. But Connie Germanoff kept coming back with chest pain; correct?
MR. SWITZER Objection.
THE WITNESS: Well, she kept coming back with chest pain every time except the last time, the time before she died, That time she came in with epigastric pain.
BY MS. MATTHEWS:
Q. Well, she complained to the paramedics of severe chest pain on the way, didn't she?
A. The paramedics wrote down

chest pain, but the ED nurse and the emergency physician both said she complained to them about epigastric pain.
Q. But in fact the paramedic documented that she was complaining of chest pain, and it was the same chest pain she had been having all along; isn't that what the run sheet says?
A. I will look at the run sheet. She did -- the paramedics did write down chest pain; patient having -- indicates severe chest pain, was taken to Aultman twice this week for same type of pain -- same type of pain that she had been having previously. Patient has a history of reflux and esophageal spasm. Yes.
So the nurse and the doctor who take care of this patient and have a lot more time to spend with the patient, have a much higher level of training than the paramedics, basically document, both, that she said epigastric pain. So if I have to make a choice

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and decide, there is several possibilities: She either told the paramedics she had chest pain, and she told the nurse and doctor she had epigastric pain, so she was inconsistent in her history; or she indicated to the paramedics she had epigastric pain, but they wrote down chest pain; or she told the nurse and the doctor it was chest pain, but they both wrote down epigastric pain.

Given those three scenarios I tend to believe that she either told the paramedics that she had epigastric pain, and they just wrote down chest pain, or she told the two parties two different stories.

Q. Well, in fact, what the paramedics wrote down is chief complaint, chest pain. History of chief complaint, two episodes in past week. Patient indicates severe chest pain. Patient was taken to Aultman ER twice this week for the same type of pain. That's what the paramedic documented;

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correct?

A. Correct.

Q. And I take it whatever Connie Germanoff told the doctor and the nurse, they should have been aware that this is what the paramedic wrote down, if the paramedic provided this sheet to them?

A. Right, if the paramedic provided the sheet. However, if the patient told them: I am having epigastric pain, they would pretty much ignore what the paramedic said because they would assume that they misinterpreted what she was saying.

Q. How can you ignore a complaint of chest pain? Ignore?

A. You are getting a history directly from the patient. You can't do better than that. You ignore a -- secondhand information if the person experiencing the symptoms looks at you, is sober, competent, and says: I am having epigastric pain.

Q. Does it say anywhere in the

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review of systems that Connie Germanoff denies chest pain?

A. No, I don't believe it does.

Q. Did Dr. Hamrick document anywhere that she even asked Connie about these complaints documented by the paramedics?

A. No, I don't think she did. And I don't think it would be necessary because to be perfectly honest, while we appreciate the work that these paramedics do because they are, you know, out in the field, and we can't be, their level of training is so much less that you can't even compare, for example, a paramedic training and a nurse's training.

Q. So a paramedic doesn't know what chest pain is?

A. I have seen many times where they will come into the patient's home and say: What's wrong, ma'am? And the patient will have their hand like this (indicating), and they will just say:

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John, she says she is having chest pain.

I don't know what transpired. I just know that given a doctor and a nurse saying she had epigastric pain versus a paramedic who said she had chest pain, I am going to believe the nurse and the doctor.

Q. Why do you have to believe the nurse and the doctor, as opposed to the paramedic? Why can't you believe everyone?

A. Well, if I believe everyone, then I am going to weigh the history . that the doctor and the nurse got much, much more.

Q. Because isn't that the jury's job, to decide the credibility of these various people? Isn't it your job, as an independent, nonbiased expert, to look at everything that's in the medical record and come up with an independent, nonbiased review?

A. Right. Right. And that's what I have done.

Q. Right. And so we have to

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deal with all the information we have?
A. Sure.
Q. And one of the things we have documented is that Connie Germanoff complained to the paramedics of chest pain. That's documented; correct?
A. The paramedics wrote down that they perceived that she was having chest pain.
Q. All right. And you would agree with me that a doctor, a prudent, practicing emergency room doctor, who sees that a patient -- that a paramedic has written down chest pain as the chief complaint, needs to be aware of that?
MR. SWITZER: Objection. Before you answer, that -- my understanding is that ambulance sheet is not a part of the hospital records in this case. So I think the representation, If that's your representation that it is, is not accurate.
MS. MATMEWS: Oh, I don't even understand that.

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ME WITNESS: Well, my understanding is this: First of all, I can tell you firsthand that probably only 20 percent of the time do we get to see the run sheet --
BY MS. MATTHEWS:
Q. Uh-huh.
A. -- when we are taking care of the patient because these run sheets are completed generally later. That's number one.
Number two, I believe Dr. Hamrick has testified that she never saw the run sheet.
Q. (Nodding head up and down.)
A. So she did not have that information, apparently. And to my knowledge we have not deposed the nurse, you have not deposed the nurse to find out whether or not she ever saw the run sheet.
So the fact of the matter is that the doctor claims that they did not have this information, so it would have been very difficult for them to use

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that information in making this decision.
Q. Well, let me ask you a hypothetical question. If the paramedic either provided the run sheet to the doctor or the nurse, or personally reported to the doctor or nurse that the patient complained en route to the hospital of chest pain -- assume that happened --
A. I will do that.
Q. -- would you agree that the doctor needs to deal with that complaint?
A. Right. The doctor -- the doctor would then, it would be incumbent upon the doctor to then use that Information as he or she best felt appropriate.
Q. And you can't ignore it?
A. I don't think we would totally ignore it, no. We would keep that in the back of our mind, with all the other things going on.
Q. All right. Would you agree

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it's not documented anywhere in the medical record that Connie had any tests performed that showed she had reflux disease?
A. In looking at the chart I do not see anywhere where she had any definitive procedures or tests that proved that she had GERD.
Q. Would you agree, based on the testimony that you have read from Dr. Kamen and Dr. Lee, that if Dr. Hatcher had called them and told them Connie was back on the 20th, they would have cathed her?
A. I am sorry, I heard the end of that, but what was -- I remember them saying that. What is your question to me about that?
Q. My question to you is: Would you agree, based on the testimony that you read, you have read, that if Dr. Hatcher would have called either Dr. Kamen or Dr. Lee, they would have cathed her?
MR. SWITZER: Objection.

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MS. ATWELL: Did you mean Hatcher or Hamrick?
MS. MATTHEWS: Hatcher.
MS. ATWELL: Okay.
THE WITNESS: Do I agree, if Dr. Hatcher had called? Based on the testimony that the cardiologists had provided, if Dr. Hatcher had called them, do I agree that they would have cathed her? Well, based on their testimony I would agree because they said that.
But in my opinion, based on what I know about working with my cardiologists, I am quite sure that what would have happened, if Dr. Hatcher had called the cardiologist, would be that if they spoke to the same cardiologist -- I assume there are other people in the group, so they might have talked to someone who didn't know the patient. And if Dr. Hatcher had said the patient has had two stress tests, and presented it, that they would have probably said it sounds as though she has been worked

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up rather extensively. She needs to make an appointment in our office, and we will take a look at her.
I think if she had called one of the two cardiologists who were more intimate with her, I think they would have given her the same response. So I don't think -- I am not saying they wouldn't have cathed her, but I don't think they would have admitted her that night. And I think they probably would have said she needs to follow up with us so we can reevaluate her.
BY MS. MATTHEWS:
Q. So you don't believe their testimony?
A. I don't remember exactly what they said, but I am basing this on my experience:
Patient worked up to this level, who has once again the same symptoms she has been having for three months, minimum, I am skeptical that they would have admitted her that night.
Q. And you don't think that in

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someone who has never had a cardiac cath it's reasonable to admit them more than once?
A. Oh, I think it's reasonable to do it. I think it's also reasonable not to do it, depending on the circumstances, depending on how she is presenting that night.
Q. Well, isn't that what the chest pain unit is for, to do serial EKGs and enzymes and get a cardiology consult, if necessary, and make these kinds of decisions?
A. Well, the chest pain center can be used for a variety of patients, but this type of scenario does not necessarily have to be one of them. You admit a patient to the chest pain unit generally on people who have not had previous cardiac workups, who come in off the street, you have no data on, and they are like total strangers to you, and you have no idea what's going on with them. And it's an individual decision that the physician makes when

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they evaluate them.
Different kinds of patients get admitted to this unit. But to say that Connie Germanoff would have been a great case for that, I would say no, that's not the typical patient that you admit to the cardiac chest pain unit.
Q. Well, aren't there all kinds of patients admitted to that chest pain unit; people who have had prior surgery?
A. Yeah.
Q. People who have unclear symptoms?
A. Sometimes.
Q. People who haven't had cardiac caths; even people who have had normal caths, right?
A. Yeah, they can be. It just depends on the circumstances and the way they present.
Q. Well, was there some symptom that Connie Germanoff could have given to Dr. Hatcher that would have made her a better candidate for the chest pain

unit?
A. No. It's just that I assume that Dr. Hatcher didn't feel she was a candidate, based on his evaluation. He did not have a high or even reasonable sense of thinking that this was cardiac etiology. He let her go because he was quite certain this was not cardiac etiology.
Q. And the entire basis of that was his reliance on the adenosine stress test; correct?
A. It was his evaluation of her that night, it was his reliance on not just the stress test but the two cardiologists with whom he was familiar and respected, having had her recently as an admitted patient three days before, and having gone over her in great detail. It's not just the stress test. The stress test is a small part of it.
Q. Uh-huh. Well, Dr. Hatcher -- if Dr. Hatcher testified that he is aware that somebody with a

nonsignificant stenosis of a coronary artery could undergo a plaque rupture and develop an acute occlusion suddenly, do you agree with that?
A. That can happen to anybody.
Q. Right. So even if Connie Germanoff had had a normal adenosine stress test, and she came in with these symptoms, she could have ruptured a plaque; correct?
A. It can happen to anyone.
Q. And the only way you're ever going to make that determination as an ER doctor is if you do the appropriate tests; correct?
A. You might uncover that if you do the appropriate tests. The appropriate tests, the only way to do that is you admit the patient. Putting them in the chest pain unit just overnight is not going to give you that result a hundred percent. It's a decision that is made based on the information you have at hand and the previous testing that has occurred and

your feeling for what the patient looks like and feels like at that time.
Q. And you can't rule that out on the basis of one EKG and one set of enzymes?
A. You can't rule that out even if you bring the patient in, do a cardiac cath, do multiple cardiac caths, you can never be a hundred percent sure,
Q. But as an ER doctor your job isn't to do the cardiac cath or to interpret it, it's just to put the patient in a position where they can be evaluated by the cardiologist again; correct?
A. That can be done without admitting the patient too. They can be evaluated by the cardiologist without admitting them.
Q. Well, did Dr. Hatcher arrange that?
A. I don't think he had to arrange that. I think he can tell the patient: You need to follow up with your doctor.

Q. Well, did he tell Connie Germanoff that she needed to follow up with the cardiologist?
A. No, he just said: You need to follow up with your doctor.
Q. And so when Connie Germanoff called her doctor two days later and said, I am still having chest pain, Connie did what she was told to do, didn't she?
A. Yes.
Q. All right. So was it the doctor's responsibility now to send her to the cardiologist, or was it okay for that doctor to just prescribe Darvocet?
A. Well, I'm not going to attest to the standard of care for the family doctor as to what they told the patient. I am not here to attest to what the family doctor should have done. It may have been very appropriate.
Q. Well, these things -- you can answer everything that way. But what's Connie Germanoff supposed to do to get diagnosed? She is doing

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everything she is asked, and yet she doesn't get sent back to the cardiologist.

A. No one is saying that this is Connie's fault. It's not Connie's fault. I mean, obviously her lifestyle practices were not that healthy. But the point is that there are some patients that are not diagnosable.

Q. Well, this --

A. They have various disease entities that come together and work together that, unfortunately, in this case, confounded and fooled at least a half dozen very good doctors. Now, I don't believe that six doctors committed malpractice. I think that there are patients whose disease entities, maybe because of a combination of diseases coming together, which is I think what happened here, fooled the doctors and fooled the tests. And that's what I think happened here.

That doesn't mean it's Connie's fault. It's an unfortunate

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case. But that happens in the practice and art of medicine. It is not a science.

Q. Well, it sounds to me like you believe that it's reasonable for the ER doctor to rely on the fact that the cardiologist discharged this patient as saying that the patient didn't have coronary artery disease; that's what you believe?

A. Oh, absolutely.

Q. Therefore, it sounds like the people you think committed malpractice are the cardiologists, if they didn't feel that way and they discharged her, knowing that people were going to rely on them?

MR. STRONG: Objection. He already answered that.

MR. SWITZER: Objection.

THE WITNESS: I can't attest to what the standard of care is for cardiology, but I can attest to the fact that we, as emergency physicians, rely heavily on our cardiologists and

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what they say. And that's what the emergency physicians did here, and I think that that was reasonable, and I think they met the standard of care in doing that.

BY MS. MATTHEWS:

Q. Where did Dr. Kamen and Dr. Lee write in this medical record that Connie Germanoff had coronary artery disease ruled out?

A. They released her from the hospital after doing a variety of tests. That insinuates to anyone reading the chart that they obviously were not impressed that she had coronary artery disease.

Q. Would you agree, if a cardiac cath had been done, it would have identified her lesions and led to treatment?

A. No, I wouldn't agree with that. Again, I'm not an expert, but -- but I can just tell you, based on my limited experience in looking at pathology reports and looking at cardiac

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caths on patients, that 70-percent lesions on a pathology report might very well have looked like 50-percent lesions or even less on a cardiac cath. I think it's entirely possible that a cardiac cath would have disclosed very limited lesions that they would not have done anything about. But you would have to talk to the cardiology experts about that.

Q. Would you disagree with Dr. Waller's opinion that failure to perform the diagnostic catheterization by Dr. Lee fell below the standard of care for a cardiologist, and led directly to Connie Germanoff's fatal, acute myocardial infarction?

MR. STRONG: Objection.

MR. SWITZER: Objection. You've already asked that.

THE WITNESS: I have already said I am not a cardiologist, I can't say that.

BY MS. MATTHEWS:

Q. Did Connie Germanoff ever get

an echocardiogram?
A. I don't think she did.
Q. That's a noninvasive test, right?
A. Yes. It does not give very much information. It's great for valves; it's great to look at valves. If you think a patient is acutely having an infarct in front of you, you may see an abnormality of the wall motion. But again, it would have been normal, in my opinion.
Q. If Connie Germanoff were having an acute myocardial infarction during an ER visit, it's likely, if an echocardiogram had been done, it would have demonstrated a wall motion abnormality, isn't it?
A. If she were having an acute MI it might have shown wall motion. But in my opinion there was no ER visit where she was having an acute MI.
Q. But in a patient who is having an acute MI, isn't it a fact that 90 percent of them will have wall

motion abnormalities on echocardiograms?
A. That's probably true. I don't know about the 90 percent, but it's probably close to being true -- about the same kind of a percentage rate as an adenosine stress test.
Q. During an acute MI?
A. Not during an acute MI, in uncovering coronary artery disease, 90 percent.
Q. Let's not mix apples and oranges because I'm sorry, I'm getting confused.
A, I just wanted to say 90 percent is nice, but you have already alluded to the fact that 90 percent is not a hundred percent.
Q. I see.
A. That was my point.
Q. But it's reasonable, is it not, that if you do an echocardiogram in the presence of an acute MI, you will detect a wall motion abnormality percentage in somewhere around 90 percent?

A, I think that's probably close.
Q. As an ER doctor do you think it's appropriate to prescribe Darvocet for chest pain that you don't know the etiology of?
A. Yes.
Q. What's the sensitivity of the combination of EKG and enzymes in the detection of an acute MI in a patient who is actually having an MI?
A. I couldn't tell you the exact percentage. It's not a hundred percent, though.
Q. How high do you think it is?
A. I couldn't teli you.
Q. Would you agree that you probably will detect it --
A, Yes.
Q. -- being --
A, (Witness nodding head up and down.)
Q. Would you agree that the sensitivity of CK and CK-MB is not sufficient to rely on this test alone to

rule out MI?
A. I think that that is such a good test that I would scrap the others and just use that. I believe that that is the test that should be used, and that is the only test that should be used.
Q. But it doesn't go up for six hours; correct?
A. Three hours.
Q. Three hours. So if someone --
A. Neither does the troponin. The troponin only has the advantage really on the back end, that it stays up longer. So when I order a troponin, it's commonly when I think the MI may be older than 24 hours and the troponin may still be up, where the CPK has gone back to normal.
The troponin also has the disadvantage, unlike the CPK, that it doesn't give the cardiologist a good idea of infarct size. While they thought it was much more specific to

cardiac muscle, and it probably is, the troponin has just been a big disappointment.

Q. Okay. You said a lot of things there, so let me just break this down a liffle bit. You said that the CPK doesn't go up for three hours?

A. After an acute MI the CPK generally starts going up, and the troponin starts going up around that same time too, three or four hours.

Q. So if you -- doing those tests after say an hour of symptoms, they are going to be negative?

A. That's right.

Q. So you have to at least keep the patient there, in the presence of symptoms, long enough to give those tests a chance to go up?

A. Well, that's -- you know, that's assuming that the patient comes in immediately. And most patients who come in, they have been having pain for a while. So by the time the test is drawn, very commonly it's already

three-four hours. But be that as it may, you again use these *tests* based on your suspicion of what's going on. And the results, as such, you consider whether or not they are significant.

Q. Right. So if the patient comes in and says, I am having severe chest pain, I have had it for an hour, and you draw their blood when they get there, all right --

A. Uh-huh.

Q. -- and their history is accurate, you can expect that their CPK is not going to be up yet; correct?

A. You cannot -- you cannot decide that this is not an acute MI just based on the fact that the enzyme is normal. You have to consider all the other factors; the EKG, your history, et cetera. I would say that the enzyme level is one of the least important tests that you're doing in that regard. And if you seriously think that this is cardiac, then you need to decide on a period of observation, if

you seriously think it's cardiac.

Q. And how long a period of observation?

A. Well, you would want to, when you put a patient into chest pain unit, if you seriously think it's cardiac, and you are not able to exclude it to your satisfaction based on all the other parameters, you decide to observe the patient, you can either admit them to telemetry or the CICU or the chest pain unit, and you at least do two enzymes at least six to eight hours apart, and serial EKGs.

Q. All right. So what's the period of observation that you're talking about, twelve hours?

A. Well, usually it's around twelve hours if you have a chest pain unit. We don't have a chest pain unit. We don't use that. We don't feel that -- considering all the things that are important to us -- that that's the way we are going at this current time. But some places have done that, and that's

generally how they do it, twelve hours.

Q. So if you have a serious concern that someone might be having an acute MI, you're committed to a twelve-hour observation period?

A. In these scenarios, yes, where you have a chest pain unit. If you have a high degree of suspicion -- and let me put it this way, most of the time you just admit the patient, if you really have a high degree. If it's not as high, that is an option you have.

So you can send the patient home, if you don't have a high index of suspicion; you can put them in the chest pain unit and send them home after twelve hours; and then a lot of people feel, well, how do you know it wasn't just unstable angina? The enzyme is normal. You haven't ruled out coronary artery disease. So what do you do? You do a stress test and then you send them home. And that's usually what happens in chest pain units.

Q. But if the patient has

already had a stress test, they might have a different test?
A. They might have no test.
Q. Right. It depends on what the --
A. Depends on what the cardiologist would decide to do, if you were to get a cardiology consult.
Q. And that would be something that would be available, cardiology consult?
A. Sure.
Q. Now you -- we were talking about when the troponin goes up. The same would apply in the first three hours, you wouldn't expect to see a positive troponin?
A. Three to four hours, right.
Q. Okay.
A. So that the troponin is positive, if you think it's positive, but the CPK is normal, and they are both done at the same time, it sort of creates a dilemma for you: Gee, if you think the troponin -- that's why I am

saying the troponin was not positive. They were both negative.
Q. Well, troponin is not present in the blood of healthy people; correct?
A. I disagree with that. I think that unfortunately you have different people with different sized hearts, and that I think now what the thinking is is that troponin is normally broken down, and when you do get these slightly elevated levels, that it's probably not positive, but they have a bigger heart, they have more muscle. That's why it's been a big disappointment.
Q. So you would disagree with the idea that troponin levels are elevated in unstable angina because of microinfarction?
A. Right, I disagree with that.
Q. And you disagree with Braunwald and Antman and all those experts?
A. I didn't like them in college either, actually, but I do

disagree with them.
Q. Would you agree with me that Connie's troponin levels during her admission of 12-16 are consistent with unstable angina?
MR. STRONG: Objection.
THE WITNESS: No.
BY MS. MATTHEWS:
Q. Do they rule it out?
A. No,
Q. Well, isn't it a fact that those are exactly what you would expect to find if you measured troponin levels in somebody with unstable angina?
A. I told you I don't believe the troponins go up in unstable angina. Unfortunately, nothing goes up in unstable angina because there is no damage in unstable angina,
Q. Would you agree that there has been shown to be an elevated mortality In people who come in with elevated troponins of .4 nanograms per milliliter who have unstable angina?
A. I have never seen that. I

can tell you people who come in with unstable angina will have mortality; some of them will go In infarct and die.
Q. Particularly if nobody intervenes?
A. Probably more so if no one intervenes, but some die anyway.
Q. Do you have any explanation for the elevated myoglobin in this case?
A. So many people have elevated myoglobins --
Q. Uh-huh.
A. -- that I wouldn't even want to venture a guess as to what caused her elevated myoglobin. But I can tell you I don't believe it was due to any myocardial damage. I do not believe this woman had any myocardial damage until she had her first heart attack.
Q. And so -- oh, until she -- all right, fine. So you don't agree at all with the concepts of myo -- minor myocardial damage and microinfarction, et cetera?

A. Microinfarctions should have an elevation of the CPK-MB.
Q. Would you agree that troponin-I can remain elevated for seven to ten days after an episode of myocardial necrosis?
A. I have never heard that. I have heard a maximum of 36 to 48 hours.
Q. That would be -- do you have an opinion to a degree of certainty as to how long a troponin stays elevated?
A. That's what I am saying. The troponin -- the CPK stays up for about 24 hours, maybe 36 hours, and that the troponin may stay up another 24 hours past the CPK, approximately. I don't believe it stays up five to seven days.
Q. So if you're wrong about those ranges, that would affect the opinions you have given as to when Connie Germanoff had an acute MI; correct?
A. No. No. I would -- I don't think that the CPK has -- I don't think

the troponin or the myoglobin have any relevance whatsoever to her having a heart attack.
Q. No, I am talking about --
A. Because none of her troponins were elevated to a level that is considered pathological.
Q. I didn't mean that opinion. I was referring -- I am sorry. I am sure I blurred that all together. I am talking about the opinion in your expert report that you gave --
A. Oh, yes.
Q. -- in your second report that --
A. That it was my opinion that her MI was about five days old?
Q. Well, that I don't understand. Is that your opinion?
A. Yes. My opinion is based on the tamponade --
Q. Uh-huh.
A. -- my training and my information on the amount of time it takes to get a blow-out through the

muscle --
Q. Uh-huh.
A. -- was not two to three days, but approximately five days, four to five days. It takes that long from the time you first have a heart attack, you get the necrosis, then you get the weakening of the muscle.
Heart muscle is about this thick (indicating); that it takes about four to five days for a tamponade to occur. So based just on the tamponade, I was saying that I disagreed with the pathologist who said two to three days; that I thought it was more four to five days. It had nothing to do with troponin levels.
Q. All right. Well, let's talk about that for a minute.
A. Sure.
Q. If it takes five days to get --
A. Four to five days.
Q. Four to five days to get a wail rupture, and she in fact had that

at autopsy, and a tamponade?
A. No question about that
Q. Then you believe Connie Germanoff had an MI four to five days before her death?
A. I believe that she had some sort of event, it could have been ischemic, but some damage occurred at that point to some extent that would have been sometime after she left Dr. Hatcher, and a couple days before she came to see Dr. Hamrick.
Q. So that --
A. And then she had another infarct. Now, that other infarct maybe somehow was more peripheral to that and allowed it to blow through. But the infarct that she had -- and she did definitely have a big infarct the day she died, when she came back on the 26th, December 26th, 1999 -- that would not have caused her to blow out her heart. It was too -- that would have been too fresh.
Q. So based on what you have

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just told me, had, for whatever reason, Dr. Hamrick done enzymes when Connie Germanoff --
A. They would have been back to normal.
Q. Not based on what you just told me about the troponin staying up for four days.
A. I never said four days.
Q. Forty-eight hours?
A. Two days, 48 hours. They would have been back to normal by that time. If she had the infarct after she saw Dr. Hamrick, which is around the time I think she did, all right, and that infarct could have -- that could even have been silent, or she was maybe having pain on and off, by the time she came back to see Dr. Hamrick, had the enzymes been done, I think they would have been back to normal and they would have again been negative.
Q. But if in fact the CPK stays elevated -- CPK-MB stays elevated for 36 to 72 hours, it would have been elevated

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if Dr. Hamrick had measured it; correct?
A. If it had been 72 hours, maybe, but I don't think so.
Q. And if in fact the troponin stays elevated for four to seven days, it certainly would have been elevated if she had measured it?
A. It might have been. It might have also been at that same .4, .6. I can't say. But I don't believe they would have been,
Q. And we don't know because nobody measured them?
A. They weren't measured because they weren't clinically indicated.
Q. Well, they weren't measured. Do you agree with this -- I take it you don't -- peak values of CPK are seen at 17 to 24 hours, and levels return to the normal range in approximately 36 to 72 hours?
A. Well, I believe to about 36, maybe 48 hours.
Q. So you think what I just read is wrong?

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A. I think it's not totally accurate, right.
Q. And I take it then --
A. You have to understand, they create a very long range because some people are having little infarcts that continue, continue. If someone has an infarct, and the infarct is over, they go up and they go down fairly quickly,
Q. And you would, I take it, disagree that the increase of troponins persists for four to seven days?
A. Right. That's not what I have been taught. What I have seen numerous times is up to about 48 hours.
Q. So I take it then you disagree with this article from the National Heart Attack Alert Program, by Dr. Antman, published in the Annals of Internal Medicine?
A. Dr. Antman again. I disagree.
Q. You don't like him much?
A. No. He was sort of a nerd in -- don't put that on. Erase that.

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He skipped a year at Columbia. That's why we didn't like him.
Q. Would you agree that when a 49-year-old woman with multiple cardiac risk factors, hyperlipidemia, smoker, family history, presents to the emergency room with severe chest pain, that the standard of care mandates an EKG?
A. Yes. I would say if a patient comes in with risk factors and has severe chest pain, and it is definitely chest pain, that you should do an EKG unless there is an obvious other reason for the chest pain, like pulled a muscle, reproducible pain, you know, things of that sort.
Q. I take it then you would also agree that if, on the day that Connie Germanoff came in and saw Dr. Hamrick, she had the exact same presentation she had when she saw Dr. Hatcher, that the standard of care required an EKG?
A. Well, she didn't have the

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exact same presentation. She had a very different presentation.
Q. No, if she had, though.
A. If she had? Yes, if she had the exact same presentation I would have said that the standard of care, she should have done an EKG.
Q. Knowing that a plaque can rupture at any time, and I take it that's something ER doctors are aware of?
A. In anybody.
Q. Don't -- every time somebody presents with severe chest pain, when they have risk factors, don't you need to consider and rule out MI?
A. We consider it, we rule it out. But it doesn't mean you have to do an EKG. We have some people that come in literally every week, who have for years; they have got a mental disorder, they have other causes of chest pain, they have psychiatric disorders. Chest pain is one of the most common complaints we see. We

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probably order EKGs in about 50 percent of them.
We do get people that get worked up; I have some patients that I know by their first name who have extensive workups -- some have had a cath, some haven't -- that their cardiologists have gone over time and time again and are convinced they don't have myocardial ischemia, and we see them, and we don't order an EKG every time.
Now, once in a while we do, based on maybe some changes that they tell us, what was the pain, what wasn't the pain. But it doesn't mandate an EKG every time you see them. It depends what they are presenting with.
Q. Well, Connie Germanoff, she didn't have any psychiatric problems that you're aware of, did she?
A. Not that I am aware of, no.
Q. And she had actually only seen a cardiologist one time, right, in the hospital, this hospital once?

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A. She only saw them during that one admission. She saw two cardiologists during that one admission. She had been followed by her family doctor for about three months.
Q. Uh-huh.
A. And family doctors, I think, have the same level of expertise in diagnosing coronary ischemia as emergency physicians do. And so they will periodically get a cardiology consultation on patients that are somewhat puzzling.
When they get that cardiology consultation, they rely very heavily on it.
Q. Sounds like everybody relies pretty heavily on the cardiologist
A. Well, of course. They are the experts. That's all they do. They don't take care of lacerations and dog bites. All they do is take care of heart problems. They have extensive training, and we rely heavily on them. And I think in most occasions that

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reliance, particularly if you know the cardiologist, is well put -- well-placed.
Q. Would you agree that epigastric pain can be an anginal equivalent?
A. It can be.
Q. Would you agree that minute epigastric pain may be referred pain associated with myocardial ischemia?
A. It can be.
Q. Would you agree, in a patient with risk factors, this is something an ER doctor needs to consider?
A. Yes.
Q. Would you agree, if the pain is epigastric and the patient is in a group where coronary artery disease is prevalent, a further cardiac history and EKG should be obtained?
A. I wouldn't agree in all cases. In certain cases it would be.
Q. If -- would you agree that upper abdominal discomfort, even that is

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relieved by antacids, may stili be cardiac?
A. It could be. It's pretty rare.
Q. So --
A. By the way, you know, it depends. If it's truly relieved by antacids, that's one thing. If it's just angina that subsided on its own, that's another. And that's an important distinction that the physician needs to make. Generally if antacids make it go away, you can rely pretty well that this was not cardiac.
Q. So you would disagree that there is a standard in emergency medicine that you can't rely on the relief of symptoms with antacids to make a determination that something is not cardiac?
A. Not the sole determination, but I think it's a factor you can heavily consider. And I do disagree with some people, who are purists and say you can never rely on that. I

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think that those are academics that don't work in the real world, like Elliott Antman. No.
Q. Was Connie Germanoff's pain on the visit when she saw Dr. Hamrick, was that relieved by antacids?
A. It was partially relieved by antacids, not completely relieved.
Q. Therefore, there was no definitive evidence, was there, that her pain was gastrointestinal?
A. That is correct.
Q. Would you agree that women are more likely to have atypical features associated with ischemia than male patients?
A. They seem to.
Q. Would you agree that upper abdominal discomfort, not completely relieved with antacids, needs to be considered as a symptom of myocardial ischemia, particularly in women?
A. I would agree that it needs to be considered.
Q. Would you agree that an ER

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physician has a responsibility to obtain old medical records to evaluate a patient's complaint?
A. When they are indicated and when they are available, yes.
Q. And you would agree in this particular patient, given all her cardiac risk factors, a prudent ER doctor should look to see what kind of workup there has been?
A. Yes.
Q. Are you aware that Dr. Hamrick has testified that if she were aware of the abnormal myoglobin and troponins in the past, she would have gotten another troponin?
A. I recall that she had made some mention that had she known the troponin was -- the last troponin was elevated, that she might have done another troponin. I remember reading that. That's her opinion.
Q. Well, she is -- she said that; correct?
A. Yeah, I believe she did say

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that.
Q. So if in fact, again, Connie Germanoff was having an acute MI when she was in the emergency room --
A. If she were having an acute MI, yes.
Q. -- you would agree with me that the troponin would probably be elevated?
A. I don't know whether it would have been elevated. It might have been elevated if she was having an acute MI and it was the right timing. Remember, if it was less than three or four hours, it wouldn't be elevated. We know that -- we have established that already.
Q. Right.
A. And if it was not much later. But if you say an acute MI, more than likely, if it had been past that three-hour or four-hour window, it would have been elevated to some degree.
Q. And if she would have kept her for observation for twelve hours, it

certainly would have been elevated, if she were having an acute MI?
A. If she were having an acute MI.
Q. Okay. Now, according to Dr. Hamrick's dictation on 12-24 Connie had had several workups for epigastric burning. What were those workups?
A. This I believe she did not glean from the medical record, but she got from the patient, who told -- had told her and other people and the paramedics that she had had -- that she had GERD.
Q. The fact that someone has gastrointestinal reflux disease doesn't mean they also don't have myocardial ischemia?
A. Right, gastroesophageal reflux disease. You can have both. And in fact it's my opinion she did have both, and in fact that was the problem. That's what fooled a lot of people.
Q. You would expect ER doctors,

though, practicing ER doctors to know patients can have both?
A. Sure
Q. Now, the fact that someone is in sinus rhythm, that fact alone, that doesn't rule out an MI, does it?
A. No.
Q. Is there any documentation at all in the medical record for the 24th of December, 1999, that would suggest to you that Dr. Hamrick even considered the diagnosis of myocardial infarction?
A. I don't think there is anything actually documented that she did. She says in her deposition that she did.
Q. But she didn't document anything?
A. She didn't document anything specifically. For example, she didn't specifically say: I considered cardiac etiology here, but I have ruled it out in my mind. She does not say that, no.
Q. Now, if the autopsy is

correct and the MI is two to three days old, just assume that.
A. Okay.
Q. Then Connie Germanoff was having an acute MI when she was in the emergency room; correct?
A. She could have. If it's two days, depending on the time -- I don't know whether it's a full two days from the time she leaves until she has her MI -- when she dies. It could be. Was it actually a full 48 hours?
Q. All right, let's figure it out.
A. Could we take a break while I use the restroom and you can look at that?
(Recess taken.)
BY MS. MATTHEWS:
Q. Let's see if we can figure this out.
MR. SWITZER: You asked him about the autopsy, right?
MS. MATTHEWS: Actually, I was right at this time trying to figure

out what time she was in the emergency room seeing Dr. Hamrick. I think it's 3:08 a.m. on the 24th.
THE WITNESS: Okay, and she came back on the 26th at what time?
BY MS. MATTHEWS:
Q. She Came back on the 26th at 8:57 a.m.
A. On the 26th?
Q. Correct. So that's --
A. More than 48 hours.
Q. Okay.
A. Okay. So you have this -- if it was just two days, then that would be different. If it was two days plus, he said two to three days.
Q. Right.
A. So that would be a difference. I can't say -- I can't say a hundred percent. I think that question maybe would be better posed to the pathologist who did the autopsy because it was more than -- it was -- wait a minute. I am sorry. It was more than two days; it was two to three

days. So if he is saying two days, then -- no, it would be okay. It's between two to three days.

He is saying two to three days, and it was more than two days. So I guess -- yeah, I guess that would be okay.

Q. All right. So let me ask the question again.

A. Okay. I'm sorry. I was thinking incorrectly.

Q. Would you agree that if the autopsy is correct and the infarct was two to three days old, that Connie Germanoff would have been having an acute myocardial infarction at the time she was in the emergency room seeing Dr. Hamrick?

A. It -- according to him, yes.

Q. Would you agree there is no evidence of gastrointestinal disease on theautopsy?

A. Yes. There is usually not, unless there is a perforated ulcer.

Q. What does an EKG cost?

A, I don't know, probably about $60.

Q. What do cardiac enzymes cost, a CPK?

A. A hundred dollars.

Q. Do you think that ER doctors ought to be aware of the ACEP clinical policy for the initial approach to adults presenting with a chief complaint of chest pain?

A. Well, having been the chairman of the ACEP professional liability committee twelve years ago, 15 years ago, and having been the ones that sort of created the impetus to create the chest pain guidelines, having been intimately involved in those, thinking it was probably a pretty good idea, we subsequently think that the guidelines were not terribly helpful and that they are, we know, not followed, probably because they were not terribly helpful.

So, unfortunately, my answer to that is no, they are probably not very helpful, and they just can't

address the very, very different kind of scenarios that occur to make them worthwhile.

Q. So you don't think they identify approaches to diagnosis and therapy for which there is the best scientific evidence?

A. I don't think there is the best scientific evidence. That's the problem.

Q. Isn't it a fact that even if Connie Germanoff was only complaining of epigastric pain, given the fact that that can be an anginal equivalent, she should have had an EKG?

A. Not necessarily.

Q. Well, you can answer every question not necessarily.

A. Oh, I haven't. I think if we counted them up, I have only answered 10 percent, maybe 5 percent, not necessarily.

Q. Well, what does that mean, not necessarily?

A. That means we see a

tremendous number of patients with epigastric pain, and the vast majority of them are due to gastroesophageal disease or gastrointestinal disease, which, by the way is a far more common disease entity, which is why half the American population, or thereabouts, takes Rolaids. That is a much more common scenario. And in a woman who has extensively been evaluated for cardiac disease, it was logical and it met the standard of care to not do an EKG and to assume that it was gastroesophageal in origin, not cardiac.

Q. How did Dr. Hamrick determine that the epigastric pain, if Connie Germanoff complained of epigastric pain, how did Dr. Hamrick determine it was not an anginal equivalent?

A. She did that based on the signs and symptoms. Let me give you an example. The patient came in, I believe, moaning in agony. Cardiac patients don't come in moaning in agony. The chest pain of a cardiac event is

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generally, the vast majority of times, a moderate pain, which is why it is most commonly sloughed off to indigestion; a very mild pain.

In general, when you see patients in agony, that is not cardiac. That is more typical of GERD or other things. It's like the difference between patients who come in with appendicitis. The pain is not that of agony. If the patient is writhing around and grabbing their right lower quadrant and flank, more typically it's going to be a kidney stone, which is an agony kind of a pain.

The patient gave a history to the doctor of GERD. The patient had been extensively been worked up for cardiac disease. All those things came together: The way the patient looked, the way the patient felt, and the doctor's clinical impression was: This is GERD, this is not cardiac. And in that scenario an EKG was not indicated. And had it been done, in my

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opinion, it would have been normal anyway, as all of her other EKGs had been.

Q. Not if she were having an acute MI, which the coroner says she was.

A. She wasn't.

Q. Well, if the coroner is correct, had she done the EKG, it would have been abnormal just like it was when she came back in.

A. If the coroner, a nonclinician who doesn't treat patients -

Q. Uh-huh.

A. - said so, that's right. But I disagree.

Q. Okay. But if the coroner is right in the dating of the acute MI, then the EKG, had it been done, would have been positive; correct?

A. No, the EKG might have been positive.

Q. Well, wasn't it --

A. People have acute infarcts

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and do not register as positive on EKGs.

Q. Well, you said all of her EKGs were normal. The one done on the 26th wasn't normal.

A. No. That was the exception, because then she was definitely having an acute MI.

Q. So if she were having an acute MI on the 24th, then there is evidence, isn't there, that it would have been positive, based on the fact that --

A. Not necessarily. The infarct she was having on the 24th would not have been the same infarct she is having on the 26th. All we know is the one on the 26th was a massive heart attack and she died.

Q. Uh-huh.

A. That did show changes.

Q. Have you looked at the autopsy?

A. Yes.

Q. How many infarcts are there?

A. Well, I think that there

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probably were two, because we know she had one the time she died because she had ST elevation. That would not have been a residual from the previous EKG, in my opinion. So I think by definition, if she had blown out her posterior wall, in my opinion, she had an infarct earlier, sometime shortly after she left Dr. Hatcher.

Q. But you didn't do an autopsy; correct?

A. I did not do an autopsy.

Q. And how many infarcts does the person who did the autopsy describe?

A. Well, that's very interesting. First of all, the patient only had 70-percent lesions of her coronary arteries, which is not what you generally see with infarcts. But then he basically sees an infarct with some reasonably fresh thrombus, all right?

Now, I don't know whether that was the one heart attack that she died from at the very end, or whether that contributed to the blowout of her

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posterior wall, which I think the pathologist is saying had to at least be two or three days old. So I don't have an answer for that. You would have to ask the pathologist.

Q. Well, in fact what the coroner said is that there was an acute right coronary thrombosis; correct?

A. That's probably true. So you're interpreting that he meant there is one?

Q. Well, I am just reading,

A. That doesn't mean there has to only be one.

Q. Well, I am just reading under microscopic examination, and what I see documented is Page 7 of the autopsy --

A. Okay, acute -- heart sections show acute coronary thrombosis, right. It doesn't say only one acute coronary thrombosis, right,

Q. And then --

A. And then it says, C, transmural acute infarct of the

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posterior wall, two to three days old.

Q. Right, with rupture?

A. With rupture. So I think he is saying two. I don't know.

Q. Well, would you accept the fact that whatever -- however many infarcts Connie Germanoff had prior to her death, they would be available to view on autopsy?

MR. SWITZER: Objection.

THE WITNESS: They were -- they were documented on autopsy, yes.

BY MS. MATTHEWS:

Q. And you haven't looked at any autopsy slides?

A. No.

Q. Are you familiar with the criteria for dating myocardial infarctions based on cardiac pathology?

A. No, Only that when there is a blowout of the myocardium, that according to what I have learned and what I have read, it takes four to five days.

Q. So you would disagree that

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it's most commonly seen at two to three days?

A. Yes, based on my knowledge.

Q. And I take it then you would disagree with Dr. Waller, who said the occurrence is unpredictable as to when it occurs?

A. Well, that was not what I had learned either.

Q. Now, all the cardiac enzymes are elevated on December 26th, the ones drawn at 9:28; correct?

A. I think that's right, yes.

Q. Now, we don't have any other determinations for that date, just one set of values; correct?

A. Uh-huh. Yes.

Q. So we don't know if those are peaks or troughs or somewhere on the curve, right?

A. I don't think troughs are the expression we use. Peaks or valleys. Troughs, I think, is antibiotics.

Q. Peaks or valleys.

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MR. SWITZER: And horses.

THE WITNESS: And horses.

BY MS. MATTHEWS:

Q. Okay. So is it fair to say we don't know whether the numbers --

A. We don't know they are going up, we don't know they are coming down.

Q. Okay. And we don't know how long they have been up?

A. No. But we could sort of predict sort of a range, but we don't know for sure.

Q. So really the significance of those numbers depends on how long each of the diagnostic tests stays elevated?

A. Well, it really -- it really doesn't matter if the CPK is 2,000 versus 3,000, it's really not going to matter. I mean, the cardiologists use those numbers sometimes to predict how big the infarct is. But for an emergency physician it doesn't matter. It's markedly positive and, you know, you're having a heart attack, apparently. So how high they are, once

they go clearly out of the normal range, except for myoglobin, which we are totally throwing out the window, it doesn't really matter to the emergency physician.

Q. Okay. But in terms of trying to figure out when somebody's infarct started or whether they are extending another infarct --

A. Right. How high the level goes will not determine, necessarily, not to a major extent, how long they stay elevated, with the exception, obviously, if you get this massive infarct and it goes up to 5,000, it probably will take a little longer until it goes back to normal, which may be where they get the 72 hours. They are really considering, you know, the very ends of the bell-shaped curve.

And maybe that's where the divergence is in what I learned, where the upper limits of the time, which is about 48 hours, and they are saying troponin up to five days. Maybe they

are talking about massive elevations. I can't tell you that.

But in general the level they go up is not the clear determinate. It's whether they go up or not.

Q. Well, can you tell me how long these myoglobin -- I am sorry -- the troponin and the CPK have been elevated, the ones that were measured on the 26th?

A. The ones measured on the 26th, I can't tell you how long they have been elevated. But I would venture to say that they did not start to rise any time before approximately 24 hours, maybe 36 hours before the MI on the 26th. It was clearly after the patient left Dr. Hamrick.

Q. Well, if in fact the patient was having an infarct that was two to three days old, those numbers could have been up for two to three days?

A. Well, as we said before, I don't think CPKs will stay up three days. They stay up about 24 hours.

And I totally disagree with the two- to threeday pathology decision. So that's two reasons I disagree with them. The patient did not have an infarct until after she left Dr. Hamrick. Sometime between the time she left Dr. Hamrick and coming back on the 26th she had an infarct. Now, it could have been five hours before she had -- before she presented on the 26th. And I tend not to think that it was much before that because I don't think she would have stayed for another 48 hours in pain before seeking help.

Q. So the coroner who looked at these microscopic sections and used the established criteria for looking at those sections to date this myocardial infarction, before there was a lawsuit in this matter, is wrong?

A. I --

MR SWITZER: Objection.

THE WITNESS: I think he is wrong, based on my knowledge, and I think he is wrong based on what the

cardiac enzymes showed when the patient does have an infarct.

BY MS. MATTHEWS:

Q. Well, I don't understand, based on what the cardiac enzymes show.

A. Well, the exception to that would be is if there were two -- the potential there could have been two infarcts. So the cardiac enzymes don't rule it out, that's right. But I disagree with the two- to threeday.

Q. But you would agree with me that the elevations in the cardiac enzymes don't allow you to date this infarct?

A. If there were two infarcts, then -- well, it depends which infarct you're talking about, I think it does give you some parameters for the date of the infarct for the last heart attack. If there were two heart attacks, which we think may be the case, the enzymes on the second heart attack don't allow you to date the first heart attack because those enzymes have come and gone

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already.
Q. Based on your understanding of ranges for how long these things --
A. Based on my understanding of ranges.
Q. But again, if the troponins can stay up for four to seven days, then this number could have been elevated for four days, and we don't know because it wasn't measured; right?
A. If you believe that, that is possible.
Q. And the same for CPK, if you believe that the CPK can stay up for up to 72 hours?
A. If you believe 72 hours, then theoretically the CPK would have been positive when she was seeing Dr. Hamrick.
Q. All right. I am correct, am I not, that Connie never had a diagnostic test that ruled out cardiac disease?
A. That ruled out cardiac disease? You mean 100 percent ruled out

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cardiac disease?
Q. (Nodding head up and down.)
A. There is no test that 100 percent rules out cardiac disease.
Q. And she didn't have the best test; correct?
A. She did not have the most accurate test.
Q. You say in your report that no testing done previously indicated any definite cardiac etiology for her ongoing symptoms. Well, isn't it a fact that the converse is also true: No diagnostic testing had been done that definitively ruled out a cardiac etiology?
A. That would be true no matter what test she had.
Q. Because if a cardiac etiology had been found, presumably the doctors would have treated it?
A. Right.
Q. So she wouldn't have been in the emergency room to begin with?
A. Well, they might have treated

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it; they might have done a cath. Let's say they find a vessel, they angioplasty, they send her home, it collapses. She could have come back the next day.
Q. And had she come back with a history of angioplasty and recurrent symptoms --
A. That would have been different.
Q. All right. And again, what is the basis of your statement that cardiac tamponade and ruptured wall would have required an MI to be five days old?
A. That's based on my understanding of the physiology of the heart and the physiology of an infarct.
Q. Can you cite me to any reference?
A. I would have to look. No. But over the years, reading articles, studying, what I was taught in medical school very specifically from pathologists, it takes five days. And

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when you think about it, you would expect it to take a long time because you're talking about a thick muscle, you know; you're talking about a piece of steak that's this thick (indicating). And then you lose the ischemia to it -- you lose the blood flow to it, you have got to get the degeneration. And there is a point where you start getting a scar formation, if it doesn't blow out. But it needs to really be weakened significantly till it just blows out, you know. You have a hose, you use it for years and years, it doesn't blow out the second day you use it. My understanding was, everything that I ever studied and learned about this was that it takes about five days; that classically tamponade occurs around the fifth day.
Q. Do you hold that opinion to the same degree of medical certainty as all your other opinions?
A. Probably not to the same level because I am not a cardiologist

and I am not a pathologist. But I feel fairly secure on that.

Q. So you're not familiar with the literature that states that the peak incidence of rupture is in two to three days?

A. I'm not familiar with that literature.

Q. And you disagree with it even if it were out there?

A. Well, I would be very happy to reassess that, if it was provided to me. I have not done a literature search on the subject in the recent past.

Q. Would you defer on that opinion to a cardiac pathologist?

A. Not necessarily. And, you know, you would have to -- we would have to talk to a number of different people. I mean, I know specifically that I have read and I have been taught over the years that five days is the approximate time frame. I have seen patients who came into the emergency

room, who died, and I remember seeing reports from pathologists that said patient had a tamponade, and placed it at four to five days. So I have gotten that number from multiple sources over multiple years.

Q. I take it then you wouldn't defer to an opinion of a cardiologist either on that subject?

A. Well, I might. But I think that there might be cardiologists that say five days too. I think we would have to really get a lot of literature and tack that down. I wouldn't just defer to one cardiologist or one pathologist.

Q. Wouldn't the best person to determine how old this infarct be -- was -- be a pathologist?

A. You would think that is true, if that pathologist is right.

Q. Are you aware that there are well-established criteria for dating infarcts that have been around for years?

A. Yes. And I thought that had to do with microscopic studies, et cetera, things of that sort. I don't think it's a science. I think there are parameters that are fairly wide, But I think that's different than a tamponade, where -- which has nothing to do with the microscopic evaluation, it has to do with the range of days it generally takes, and maybe it is a little wider. Maybe it's two to five days, and there are those people that believe five days, and some people that believe two days. But I had always heard and read four to five days.

Q. If the coroner is right and the MI is two to three days old, then your opinion that Connie Germanoff was not having an MI as the source of her epigastric pain would be incorrect; true?

MR. SWITZER: Objection.

THE WITNESS: If the pathologist is right, then it is quite possible that she was having an infarct

at the time. That does not mean that her EKG and enzymes would have been positive. That is not to say that there was a deviation from the standard of care in not doing an EKG and enzymes. But your statement would be correct that at the time her epigastric pain was not GERD, as I think it was, but was in fact coronary ischemia, and in fact an infarct.

BY MS. MATTHEWS:

Q. And just dealing with probabilities, had an EKG and enzymes been done on the 24th -- if the coroner is right and Connie Germanoff was having an acute MI -- they probably, meaning 51 percent, would have been abnormal; correct?

MR. SWITZER: Objection.

MR. STRONG: Objection.

THE WITNESS: If she was having an infarct, and if the timing was right in that it was more than three hours old, or four or five hours old, then they would probably have been

positive in some fashion.
BY MS. MATTHEWS:
Q. And if she had been observed for twelve hours, they certainly would have been positive; correct?
A. If she was having an infarct, then they would certainly at some time during that time span become positive, yes.
Q. So where you state in your opinion that if Dr. Hamrick had ordered enzymes on the 24th, they would have been normal, as they had been previously, that assumes that the coroner is wrong?
A. That is correct.
MS. MATTHEWS: I don't have any other questions.
MR. STRONG: Anybody on the telephone have questions?
MR. KREMER This is Stephan Kremer. I do not.
MR. ROSE: Mark Rose. I don't.
MS. ATWELL: This is

Cheryl. I do not.
MR. HOWES: Mark, do you want to talk with me, or should we just --
MR. ROSE: Only if you do.
MR. HOWES: No, I have nothing to talk about.
MR. ROSE: All right.
MR. HOWES: Thank you.
MR ROSE: Thanks.
CROSS-EXAMINATION OF NORMAN SCHNEIDERMAN, M.D.
BY-MR.STRONG;
Q. Doctor, you're a Board-certified emergency room physician; correct?
A. Yes, I am.
Q. And your practice is primarily here at Miami Valley Hospital's Emergency Department?
A. It is solely here.
Q. And you're licensed to practice medicine in the State of Ohio?
A. Yes, I am.
MR. STRONG: Thank you.

That's all I have.
MS. MATTHEWS: Anybody else?
Bye.
(Thereupon, the deposition was concluded at 3:42 o'clock p.m.)
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CEFARATTI GROUP FILE NO. 5440
CASE CAPTION: STEPHAN GERMANOFF, ETC. VS. AULTMAN HOSPITAL, ET AL.
DEPONENT: NORMAN SCHNEIDERMAN, M.D.
DEPOSITION DATE: JULY 5, 2001

(SIGN HERE)
The State of Ohio,)
County of Cuyahoga) SS:
Before me, a Notary Public in and for said County and State, personally appeared NORMAN SCHNEIDERMAN, M.D. who acknowledged that he/she did read his/her transcript in the above-captioned matter, listed any necessary corrections on the accompanying errata sheet, and did sign the foregoing sworn statement and that the same is his/her free act and deed.
IN TESTIMONY WHEREOF, I have hereunto affixed my name and official seal at , this day of , A.D. 2001.
Notary Public Commission Expires

ERRATA SHEET

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