State of Ohio,)
)
County of Cuyahoga.)

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IN THE COURT OF COMMON PLEAS

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Nola Vargo, Administratrix, et al.,)
)
Plaintiffs)
)
vs.) Case No. 447160
)
The Cleveland Clinic Foundation, et al.) Judge Nancy M. Russo
)
Defendants.)

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DEPOSITION OF PATRICK N. WHELAN, M.D.

Friday, April 26, 2002

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The deposition of PATRICK N. WHELAN, M.D., called on behalf of the plaintiffs for examination under the Ohio Rules of Civil Procedure, taken before me, Kristin A. Beutler, a Registered Professional Reporter and Notary Public in and for the State of Ohio, pursuant to agreement of counsel, at Reminger & Reminger Co., L.P.A., The 113 St. Clair Building, Cleveland, Ohio, commencing at 10:00 a.m. on the day and date above set forth.

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APPEARANCES:
On behalf of the Plaintiff:

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PATRICK N. WHELAN, M.D.
called on behalf of the plaintiffs, having been first duly sworn, was deposed and testified as follows:

EXAMINATION

BY MR. NORTON:

Q. Doctor, will you tell us your full name.
A. Patrick Noel Joseph Whelan, W H E L A N.
Q. How old are you?
A. 37.
Q. What is your current address?
A. 21521 Lake Road in Rocky River.
Q. Now, as I understand it -- do you have a CV with you today?
A. No.
Q. Well, you had your undergraduate education in Ireland, correct?
A. That is correct.
Q. And after graduation from medical school in Ireland -- what year was that?
A. 1988.
Q. In '88?
A. No. Excuse me, yes, 1988.
Q. So then you had some postgraduate training in England, I believe?
A. I worked for one year in England between 1988 and 1989.

Q. As an intern first?
A. Correct.
Q. And then didn't you have a year as a medical intern in England?
A. Yes. The intern year in England is like a different year. I did six months as a surgical intern and six months as a medical intern, because that's the way it is set up there.
Q. Then you returned to Ireland where you served for about a year as the senior house officer in emergency medicine?
A. I did senior house officer in emergency medicine for about four months, then I did senior house officer in medicine for about six months.
Q. Madison?
A. Medicine.
Q. Oh, medicine. In Ireland?
A. In Ireland.
Q. Then you came to the United States?
A. In 1990.
Q. And you came here in 1990?
A. Correct.
Q. Did you come to MetroHealth?
A. Correct.
Q. And you did some further intern work there?
A. I did an internship and a medical residency until 1993.
Q. And then you went into a fellowship in pulmonary

medicine?
A. And critical care, that's correct.
Q. And critical care. And that was at Metro?
A. It was based at Case Western and it was shared between Metro, University Hospitals, and the VA.
Q. And you were Board certified in 1993 in internal medicine?
A. Correct.
Q. And in 1996 you were Board certified in pulmonary medicine?
A. Correct.
Q. And in 1997 you were Board certified in critical care medicine?
A. Correct.
Q. You became associated with Kaiser Permanente in 1997; is that correct?
A. Correct.
Q. And in that capacity you were a member of Ohio Permanente Medical Group?
A. I was employed by them, yes.
Q. You were employed by Ohio Permanente Medical Group, and you were compensated by Ohio Permanente Medical Group?
A. Correct.
Q. And your compensation was reported to you on a W-2 form?
A. Correct.

Q. And you were with Ohio Permanente Medical Group until sometime in 2000; is that correct?
A. Correct, July 2000.
Q. And in what capacity were you employed by Ohio Permanente Medical Group?
A. I worked as a hospitalist and I divided my time between inpatient medical service. I also worked in the clinical decision units at Parma and at CCF.
Q. Where did you act as a hospitalist for OPMG?
A. CCF.
Q. That's Cleveland Clinic Foundation?
A. Correct.
Q. And in that capacity you looked after patients who were admitted to the Clinic on the Kaiser service?
A. Correct.
Q. They were Kaiser patients?
A. Mostly.
Q. In the hospital setting, does the hospitalist assume the role of the attending?
A. To the patients to whom -- to his assigned patient, yes.
Q. Well, what is the role of a hospitalist in caring for a patient that has been admitted to the hospital and assigned to that person?
A. To assume the role as attending physician.
Q. And that would include overall responsibilities for the

patient's care?
A. Assigned to me, yes.
Q. And in caring for patients assigned to you as a hospitalist at Cleveland Clinic Foundation, were you assisted by other physicians?
A. Residents, and other attending physicians in consult if necessary.
Q. And the residents would be, to your knowledge, employees of the Clinic?
A. To my knowledge, yes.
Q. The attendings that you would be working with would be other physicians, members of Ohio Permanente Medical Group?
A. Mostly, but there were also some CCF attendings if OPMG did not have the coverage for that particular subspecialty or if they didn't have that subspecialty at all.
Q. But to the extent that OPMG covered a needed specialty or subspecialty, the attendings you worked with were other OPMG doctors?
A. Yes.
Q. Now, internal medicine is a primary medical specialty, correct?
A. Correct.
Q. The primary one. Where does pulmonary medicine fit into that?
A. It's a subspecialty of internal medicine.

Q. What is the focus of pulmonary medicine?
A. Lung disease.
Q. Give me some examples.
A. Asthma, COPD, sarcoidosis, interstitial lung disease.
Q. The difference between an internist and somebody that is certified in pulmonary medicine would be in terms of these diseases of the lung you just mentioned; the pulmonary man would have a greater depth of understanding or greater, more intense focus of training?
A. More intense focus of training, yes.
Q. What is the subject matter of critical care medicine?
A. That's taking care of people in a critical care setting who meet the criteria to be in intensive care.
Q. How do the skills of a critical care physician differ from those of somebody that's Board certified in internal medicine?
A. One has more advanced training in medical care management, hemodynamic monitoring, certain therapies conducted in intensive care that wouldn't be conducted elsewhere in the hospital.
Q. Now, in March of 2000, were you on service as a hospitalist for OPMG at Cleveland Clinic?
A. At least part of March, yes.
Q. And, say, March 3rd to March 16th, were you on duty?
A. Let me refer to my notes, if I may.

March 3rd, that would be yes. And March 16th, I do not know for sure about March 16th, but I can tell you I was definitely there until March 15th.
Q. Okay. During that period of time, specifically, from March 3rd 2000 to March 15, 2000, was one Nola Hasto admitted to the hospital under your service?
A. Correct.
Q. And why was she admitted to the hospital?
A. She was admitted with chest pain. She had shown up at the pain clinic, I believe, in Parma and had reported that she was having chest pains there and initially admitted to the CDU in Parma, and from there to CCF.
Q. Why was she admitted to CCF, for what purpose?
A. For further investigation of the chest pains.
Q. In terms of what possible causes?
A. Well, she had a preexisting history of atherosclerotic cardiac disease. That was the primary concern at the time that she was admitted.
Q. Did you familiarize yourself with her records at the Parma emergency CDU unit?
A. Not there, but I would have had access to some of the information that was sent with her when she was first admitted to CCF.
Q. So that would have been the records that were generated on the one or two days that she spent there before coming to

the hospital?
A. They would not necessarily have sent all of her records, but they would have sent some of her records.
Q. And it's true, isn't it, that OPMG has most of its, in fact, has all of its patients on an electronic data base?
A. That's correct.
Q. So that anytime you wanted to check up on the past history of a given patient you could access the data base?
A. Me personally?
Q. Yes.
A. I didn't do that very often.
Q. But you could?
A. I could, yes.
Q. That's the purpose of the data base?
A. Correct.
Q. But in any event, you had some of the records that came with Nola when she was admitted to the hospital?
A. Correct.
Q. Now, according -- I tried to determine exactly when she was admitted to the Clinic, and the best I was able to determine was from a nursing note written on March 2nd at 3:45 in the afternoon. It appears that was the time that she came into the hospital. In any event, that nursing note states, "Heparin maintained since transfer." Did you know that she had come to the Clinic while on heparin?

A. I do not recall that specifically.
Q. Was she placed on heparin when she arrived at the Clinic?
A. I do not recall that specifically.
Q. You have the record.
A. Okay. The notes on 3/2/00 by Dr. Ziolo appear to indicate that, yes.
Q. Why did she come -- you don't know that she came. Why was she placed on heparin when she arrived at the Clinic?
A. Because there was a concern that she might be having unstable angina.
Q. So the heparin was prescribed pending workup of her heart condition?
A. Correct.
Q. And what is heparin?
A. It's an anticoagulant drug.
Q. Does it present any risks to an elderly woman?
A. Presents risks to everybody.
Q. What's the nature of the risk?
A. Makes one more likely to bleed.
Q. Is this risk greater in the elderly than it is in younger people?
A. Being old, per se, is not an additional risk to a person being on heparin, but, statistically, people who are older have more potential risks to have trouble with heparin.

Q. Why?
A. Because they fall more easily if they have those kind of medical conditions which predispose them to fall, or statistically have conditions that might make them bleed more easily in certain circumstances. But old age, per se, is not a risk to be on heparin.
Q. Susceptibility to fall or other medical conditions, that makes an increased risk for the elderly; is that it?
A. That's correct.
Q. Are you familiar with Dr. Neidermaier?
A. Yes.
Q. Who is he?
A. He's a cardiologist that used to work for OPMG.
Q. He saw Nola Hasto shortly after she was admitted to the hospital; is that correct?
A. His first note was on 3/3/00, that's correct.
Q. So he was the OPMG cardiologist. Was he called in on consultation?
A. Yes.
Q. To examine her with reference to her heart condition?
A. Correct.
Q. And you indicated that she was on heparin or placed on heparin because of her heart condition?
A. Correct, or because of some concerns about her heart condition.

Q. Are you able to read his note?
A. Most of it, yes.
Q. It appears that from his note, and you have it in front of you, but I have written some notes, apparently he's decided to order a stress echo for her?
A. Yes, that's correct.
Q. That's an examination of the heart?
A. That's a test to look at the heart, yes.
Q. And didn't he order -- didn't he suggest that heparin could be stopped?
A. May stop heparin.
Q. What does that mean, may stop?
A. Consider, it's possible to stop.
Q. In other words, from a cardiology perspective, he wasn't necessarily concerned that she remain on heparin?
A. He didn't feel it was absolutely essential, yes.
Q. And then you saw her that same day following Dr. Neidermaier?
A. I don't know if I saw her following him or not. I may have written my note afterward, but I could have seen her before Dr. Neidermaier.
Q. But your note is written after?
A. Correct.
Q. The same day, but after?
A. Correct.

Q. Now, although Dr. Neidermaier, the cardiologist, said the heparin could be stopped, in fact, it was not stopped, correct?
MR. TABER: Objection.
MR. GROEDEL: Objection. You can go ahead and answer.
A. I don't know that.
Q. Well, you can refer to your notes.
A. I do know that the next day I wrote, on 3/4/00, "Would restart heparin IV if this lady has any more chest pain."
Q. You wrote that on the 4th?
A. Correct.
Q. Well, you can determine on what days she received heparin by looking at the medication record in the chart, couldn't you?
A. Yes, I could.
MR. NORTON: Do you have that, Marc?
MR. GROEDEL: Do you have it?
Q. Doctor, I'm handing you a folder containing what is the copies of the medication records of Nola Hasto from March 2nd through the 16th, and it looks to me from that record that she received heparin from admission through the morning of March 7th, if you want to take a look at it.
A. Says, "DC heparin drip," 3/3. I'm not familiar with how further -- with what these columns are, what specifically that

means, these notations, but there's certainly a notation on 3/3, says "DC heparin drip."
Q. Would that have been in response to a doctor's order?
A. Most likely.
Q. And would you have written the order, or --
A. Not necessarily.
Q. Who would have written it?
A. Most likely, one of the residents.
Q. Would that have been a resident assigned to your team?
A. Or somebody that was cross-covering, one or the other.
Q. It would be somebody you would be responsible for?
A. For their conduct, yes.
Q. How about for their order?
A. Ultimately, yes.
Q. Do you have the doctors orders in the chart? Let me see if I have them.
A. Yes, I do.
Q. It appears that although -- well, was there an order for heparin written on March 4th?
A. Subcu heparin, yes.
Q. Whose order was that?
A. Dr. Boyle's.
Q. Dr. Boyle would have been a member of the blue team you were supervising?
A. Correct.

Q. Were you aware of that order?
A. I don't recall.
Q. Why would it have been ordered?
MR. TABER: Objection.
A. Even though the lady was felt not to require intravenous heparin anymore, there were perhaps felt to be indications for subcu heparin, because the indications for subcu heparin are not the same for IV heparin.
Q. What's the difference?
A. Subcu heparin is generally given as a prophylactic drug against deep venous thrombosis.
Q. Now, your note of March 4th indicates that you would, quote, "Restart IV heparin if lady has any more chest pain." I think you wrote that.
A. I would restart heparin IV if this lady has any more chest pain.
Q. Right. So from that note it appears that you were aware that the heparin, drip heparin, had been stopped, but subcu had been given?
A. I was aware that the drip heparin had been stopped. There's no indication in this note to indicate that I knew for sure.
Q. Wouldn't you want to know what orders were being written for a patient that you were responsible for?
A. It's not that I did not know at the time, it's just that

I can't recall at present, and the note doesn't indicate that.
Q. But at the time, that's something you should have been aware of?
A. Yes.
Q. So you were concerned that if she had any more chest pain you would restart the drip heparin?
A. Correct.
Q. So on the 4th, at least, your concern for this woman was of cardiac origin?
A. Correct.
Q. And in that connection, you were interested in using heparin to maintain her?
MR. TABER: Objection.
A. Not on the 4th, I wasn't.
Q. If she had more chest pain?
A. That's a hypothetical question, if she had more chest pain.
Q. Right. But at that point, at any rate, she was on subcu heparin?
A. Correct.
Q. Now, apparently, from my reading of the record, she was placed back on IV heparin on the 5th, the next day?
A. That's correct.
Q. Was that your order?
A. Not specifically.

Q. Is that Dr. Boyle's order?
A. I don't know, I haven't looked at the order, but I can look for you. Yes.
Q. So, again, this is an order written by a resident who was caring for one of your patients?
A. Correct.
Q. If you had disagreed with that order, you would have stopped it?
A. Correct.
Q. And you didn't stop it?
A. Correct.
Q. From the record -- do you know independently of the record why the drip heparin was started again on the 5th?
A. Because Mrs. Hasto had some chest pain sometime on 3/5/00.
Q. That would have been consistent with your earlier note of the 4th?
A. Correct.
Q. And she remained on the drip until the morning of March 7th; is that right?
A. Correct.
Q. Sometime during the morning of the 7th it was stopped?
A. Correct.
Q. Why was it stopped?
A. Because she was going for a cardiac catheterization and

she had also fallen.
Q. When had she fallen?
A. Sometime in the morning.
Q. Well, was the heparin stopped because she fell or because she was going for a catheterization?
A. I think it was both. I can't tell you exactly which was the immediate decision, but they're both indications to have the heparin stopped. A catheterization can't be done while on IV heparin unless under exceptional circumstances, and a fall of that nature would generate an indication to at least hold it temporarily.
Q. Well, don't you get heparin when you have a catheterization done?
A. I'm not familiar. You may get heparin through the catheter as they're doing it, but I'm not a cardiologist, so I can't answer that question.
Q. I see on the 7th you wrote a note that she fell, "The patient fell immediately prior to the cardiac catheterization."
A. Yes.
Q. Do you see that note?
A. Yes, I do.
Q. Does it refresh your recollection as to whether or not the heparin was stopped because of the fall or because she was going for the catheterization?
A. Probably occurred because of both, but I can't tell you

that for sure.
Q. Now, after the catheterization Dr. Neidermaier wrote another note on the 7th?
A. I have a note here from the 8th.
MR. GROEDEL: 7th or 8th?
MR. NORTON: 7th.
MR. GROEDEL: Postcath?
MR. NORTON: Right.
A. I don't see a note from him from the 7th, I see a note from the 8th.
MR. GROEDEL: On the bottom.
THE WITNESS: But it's definitely the 8th.
MR. GROEDEL: Right, it's the 8th.
Q. So the 8th Dr. Neidermaier saw her again, according to the notes?
A. Correct.
Q. Is that before or after you saw her? You wrote a note on the 7th, so it was after you saw her then; is that right?
A. That would be correct.
Q. And so he's writing a note after the catheterization has been completed; is that correct?
A. Correct.
Q. And he's stating that she doesn't need any intervention, wouldn't benefit from it, correct?
A. He's not saying that she doesn't need it, he's saying

she wouldn't benefit from it.
Q. So he recommended continued medical management?
A. Correct.
Q. What did that mean to you?
A. That meant to me there was going to be medicines and there was going to be no cardiology intervention planned at that time.
Q. What kind of medicine?
A. Anginal medicines.
Q. What are those?
A. Nitrates. One could consider beta blocker, but there was a mitigating factor in this case. One could consider calcium antagonist, perhaps an aspirin.
Q. Now, in terms of aspirin, in fact, this woman received one baby aspirin a day from the date of admission through the 15th of March; is that correct?
A. I don't know that for sure.
Q. You can look at the medication record, I think you'll find that to be true.
A. This should be a contiguous page, but it isn't, as far as I can tell. It only goes to 3/8, so I have to keep going. Well, I can tell you based upon what I have here, this lady first received a baby aspirin, which is 81 milligrams, on 3/3, and received it till at least 3/14. But the indication on 3/15 means -- there's a 10 here but there's no line through it, so

I'm unclear what that specifically means. But she doesn't appear to have received it after the 15th, and possibly not after the 14th.
Q. But at least through the 14th she received it?
A. As best as I can tell, yes.
Q. What was the purpose of giving her aspirin?
A. It's an antiplatelet agent.
Q. Does it inhibit coagulation?
A. Somewhat.
Q. Is it proper to speak in terms of half-life, to speak of aspirin in terms of half-life?
A. You can talk about it in that way.
Q. How long does it maintain its anticoagulant effect after the dosage has stopped?
A. It's not really a half-life, but some people can feel it can be up to 14 days.
Q. Not related to half-life, can you consider an effect up to 14 days?
A. I don't know if it's specifically related to half-life, but it can be effective up to 14 days on the platelets. But we're taught that it can have an effect up to 14 days.
Q. Now, when Dr. Neidermaier wrote his note on the 8th for medical management, he didn't order heparin?
A. He didn't mention it.
Q. And if I understood your earlier answers correctly, you

didn't believe that was included in his recommendation of medical management?
A. Intravenous heparin, correct.
Q. But did you believe he, himself, considered subcu heparin?
MR. GROEDEL: Objection. You may answer.
A. The subcu heparin was not for primary cardiac reason.
Q. Okay. After the 7th, subcu was not primarily for cardiac?
A. No, it was for DVT prophylaxis.
Q. But at any rate, Mrs. Hasto did receive subcu heparin from the 8th through the 12th; is that correct?
A. I need to refer to the notes.
It was started on the 8th and continued until the morning of the 13th.
Q. Subcu heparin?
A. Correct.
Q. Was that heparin therapy, were you aware of it?
A. Yes.
Q. Did you order any of it?
A. I don't know if I ordered it myself or one of the residents did or not.
Q. But you would have been aware of it and you concurred in it?
A. Correct.

Q. And, again, it was prescribed primarily for DVT prophylaxis. Was there something in this patient's clinical presentation that suggested to you that she needed prophylactic medicine for DVT?
A. I know that she was bed-bound at least for the initial part of her stay, and we felt because of her other medical conditions that she would benefit from DVT prophylaxis.
Q. Were there any specific clinical signs or symptoms apart from her bedridden condition that you were aware of that warranted DVT prophylaxis?
A. I do not recall.
Q. You can look at the record.
MR. TABER: Can we clarify at what point you mean, John?
MR. NORTON: From the 8th through, I think it was the 12th.
MR. GROEDEL: Morning of the 13th.
MR. NORTON: Or morning of the 13th.
MR. GROEDEL: Do you want him to describe the other medical conditions that he thinks was an indication, or is that what you're looking for?
MR. NORTON: I think what I said, what clinical presentations were you aware of that suggested it was appropriate to place this woman on DVT prophylaxis.
A. I can tell you that I wrote a note on the 11th which

would start ambulating Mrs. Hasto, which would indicate at least until the 11th that she hadn't been walking around, which in and of itself would be prophylactic indication. Obviously, being bed-bound is not a medical condition.
Q. Was there any other clinical sign or symptom that you can point to as a reason for DVT prophylaxis?
A. Sign or symptom, no.
Q. While she was being maintained on anticoagulant therapy from the 8th through the morning of the 13th, you were aware that she had fallen?
A. You mean anticoagulant therapy, you mean subcu heparin?
Q. Yes.
A. Yes, I was aware she had fallen.
Q. And because she had fallen, she was at risk, or a greater risk, for bleeding?
A. Slightly, yes.
Q. Were you aware that -- were there any signs or symptoms that she was bleeding?
A. She had some bruising, yes.
Q. Where?
A. I don't recall, I'm just going by what the notes say.
Q. Your notes or the nurses notes?
A. Well, I'd seen the autopsy report, I know that referred to some bruising.
Q. I think the nurses notes refer to bruising as well.

A. They may, I didn't read it.
Q. But my question is more specific. Did you see the patient every time you wrote a note?
A. Not at the exact same time, but I did see this lady every day.
Q. Every day. So if she had bruising, you would have seen it?
A. Yes.
Q. And when you say you saw her, did you come in and look at her, did you ever physically examine her?
A. Yes, I did.
Q. So as of sometime on the 7th you were aware that she had fallen?
A. Correct.
Q. And from the 7th on you were aware that she had some bruising?
A. I do not recall if the bruising started immediately, but sometime during the period I recall that she had had some bruising.
Q. What would these bruises have been signs of?
A. Bleeding into the soft tissues.
Q. Is bleeding in an elderly patient who had sustained blunt trauma in a fall, does that present some risk to the patient?
MR. GROEDEL: Objection. You may answer.

A. That's a very general question. Of course it presents some risk, but it depends where the bleeding is, to answer it more specifically.
Q. How about if it's bleeding just into soft tissue, as you say?
A. If it's not substantial, it doesn't represent risk to most patients.
Q. How would you determine whether it is substantial or not?
A. You would look at the patient and you would check their hematocrit and hemoglobin.
Q. So if the patient's hemoglobin was decreasing in a clinical picture of bruising following a fall, that would suggest to you some loss of blood?
MR. TABER: Objection.
MR. GROEDEL: Objection. You may answer.
A. If it was decreasing substantially, yes, but a small decrease would not necessarily indicate that.
MR. TABER: John, may I ask for clarification? When you say bleeding, are you excluding any gastrointestinal bleeding?
MR. NORTON: Bleeding is bleeding.
MR. TABER: Okay.
MR. NORTON: I don't care whether it's from the nose or wherever.

Q. Where would we find her hemoglobin?
A. In the laboratory reports.
Q. Would you be looking at her lab work in connection with your continuing care of her?
A. Yes.
Q. Doctor, I'm handing you a folder which contains lab reports. You may have it in your own records, I don't know.
MR. GROEDEL: What do you want him to look for, John?
Q. Well, when she came into the hospital in March, when was the first time her hemoglobin was taken, what date?
A. In the hospital, I can tell you it was definitely done on the 3rd of March.
Q. And what was it?
A. 10.8 grams.
Q. Is that borderline low?
A. It's low.
Q. Was it taken on the 4th?
A. Yes.
Q. What was it then?
A. 10.9.
Q. How about on the 5th?
A. 10.5.
Q. And the 6th?
A. 10.3.

Q. So she's borderline low on the hemoglobin, but it's remaining pretty constant?
A. Till what date?
Q. Well, from the 3rd to the 6th.
A. Yes.
Q. How about on the 7th?
A. 9.7.
Q. 9.7 on the 7th?
A. Excuse me, there's no 7th here, excuse me.
Q. What's the next one, then?
A. The 8th.
Q. What was it?
A. 9.7.
Q. What was it on the 9th?
A. 8.9.
Q. Well, is that a significant drop in hemoglobin from, let's say from the 4th at 10.9 to the 8th at 8.9?
A. No.
Q. Not at all?
A. It's a drop.
MR. GROEDEL: Objection. You may answer.
A. It's a drop. You have to -- the significance would have to be taken in clinical context.
Q. Is there any correlation between a gram of hemoglobin and a unit of blood?

A. People say that it's approximately a unit of blood, but that's an approximate estimation.
Q. One gram is approximately one unit of blood. So if you're just taking two days, March 4th at 10.9, for simplicity, and March 9th at 8.9, you have lost two grams of hemoglobin?
MR. TABER: Objection.
MR. GROEDEL: Objection.
A. That's not two days.
Q. No, taking two days, I didn't say they were back-to-back days, I'm just taking the easy one. 10.9 on the 4th to 3/9 to 8 is -- to 8.9 on March 9, is a two unit drop of blood, or two gram drop of hemoglobin?
A. Can you rephrase the full question?
Q. Between the 4th of March and the 9th of March, her hemoglobin dropped two grams?
A. Correct.
Q. Which is approximately two units of blood?
MR. GROEDEL: Objection.
A. That's hypothetical. You're assuming by stating that question that the hemoglobin fell slowly due to blood loss, and I don't know the answer to that question at this point.
Q. Because, as you said, you have to evaluate a drop of hemoglobin in the clinical picture?
A. Also, hemoglobin can fall for other reasons other than blood loss.

Q. Right, that's why I say you have to evaluate it in the clinical picture.
A. Correct.
Q. Now, this woman's clinical picture included a fall, correct?
A. Correct.
Q. And it included signs of bleeding into soft tissue in the form of bruising?
A. Correct.
Q. So bleeding was definitely a part of the clinical picture that could account for a drop in hemoglobin?
A. Possibly.
Q. Now, what other factors were present that could mean this drop?
A. Well, subsequently she did have a guaiac-positive stool.
Q. I'm talking about just between the 4th and the 9th.
MR. GROEDEL: Well, I mean, I think it's unfair to limit his answer, because you're looking at two labs between the 4th and the 9th. Maybe there's information after that which allowed him --
MR. NORTON: Maybe there is, but I didn't get there yet.
Q. I'm talking just between the 4th and the 9th, Doctor.
A. Can you repeat?
Q. I'm responding to your qualifier. You said, I can't

conclude that between the 4th and the 9th she lost two units of hemoglobin because of bleeding, because other factors, you said, could account for the drop in hemoglobin. So I'm wondering what other factors were present in that time frame, between the 4th and the 9th, to account for a two gram drop in hemoglobin?
MR. TABER: Objection.
MR. GROEDEL: Objection. You may answer.
A. I think you're asking me a very hypothetical question. There are a lot of things I could postulate.
Q. Well, the only reason I'm asking is because you're not accepting the concept that this two gram drop in hemoglobin was directly related to blood loss.
A. Because I can't prove it. I don't think anybody can prove it.
Q. Well, what can you postulate as other causes for this time frame?
A. That she has marrow failure for some reason.
Q. What kind?
A. Marrow.
Q. Bone marrow?
A. Possibly. There could have been a dilutional phenomenon; hemoglobin can go down because there's too much fluid in the system. This lady did have cardiac disease and may have been holding onto excessive amounts of fluid. She

could have been hemolyzing for whatever reason. Those are things that would come to mind; I don't see any clear-cut evidence of that right now.
Q. As a matter of fact, you never explored any of those other possible causes?
MR. TABER: Objection.
A. Not in my notes.
Q. And all you can know about what you did for this lady is from your notes?
MR. GROEDEL: Objection.
A. Are you talking legally, or --
Q. No. All I can know, anybody -- nobody can get into your mind and know what you did at the time unless you wrote it down?
MR. GROEDEL: Objection.
A. Correct.
Q. So we have to go from your notes, right?
MR. GROEDEL: Objection.
A. Correct.
Q. So from your notes, can we say that you explored any of these other possible reasons for the drop in hemoglobin?
MR. TABER: During that period of time there?
MR. NORTON: We're dealing with March 4th to March 9th.
A. In my own notes until March 9 it's not talked about.

Q. Now, continuing with the hemoglobin, on March 10th?
A. 8.1.
Q. Which is almost another gram, seven-tenths of a gram?
A. It's .8.
Q. So she's continuing to drop her hemoglobin on the 10th, right?
A. Yes.
Q. And still the aspirin and the subcu heparin are being maintained?
A. Correct.
Q. Again, for the DVT prophylaxis?
A. Correct. Well, the heparin is for DVT, the aspirin is for her cardiac condition.
Q. And, again, the prophylaxis is based on the fact she's not ambulating?
MR. GROEDEL: Objection. You may answer.
A. I don't know that anymore.
Q. Pardon?
A. I do not know that beyond 3/11.
Q. Beyond 3/11, but I'm only up to the 10th.
A. So that's correct.
Q. Did there ever come a time after the 10th when there were any other signs or symptoms, besides her nonambulatory status, that you were concerned about in terms of the DVT?
MR. TABER: Are we excluding test results when

you say clinical signs, John?
MR. NORTON: Clinical signs, symptoms, findings, whatever.
A. After the 10th, well, this lady was still wheezy without an explanation, and by 3/13 we obtained a V/Q scan, which was high probability, which strongly suggests pulmonary emboli as a diagnosis.
Q. She still had wheezing?
A. Correct.
Q. From when, how long had she been wheezing?
A. I assume, although I cannot recall, that she had been intermittently wheezing since admission.
Q. You can look at your notes and see if you commented on it.
A. I know she was still wheezy, in my note, on 3/13.
Q. Start from the beginning and let's see.
A. On 3/3 she presents -- I wrote, indicated, that she presents with a two week history of intermittent chest pain, but also intermittent wheeze.
Q. That's on the 3rd?
A. Correct.
I comment that she was wheezy on 3/4. I have not commented on 3/5. I do note that Dr. Boyle commented on 3/7 that she was wheezy on examination. I comment that, myself, that she was wheezy on 3/8. On 3/9 I also commented that she

was wheezy, on 3/10, on 3/11, and on 3/12, 3/13. I did not comment on 3/14. I did not comment on 3/15.
Q. Well, backing up, then, was this wheezing significant to you in any way?
A. Yes, it was.
Q. But it wasn't a reason you prescribed the heparin, or was it?
A. The subcu heparin, no. The IV heparin was restarted on the basis of a high probability V/Q scan.
Q. You're talking about the 13th of March?
A. Correct.
Q. So what was the significance of the wheezing, then, why are we talking about wheezing?
A. Because this lady had major problems, at least, chest pain and wheezing. Because of her extensive past history of atherosclerotic cardiac disease, the initial focus was on this as a cause for both her chest pain and wheezing. When the cardiac cath did not seem to show any significant progression of her disease prior to what she had before, the focus of the workup changed somewhat.
Q. From cardiac to what?
A. Pulmonary.
Q. So before the cath, the wheezing was related, you felt, was related to cardiac?
A. We felt it was most likely, but we did not know for

sure.
Q. After the cath, what did you relate it to?
A. We just focused more on her pulmonary possibilities.
Q. How does wheezing play into the pulmonary issue?
A. It can be a sign of different pulmonary diseases, such as COPD, asthma; or it can be a less common manifestation of other pulmonary disease, such as thromboembolic disease in the pulmonary arteries.
Q. Well, but you weren't concerned about these other diseases after March 7th, were you?
MR. TABER: Objection.
MR. GROEDEL: What other diseases?
MR. NORTON: The ones he just mentioned.
A. Oh, yes, I was.
Q. All of them or just some of them?
A. We had to look for the possible explanation for this lady's wheeziness, so we had to consider other diagnoses other than coronary artery disease.
Q. Well, what are some of the -- what's included within the differential diagnosis for wheezing?
A. COPD, asthma, stridor.
Q. What was that?
A. Trouble with the vocal cord, which is technically separate from wheezing but can show up as a syndrome. Similar to wheezing. There are rarer ones, sarcoidosis, which doesn't

do it as often; fibrotic lung disease; bronchospasm, caused by irritants; pulmonary emboli can do it, but not commonly; it can be a manifestation of congestive heart failure, a phenomenon called cardiac asthma. Those are the common ones that come to my mind.

Q. And did you actually consider these various other possibilities in the differential diagnosis of her wheezing?

A. Yes.

Q. And what did you conclude was the cause?

A. We had to go through it step-wise. Initially when this lady came in she had an extensive history of coronary artery disease.

Q. Right, I understand before March 7th you considered it to be cardiac origin.

A. Most likely.

Q. Most likely. But after March 7, say between the 7th and the --

A. This lady carried a diagnosis of COPD, however, there was the ringer that she had not smoked significantly in the past, which did raise a red flag somewhat, as that most people with COPD have smoked or do smoke or have smoked in the past.

Q. So what did you conclude was producing her wheezing?

A. At what time?

Q. Between the 7th and the 12th.

A. We focused then that her COPD might be the cause and we

actually started steroids on this lady.

Q. So between the 7th and the 12th you weren't concerned about pulmonary emboli?

A. It was lower down the list.

Q. Very low?

A. Low at that time.

Q. Was that any part of the reason that you maintained her on the subcu heparin between the 7th and the 12th?

A. The subcu heparin had nothing to do with it. That is a possibility. That's a prophylactic drug. If you felt that this lady, strongly, this lady was wheezing because of a pulmonary embolus, the treatment would have been IV heparin, if you had in fact gotten a test which suggested that or your clinical suspicion was very strong.

Q. So you didn't have a strong feeling about pulmonary embolus then until after the 13th, or on the 13th?

MR. TABER: And excluding the before, that he already testified about.

A. I became more suspicious around the 11th and later, because the spirograms came back on the 11th not suggesting COPD as the diagnosis.

Q. So you thought perhaps she was having, could have --

A. I think it went higher up my list, although I don't think -- I didn't feel confident that's what she had, but I think we needed to work it up. I had a lady that was wheezy

without an explanation, who had relatively normal spirograms, and a cardiac catheterization that wasn't suggesting that her coronary artery disease was any worse than it used to be.

Q. So the possibility of a pulmonary embolism moved up to what level on your list?

A. Moderately suspicious.

Q. Now, how would a pulmonary embolism produce wheezing?

A. It makes people short of breath often, and if they have a preexisting condition, sometimes even if their lungs are completely normal, they can develop bronchospasm as a result of that.

Q. What are the clinical signs, or the signs and symptoms of, say, a pulmonary embolism?

A. Shortness of breath; chest pain that's pleuritic; can present with syncope; can present with lightheadedness; they can cause sudden death. The physical signs are not very specific for pulmonary embolus. You can have signs of pulmonary hypertension on physical exam, but oftentimes the exam is not very impressive.

Q. When chest pain occurs in a clinical setting of pulmonary embolism, how would you describe its onset?

A. Typically, it's relatively sudden in onset.

Q. An acute?

A. Yes.

Q. This woman didn't have any of that?

A. That's correct.

Q. Is tachypnea a clinical sign?

A. Yes.

Q. She didn't have that either?

A. I didn't review that recently, so I don't know.

MR. GROEDEL: Tachypnea.

Q. Tachypnea.

A. I guess I would have to look at the nurses record.

Q. That would be what, respirations?

A. Vital signs, probably.

Q. Go ahead.

A. I actually don't have any vital signs in the section labeled Vital Signs.

Q. That would be in the nursing notes?

A. I presume so.

Just randomly looking through this record, on 3/7 her respiratory rate was 20; on 3/9 it was 20; on 3/13 it was 20; and that's technically tachypnea.

Q. Twenty?

A. Yes.

Q. What's normal?

A. Twelve to fifteen.

Q. Going back, when did you say you became suspicious of pulmonary embolism, the 11th?

A. More suspicious.

Q. More suspicious. Well, here you have a patient that's dropping her hemoglobin, by the 11th it's down to what?
A. Well, I have two values on the 11th, I have 7.8 and I have 9.0.
Q. What accounts for the dramatic difference --
MR. TABER: Objection.
Q. -- on that single day?
MR. GROEDEL: Objection. You may answer.
A. I cannot explain that at this time.
Q. Was she getting any saline?
A. I do not know, I'd have to review the records to say that. It could be lab error, but I can only postulate that.
I do not see any record of it.
Q. So there are two reads, then, on the 11th, hemoglobin, one at 7.8 and the other is 9.0, different times?
A. Yes, they're about, approximately, eight hours apart.
Q. What hour of the day was the 7.8?
A. 4:55 in the morning.
Q. And then when was the 9.0?
A. 12:50 in the afternoon.
Q. On the 11th, wouldn't you have been concerned with that hemoglobin drop to 7.8?
A. Somewhat.
Q. In this woman, this elderly woman who had fallen on the 7th and who was manifesting bruising, a drop in her hemoglobin

like that, do you think it was still appropriate to continue the aspirin and the subcu heparin?
A. I think the aspirin, because she had significant coronary artery disease. The subcu heparin, I'm unclear about her mobility status at that time; she hadn't been very mobile for the earlier part of her hospital course. I'm unclear why. I only know that the testing that was being done to her did require her to remain in bed and she hadn't been mobile. She had also fallen, as you know, prior to the tests.
Q. So your testimony is, even with that kind of drop in hemoglobin, you felt that appropriate, to maintain the subcu and the aspirin?
A. Yes.
Q. And the subcu is, again, prophylactic for DVT?
A. Correct.
Q. And it is true, isn't it, that even this subcu heparin presents the potential for increased bleeding in an elderly person who had fallen?
A. It presents a potential increased bleeding in anybody.
Q. And it's increased with somebody who is elderly?
MR. GROEDEL: Objection.
A. Not being elderly by itself.
Q. Just the fall?
A. It depends on the nature of the injuries and what the status of things were at the time post the fall. You know,

obviously, we do not know exactly -- did not know exactly what was going on inside this lady's body at this particular moment in time, so my answer can only be speculative.
Q. You know she had a hematoma on her head?
A. Yes, I do.
Q. You were concerned enough about bleeding to have ordered a CT of her head?
A. I think anybody who falls while on IV and strikes her head is going to get a head CT.
Q. You could, if you were concerned about pulmonary embolism, have ordered tests to see if in fact that condition was developing in her, could have done that on the 11th when her hemoglobin was 7.8?
A. It doesn't develop, it just happens. But we could have, yes.
Q. And when would have been the venous duplex of the lower extremities? That was done later, but you could have done it on the 11th?
A. Potentially, yes.
Q. What is that, anyway?
A. It's an ultrasound test to see if there are clots in the lower extremity veins.
Q. So, basically, it's a noninvasive test?
A. Correct.
Q. It's like an x-ray?

A. No, it's not like an x-ray, but it's a noninvasive test.
Q. Takes a picture of the --
A. It's an ultrasound test. X-ray is usually radiation, there's no radiation involved with this test.
Q. But it gives you an image of the veins and arteries of the --
A. You can obtain an artery image, but this variety of this test you just look at the veins, the arteries generally are not examined.
Q. At any rate, you weren't sufficiently concerned on the 11th about the possibility of PE to have ordered that kind of a test on the 11th?
A. Correct.
Q. When did you order that test?
A. I do not recall when I ordered it. I can tell you when it happened. It happened -- the duplex of the lower extremities I considered in my note on 3/14, but I do not recall exactly when it occurred, or if it did --
Q. Pardon?
A. I mentioned that in my note of 3/14. I do not know if this test occurred; or if it did occur, when it occurred.
Q. Would that be a test that would be in the x-ray record?
A. Should be, should be.
Q. I'm handing you a file containing the x-rays. He's got it over here too.

A. Test was done on 3/14.
Q. What did it show?
A. Negative study bilaterally for acute DVT.
Q. Now, this other test that you gave for something that showed a high probability for PE, what did you call it?
A. A V/Q scan.
Q. Is that also a noninvasive test?
A. Yes, it is.
Q. How does it work?
A. It's a test that has two parts. The patient inhales a small amount of material that is radioactive, and they also are injected with a tiny amount of material that's radioactive. So the inhale test looks at the distribution of the radioactive tracer within the lungs, and the injected part of the test looks at the distribution of the radioactive tracer within the pulmonary circulation of the lung.
Q. Now, is it a test that's specifically diagnostic for PE?
A. No, it's not.
Q. Is it a test that has to be correlated with the clinical picture?
A. Yes, it does.
Q. Is it a test that measures breathing?
A. That's too broad a question.
Q. Too broad. Well, are there medical conditions which can skew the validity of the test?

A. Yes.
Q. What conditions?
A. Pneumonia. Any reason for the patient to have an infiltrate on their chest x-ray. Lung cancer, perhaps. People with both asthma and COPD sometimes can have problems with the ventilation part of this test.
Q. Okay. So this woman did have asthma?
A. She carried a diagnosis of COPD, which is technically not the same thing as asthma, but the problem is that the pulmonary function test didn't seem to support that as a diagnosis, the spirograms.
Q. What about asthma?
A. It's possible that she had asthma.
Q. Well, she was given steroid for asthma.
A. Which didn't seem to improve the situation very much.
Q. The steroid wouldn't affect pneumonia?
A. No.
Q. Did the x-ray show any infiltrate on her lung?
A. I need to review the file.
MR. TABER: Which day are we talking about?
MR. NORTON: X-ray.
A. I'm looking at a film from March the 3rd. With the exception of some blunting of the right costophrenic angle and some small bilateral pleural effusions, there's no specific comment about an infiltrate.

Q. How about, there's a film from the 9th, what does that say?
A. Lungs free of acute parenchyma infiltrates. And it says that there's little appreciable change in the appearance of the chest from the study obtained six days earlier.
Q. So the 9th and the 3rd are about the came?
A. According to the radiologist.
Q. How about on the 12th?
A. They do comment of a patchy infiltrate in the right lower lobe, which was commented to represent perhaps atelectasis versus pneumonia. And they also talk about a 7 millimeter by 1 centimeter parenchymal nodule in the right upper lobe. They give a differential diagnosis of what that nodule might be, and they talk about spur formation in the thoracic spine.
Q. So is it possible that this woman had a touch of pneumonia?
MR. GROEDEL: Objection.
A. This is a theoretical question. It's possible, but the clinical picture didn't seem to support that.
Q. In any event, this infiltrate that's shown on x-ray on the 12th is a condition which could have skewed the validity of the scan, the V/Q scan?
A. It may have made it slightly more difficult to interpret, yes, but not technically affect the interpretation.

Q. Now, in the care and treatment of a patient, is it important to know as much as you can about the patient's past medical history?
A. Yes, it is.
Q. Did you know that she had had a past history of wheezing?
A. I do not recall that specifically. I know that she had been complaining of wheezing for two weeks prior to being admitted.
Q. You don't know whether that condition was present in any other Kaiser record?
A. I do not recall.
Q. You never looked at any other Kaiser record?
A. I do not know that for sure, I do not recall.
Q. If you had known that she had a history of wheezing on other occasions, would that have caused you to be less concerned about it in this setting, this clinical setting of March 2000?
MR. GROEDEL: Objection, vague question. Go ahead.
A. No, I was still very concerned about this lady's wheezing because I didn't have a good explanation for it.
Q. Would pneumonia account for it?
A. It can cause wheezing, but not for lengthy periods of time like you just described.

(Plaintiff's Exhibit 1 was marked.)
Q. Doctor, what I have handed you is marked as Plaintiff's Exhibit 1, it's a discharge summary for Nola Hasto from the Cleveland Clinic for admission of December 24th, 1997. Do you see that on examination there the physician reported that her lungs showed crackles and diffuse wheezing?
MR. GROEDEL: Object. You can go ahead and answer these questions, but I'm going to object to any testimony based upon what's in this discharge summary that's just been presented to the doctor without the benefit of having reviewed the entire chart, and of course without reviewing this record before.
A. You're talking about the physical examination section, crackles in lung base and diffuse wheezing, yes, I see that.
Q. Do you see what the ultimate diagnosis was in the case, in the discharge?
A. Community acquired pneumonia.
(Plaintiff's Exhibit 2 was marked.)
Q. Doctor, what I have handed you is Plaintiff's Exhibit 2, which is a copy of the emergency department record of Kaiser, April 16, 1997. Apparently Nola Hasto appeared at the Kaiser emergency room on that date and her lungs were examined, do you see that, and the note was made that her breath sounds revealed inspiratory and expiratory wheezing?
A. I note that.

Q. Now, this record as well as the Cleveland Clinic discharge record is something you could have accessed on the computer?
A. Yes, sir.
MR. GROEDEL: Objection.
Q. Pardon?
A. Yes, it is.
Q. Had you accessed the report and become aware of those prior instances of wheezing, would it have influenced your thinking in this case at all?
MR. GROEDEL: Objection, asked and answered. Go ahead.
A. Not much.
Q. Now, on the 13th of March she was placed back on drip heparin?
A. IV heparin, that's correct.
Q. And you say that was because of the V/Q scan?
A. Being high probability, yes.
Q. Even though you have told us that the scan can be skewed by other conditions?
MR. GROEDEL: Objection. You may answer.
A. Harder to interpret because of other conditions, but not skewed, per se.
Q. And these other conditions would be pneumonia?
A. Pneumonia could potentially make it more difficult to interpret.

Q. Infiltrate on the lung?
A. Correct.
Q. Asthma?
A. Asthma may, may, but not always.
Q. And it is a test that requires correlation with the clinical picture?
A. That's correct.
Q. What in this woman's clinical picture, other than the fact that she was not ambulatory, correlated with the lung scan that showed high probability for PE?
A. I don't quite follow your question.
Q. You have told us that a lung scan has to be correlated with the patient's clinical picture in order to reach a definitive diagnosis?
A. That is correct.
Q. And my question is -- and you have already told us about the fact that she was not ambulatory as a reason for the subcu heparin. I'm asking you what specific signs or symptoms did this patient present that you regard as having been corroborative of the V/Q scan's high probability finding for PE?
A. She was short of breath, wheezy, she had a cardiac cath that didn't show advancement of atherosclerotic disease, and most importantly she had pulmonary function tests, spirograms,

which look relatively normal. But the lady was still wheezy and had been wheezy throughout most of her course, and that struck me as being suspicious for another diagnosis other than either cardiac -- atherosclerotic heart disease or COPD/asthma as a reason for this lady's shortness of breath and wheezing.
Q. Let me try to break that down. Her cardiac condition would not be causative of a PE, would it?
MR. TABER: Objection.
A. If she had a low output state, that would put her at increased risk, yes.
Q. A low output state, what do you mean by that?
A. If she was not pumping blood around her body the way she was supposed to, if there was intermittent, or at times, congestive heart failure.
Q. Did she have a low output state?
A. I know she had a low ejection-fraction in the past, yes.
Q. 45 percent?
A. Which is mild to moderately reduced, so that would put her at some increased risk, although not a lot of risk, but some increased risk of developing a pulmonary embolus, and also be another reason to consider using subcu heparin as a prophylaxis.
Q. We're talking about the drip heparin now, and I'm asking you now about the signs and symptoms presented in this woman's clinical picture that corroborate?

A. Signs and symptoms, symptoms were shortness of breath and continued wheeze in the face of IV steroid, which didn't seem to improve her condition significantly. Those would be the wheeze in the face of the fact that the pulmonary function test looked relatively normal, and in the face of the fact that cardiac catheterization did not seem to show significant progression compared to previous examinations of her atherosclerotic cardiac disease.
Q. So basically it's the wheeze?
MR. TABER: Objection.
MR. GROEDEL: Objection, asked and answered three times now, John.
A. I think you're trying to paraphrase what I'm saying, and I've already made my statements pretty clear.
Q. Now, are you saying that she was having a PE, or she was at risk for a PE on the 13th?
A. Based on the clinical information, both physical examination, history, and some of the test results, plus a high probability V/Q scan, I felt that the balance of probabilities was that this lady most likely had one or more pulmonary emboli.
Q. You figured she had one?
A. I can't tell for sure, but the balance of probabilities and the clinical suspicion was very strong, based on the information available to me on the 13th.

Q. Taking the clinical sheets, yours and Dr. Boyle's, from the 9th to the 13th, I didn't find any note that she was short of breath. If you can find one, please identify it for me, between the 9th and the 13th.
MR. TABER: Just the progress notes?
MR. NORTON: Clinical sheets, progress notes.
A. From the 9th to the 13th?
Q. I didn't find any.
A. From Dr. Boyle or myself?
Q. Either one of you.
A. But there's a note from Dr. Ziolo, on 3/11 she says, "Blue team. Still with DOE," which stands for dyspnea on exertion, which means she was getting short of breath when she got up.
Q. Anything else?
A. With regard to shortness of breath?
Q. Right, Dr. Ziolo.
A. Till the 11th, to which date?
Q. The 13th.
A. On 3/13, somebody, although I cannot read the signature, does this blue B intern note.
Q. I see blue intern.
A. Blue B intern note. There's a note that says "Mild SOB," shortness of breath.
MR. TABER: What was the date on that?

THE WITNESS: 3/13.
MR. TABER: Thank you.
Q. Okay. Now, the description of mild shortness of breath, that would not represent an acute onset of PE, would it?
A. That's a very vague question.
Q. PE presents acutely, doesn't it?
A. Not always, you can have more than one and end up with chronic shortness of breath. What you're talking about is one single acute pulmonary embolus, and please realize this lady could have had more than one which produced an accumulative shortness of breath. Also realize that not all patients who have an acute pulmonary embolus present with shortness of breath, but their typical presentation is acute shortness of breath.
Q. In terms of the shortness of breath, we have the one note on the 11th, Dr. Ziolo, mild dyspnea on exertion, and this one on the 13th, blue intern, mild shortness of breath. Any others?
A. Not that I can determine.
Q. So reflecting on the answer that you gave earlier about the basis for your belief that her clinical picture correlated with the high probability PE lung scan --
A. No, it did not correlate, but the two together led me to believe that it was likely this lady had a pulmonary embolus.
Q. And as I listen to you, that basis that you have

expressed could be divided into two categories; one, those signs which are positive, such as shortness of breath, positive in the sense that they're observable; and two, those conclusions you arrive at by exclusion?
A. Such as?
Q. Such as the pulmonary function test excluded COPD as a cause?
A. It excluded COPD fairly substantially as a cause.
Q. And you excluded cardiac origin as a cause?
A. Not completely, but we excluded atherosclerotic cardiac disease as a cause.
Q. So in terms of the clinical picture supporting pulmonary embolism, we've got the exclusion of COPD as a cause, exclusion of coronary atherosclerotic disease as a cause, and we've got the symptoms of shortness of breath reported on the 11th and the 13th?
MR. TABER: Objection.
MR. GROEDEL: Objection, asked and answered now for about the fifth time. Go ahead.
MR. NORTON: Here is the question, you objected before I got to the question.
Q. Any other sign or symptom or exclusion?
A. Well, this lady had complained of wheeze and shortness of breath for a longer period of time than you have mentioned. We did not have an explanation for that as of the 13th, and the

V/Q scan came back as high probability.
Q. Well, I understand that when she came in she was wheezing almost every day. But after the 9th she -- when she came in on the 2nd, she had early complaints of shortness of breath, but they diminished?
MR. GROEDEL: Objection.
MR. TABER: Objection.
A. You cannot make that conclusion based on the record.
Q. You mean that doctors get tired of writing in the chart?
A. No, but we don't ask every question every day. There's definitely some indication this lady was short of breath, plus the fact shortness of breath is a subjective complaint.
Q. True. It could be caused by pain?
A. There are numerous causes for it, it's subjective.
Q. Somebody that's bleeding into the soft tissue of the chest might have pain from that internal hemorrhage?
A. Possibly.
Q. But in any event, at the risk of incurring another objection from Mr. Groedel, it's the shortness of breath, wheezing, observable, plus the two exclusions that we talked about that you felt suggested to you that this woman had a PE?
MR. GROEDEL: Objection. You may answer.
A. Plus the V/Q scan that was high probability.
Q. Right, exactly. And that's why you started the infusion of heparin then on the 13th?

A. Basically, yes.
Q. And when you started this heparin on the 13th, you were aware that this presented some risk of further hemorrhage on this woman's part?
A. It presents risk of hemorrhage to everybody.
Q. So you're aware of the risk?
A. Yes, I am.
Q. But apparently in your risk-benefit analysis you felt the risk of hemorrhage was less significant than the risk of PE?
A. Of an untreated PE?
Q. Of an untreated PE.
A. On the 13th, yes.
Q. Could you have selected any other method of dealing with the PE that would not have placed Mrs. Hasto at risk of hemorrhage?
A. We could have put in an IVC filter on the 13th.
Q. Why did you not do that?
A. Because the evidence suggests that IV heparin is superior to IVC filter for pulmonary emboli, particularly as the IVC filter doesn't actually treat the emboli in the patient, it merely prevents them or it cuts down the risk of developing pulmonary emboli further substantially.
Q. So this woman had, in your opinion, had a pulmonary emboli that was up in her lungs someplace?

A. Based, yes, one or more.
Q. It wasn't in her lower extremities?
A. Well, pulmonary emboli are pulmonary by definition.
Q. They start out in the lower extremities?
A. Not always, but mostly they do.
Q. So you chose IV heparin with its risk of hemorrhage over the IVC filter because the filter only catches that which is to come and doesn't deal with that which is present already?
A. That is to come from the lower extremities, yes.
Q. So you felt that as of the 13th this woman had a pulmonary embolism that had reached the lungs?
MR. TABER: Objection.
A. One or more.
MR. TABER: Asked and answered.
Q. One or more. And you selected the IV heparin over the IVC filter on the 13th even though on that day, the 13th, her hemoglobin had dropped to 7.9?
A. I need to review the lab results again.
Q. That's fine.
A. Correct.
Q. How do you regard a hemoglobin of 7.9?
A. It's low.
Q. On the 13th were you concerned about her bleeding?
A. You're concerned of it with any patient, heparin bleeding.

Q. Did you have any specific concerns for this patient?
A. She was already low, so we needed to watch her, and that's what we did.
Q. Now, this woman had a prior heart attack; you were aware of that?
A. Yes.
Q. 1997, I think, sometime.
A. I knew that she had a prior heart attack. I need to refer to the notes to know exactly when it was.
Q. It was before this admission?
A. Correct.
Q. And she had a stent placed in her LAD?
A. Correct.
Q. And she had some diastolic dysfunction?
A. I wasn't aware of that.
Q. It's in your note, if you take a look, I think it's in your initial note.
A. Yes.
Q. March 3rd. What is the significance of diastolic dysfunction?
A. It is usually caused by stiffening of the left ventricle, which means that the heart doesn't -- the left ventricle doesn't fill with as much blood as it's supposed to and can intermittently cause congestive heart failure.
Q. And you know this woman's ejection-fraction was 45, you

told us?
A. Yes.
Q. And so on the 13th you knew that she was bleeding someplace?
A. No, I don't think you can make that conclusion.
Q. You knew she had a drop in hemoglobin to 7.9?
A. I knew her hemoglobin was 7.9 grams.
Q. Which is four-tenths of a gram lower than the day before?
A. .4, yes.
Q. And three full grams lower than on March 4th?
A. Yes.
Q. And because of the drop of hemoglobin, you felt it was important to give her a transfusion?
A. Yes.
Q. And so she got two units of blood, right?
A. Correct.
Q. Now, even after the two units of blood, which brought her hemoglobin back up to 11 on the 14th, she continued to drop hemoglobin, so that it was 7.3 on the 15th, correct?
A. I'm looking for those labs, because my pages are not contiguous. Here we go. Your question again, please?
Q. Even after two units of blood having been given on the 13th, which brought her hemoglobin back up to 11 on the 14th, she's back down to 7.3 on the 15th?

A. Correct.
Q. A significant drop in hemoglobin?
A. Correct.
Q. That's better than three grams of hemoglobin in one day, between the 14th and the 15th?
A. Correct.
Q. Weren't you concerned that she was bleeding --
A. On the 15th --
Q. -- to account for that?
A. On the 15th, sure. That's why we called GI, that's why we stopped the heparin.
Q. Why did you give her the coumadin on the 14th?
A. Because at that time the hemoglobin was 11 grams and seemed stable at that point.
Q. Well, was it an 11 because she just had two units of blood the day before?
A. Correct.
Q. That was just a temporary measure to bring her hemoglobin back up with the transfusion?
A. That's not correct to say that. I mean, if there's no further reason for blood loss, then you give somebody a blood transfusion, their hemoglobin should stay stable.
Q. But we have a reason for continued blood loss in this woman, the fall.
MR. TABER: Objection.

MR. GROEDEL: Objection.
A. That's highly speculative, you don't know that for sure, there's no objective definitive --
Q. You know she was bleeding into the soft tissue because there were bruises on her torso.
A. I don't know if she was actively bleeding at that point; she had bled at some point.
Q. Now, coumadin is much longer lasting than even IV heparin?
A. Much longer lasting.
Q. And the combination of IV heparin and coumadin on the 14th is a powerful anticoagulant?
A. Not actually, because the coumadin takes about 48 hours to start working. It interferes with vitamin K, then the factors that are made by vitamin K do last a certain one to two days, so at that point it wouldn't have had much effect. The dose that she got on the 13th wouldn't really have had significant effect on the 14th.
Q. The coumadin was on the 14th, I believe, Doctor. Take a look.
A. Okay.
Q. So is it your testimony that the coumadin on the 14th had no role to play in the drop of her hemoglobin to 7.3 on the 15th?
A. On the 14th, it had little contribution.

Q. Some?
A. It's hard to tell exactly. I don't know, there's a lot of variability and possibilities here.
Q. Now, because of the drop in her hemoglobin to 7.3 on the 15th, it became necessary to transfuse her again?
A. Correct.
Q. And this time the transfusion was four units of blood?
A. That's what we decided to do. I don't know for sure if she got four units or not, but that's what was documented in Dr. Brown's note.
Q. And in addition to the four units of blood, she was given considerable saline on the 14th; is that correct?
A. I need to review the note.
Q. I think in the orders, if you look for that, saline.
A. Talking about the 14th?
Q. 14th, right.
A. I do not see any order for normal saline on the 14th. I do see orders on the 15th.
Q. Looks to me like she got on the 15th a bolus of 500 cc's over four hours of normal saline, she got another 500 cc bolus at about 5:00 in the afternoon, and another 200 cc bolus later on in the evening. And on the 16th she got a one liter bolus of normal saline. Do you see any of that in there?
A. On the 14th she had 500. This note, stop the IV fluid while being given blood on the 15th. On the 15th there was a

250 cc bolus. On the 16th there was an additional liter.
Q. Now, it's true, isn't it, that if you have decreased hemoglobin you have decreased oxygenation of the blood?
A. Not technically, you just have less ability to carry oxygen. The blood is still oxygenated.
Q. But you have decreased oxygenation of tissue as a result of decreased hemoglobin?
MR. TABER: Objection. Same question.
A. Not entirely, it depends on the body's demand for oxygen. Many people with slight anemia do not have difficulty oxygenating their tissues.
Q. The lower the hemoglobin, the less oxygenation you're going to get?
A. No, it depends on the demand.
Q. Let's take one person lying in bed doing nothing except breathing, the same person.
A. We're talking hypothetically?
Q. Yeah, because I'm just trying to get an answer, that's all.
A. The lower the hemoglobin, the lower likelihood of oxygenating the tissues, but there are so many other variables it's difficult for me to answer that question in isolation.
Q. If you have decreased oxygenation secondary to decreased hemoglobin, together with decreased blood volume, are you not increasing the work of the heart?

A. Yes.
Q. Is it the purpose of the -- well, let me strike that.
The normal saline infusions increase blood volume, correct?
A. Circulating fluid volume.
Q. But not hemoglobin?
A. No.
Q. So the saline is increasing circulating fluid, it's not increasing hemoglobin?
A. Correct.
Q. The workload of the heart is increased by virtue of the increased volume --
A. Not necessarily.
Q. -- with the decreased hemoglobin?
A. That's not true.
Q. What's untrue about it?
A. It depends on what state the circulating fluid volume was before the saline was infused. If it was reduced, giving normal saline would actually --
Q. If it was --
A. If circulating fluid volume was reduced, giving normal saline in fact would increase cardiac output.
Q. Say that again.
A. If your circulating fluid volume before infusion of the normal saline was reduced, potentially, administering normal

saline would increase cardiac output.
Q. Increase the workload of the heart, heart's pumping faster?
A. Not necessarily. There's not a direct relationship between how much cardiac output is there and how hard the heart has to work.
Q. Would you agree that given the negative duplex on the 14th, the risk for recurrent PE was low?
MR. TABER: Objection.
MR. GROEDEL: Objection. You may answer.
A. That's a hypothetical question. There's so many other reasons why this lady potentially could have developed a clot in her leg after the duplex. People sometimes do develop pulmonary emboli even in the face of a negative lower extremity duplex.
Q. Do you believe four units of blood and the saline that was given on the 15th increased the workload of the heart?
A. No.
Q. Why was that given?
A. Because her hemoglobin was low and because we needed to resuscitate this lady.
Q. And all that fluid didn't overload her heart?
A. I don't know the answer to that.
Q. Could it have?
MR. GROEDEL: Objection.

Q. Potentially, if it overloaded the heart, how could that affect somebody's diastolic dysfunction?
A. Become more short of breath, perhaps more edematous.
Q. It would result in pulmonary congestion, possibly?
A. Possibly, yes.
Q. Did you ever consider using dopamine to raise pressure instead of normal saline?
A. It can be given, yes, but the problem is, if somebody is volume depleted, it doesn't work very well, unless you try to get their volume status corrected better. Normal saline, if one believed that the volume status was reduced, then giving fluids would be appropriate.
Q. Dopamine can also affect the kidneys?
A. Yes, it can.
Q. And improves kidney function?
A. Potentially, yes.
Q. Did you know that while this woman was receiving this infusion of blood and saline her urine output had dropped to 50 cc's in 24 hours?
A. I'm not aware of that at this moment, but I may have been aware of it at the time.
Q. Would the combination of the drop, well, urine output to 50 cc's coupled with the infusion of blood and saline in the volumes given that we know of, increase the workload of the heart?

MR. TABER: Objection.
A. There are too many variables. It could.
Q. Could it result in pulmonary congestion?
A. If the kidneys were not secreting urine appropriately. That's provided you're assuming that the kidneys had some acute problem. It potentially could.
Q. According to the nurse notes, 150 cc's --
A. There are many explanations potentially for that.
Q. What, for instance?
A. If she was hypoperfusing, the kidneys don't make urine if her volume status was reduced.
Q. Hypoperfusion?
A. Of the kidneys.
Q. Meaning decrease in circulating blood volume?
A. Not necessarily decrease in the pressure within the kidneys, but potentially as a result of decreased circulating fluid volume, but that's speculative at this point.
Q. And hypoperfusion of the heart will affect the heart muscle as well?
A. Through the mechanism of ischemia, potentially, yes.
Q. Did you consider using a -- will you agree that the potential for fluid overload in this woman was present on the 13th given her non-urine output or limited urine output and infusion of all this blood and saline?
MR. GROEDEL: Objection.

A. Yes, it's a possibility, yes.
Q. So on the one hand, it's important to bring the pressure up?
A. Correct.
Q. On the other hand, you don't want to fluid overload, that's something you want to avoid?
A. Yeah, but it's difficult in clinical practice to precisely determine that.
Q. The reason you don't want to fluid overload is because it puts a burden on the heart?
A. Among other structures, yes.
Q. And certainly on the heart, correct?
A. Yes.
Q. And it is difficult to monitor?
A. Yes.
Q. If you're relying on blood pressure monitoring, that's a poor way of checking it?
A. By itself, yes.
Q. The better way would be a Swan-Ganz catheter?
A. That's more invasive, but it probably would provide you with more information than simply doing blood pressure.
Q. It would provide you with a method of titrating the fluid so as to avoid fluid overload?
A. It's more precise, yes, but not wholly accurate either.
Q. Can you tell me, in your training in critical care

medicine or wherever, did you become familiar with the concept of hypovolemia?
A. Yes, I did.
Q. What is it?
A. It's where there's reduced circulating fluid volume which can potentially lead to hypoperfusion of certain vital body structures.
Q. Can you tell me what some of the possible causes of extrarenal hypovolemia would be?
A. Blood loss; dehydration; extravasation of fluid, such as a burn patient or somebody who's very septic.
Q. Does the correlation of BUN and creatinine give you some method of measuring whether or not a patient is hypovolemic?
A. It can be an indicator, but there are other confounding factors, and it's not solely a reliable test of hypovolemia.
Q. Normally, the relationship between BUN and creatinine is ten to one?
A. Approximately, yes.
Q. At what level, how high does the BUN have to get over the creatinine in order to come up with a sign of hypovolemia?
A. You're talking purely -- I can only answer that question if talking hypovolemia in the absence of any other confounding factors.
Q. All right.
A. Twice.

Q. Double?
A. Double.
Q. Did you ever monitor this patient's creatinine and BUN?
A. Yes, we did.
Q. Did it give you any indication that she was hypovolemic?
A. It could have indicated it, but there were other reasons potentially why this lady's creatinine or -- she had a GI bleed in addition, and that could alter her BUN also. We think she had a GI bleed, at least we thought on the 15th.
Q. That's because on the 15th she had a guaiac-positive stool?
A. Yes, plus she had dropped her H & H.
Q. Can hypovolemia lead to shock?
A. Yes.
Q. And what is hypovolemic shock?
A. It's felt to be where there's hypoperfusion of critical tissues which can lead to detrimental effect to vital organs. It's caused by reduced circulating fluid volume.
Q. And is pulse pressure any kind of an indicator of hypovolemic shock?
A. Not by itself, it's not a specific indicator of hypovolemic shock.
Q. Does decreased pulse pressure precede a decrease in diastolic pressure in patients who are developing hypovolemic shock?

A. I don't know the answer to that question.
Q. Did you ever check this woman's pulse pressures on the 14th, 15th?
A. Not myself, personally, no, others may have, but not me.
Q. Were you aware that her diastolic pressures were falling sharply?
A. On which dates?
Q. 13th, 14th, 15th.
A. I do not recall that specifically.
Q. Did you ever discuss this case with Dr. Neidermaier yourself?
A. I do not recall.
Q. How about with Dr. Mostow?
A. I do recall speaking with her once.
Q. Do you recall the substance?
A. She had told me about the circumstances that she, this lady, had fallen, that she was aware of it, and I do not recall very much else about the conversation.
Q. At any time during your care and treatment of this patient, did you actually conduct an examination of her body to see the nature and extent of her bruising following the fall, you, yourself?
A. I do not recall specifically if I did an examination solely to look at the bruising.
Q. At any time when you examined this woman, did you ever

look at her torso?
A. I do not recall.
Q. In the routine course of events, would that be something you would do for a hospitalized patient?
A. To look at their torso? Not necessarily without their clothes on unless there was a specific reason I thought I needed to do that.
Q. Under what circumstances would you be looking at a patient's torso in the course of examination?
A. If I thought they had skin problems, obviously if there was bruising like you talked about, if I need to look at the breasts in a female, any other type of sign of injury, other rare skin tag, skin growths, rashes, perhaps.
Q. When you talked to Dr. Mostow, did Dr. Mostow tell you that she had had prior patient contact with Nola Hasto?
A. I do not recall.
Q. Did you talk to any other OPMG physician, OPMG physicians, about Nola while you were taking care of her?
A. I may have spoke to Dr. Brown.
Q. Dr. --
A. B R O W N.
Q. What's his first name?
A. James.
Q. He's the doctor that came up in the MICU unit?
A. He's the GI doctor.

Q. He's the GI doctor. Did he make any notes?
A. He has a note from March 15th.
Q. Are you aware of any other OPMG doctors that saw her?
A. During her stay at CCF?
Q. I'm particularly interested in the 15th and 16th -- 14th, 15th, 16th. There's some notes, actually, it's in the nursing notes, there's some reference to some doctors coming up, in the nursing notes of the 15th.
MR. GROEDEL: Is there a particular page, John, you want to show him?
MR. NORTON: I'm trying to find them. The nurses files are getting all mixed up here, I'm trying to find the nursing notes.
MR. GROEDEL: Is it after the patient was admitted to the MICU?
MR. NORTON: Right.
A. That's not an OPMG doctor. I'm assuming, but I cannot tell you for sure, that is a CCF resident, although I think it's more likely that it's a --
Q. Dr. Weingten?
A. I'm not certain, but I'm fairly sure that is a CCF resident.
Q. You're not aware of any other doctors?
A. Not according to the record, at least. Dr. Brown, I talked to him earlier.

Q. Do you know the cause of death in this case?
A. Not specifically. I've seen the autopsy report and I've seen the coroner's conclusion.
Q. Have you ever reached a conclusion of your own as to what the cause of death was?
A. Not specifically, no.
Q. What do you know the coroner's conclusions to be?
A. Coroner felt most likely cardiovascular disease.
Q. What does that mean, she had a heart attack?
A. I think you're asking me to put words in the coroner's mouth. I don't remember looking closely at the verdict, but it was felt to be close to her cardiac disease.
Q. You, yourself, have not formulated any opinion?
A. No, because I paid somewhat less attention to the events that went on in the MICU because I was no longer her attending.
Q. How would coronary artery disease have caused death?
MR. GROEDEL: Objection, he didn't say coronary artery disease.
A. Cardiovascular. There were a number of mechanisms, but I'm speculating again. I think you're asking me to paraphrase or put words in the coroner's mouth.
Q. Would it require a thrombus, blocking of a vein, or something?
A. Not necessarily. That's one of the possibilities. There are a lot of possibilities.

Q. Well, just tell me, how does coronary vascular disease produce death?

MR. GROEDEL: Objection. Go ahead.

A. Can cause an acute MI; it can cause intractable ischemia due to unstable angina; it can cause cardiac wall motion damage leading to congestive heart failure; it can cause ischemic cardiomyopathy with low output state. There are a number of ways it can kill people.

MR. NORTON: All right, Doctor, I thank you very much.

MR. TABER: No questions.

MR. GROEDEL: We're done? Very good. Can we have 28 days to read it?

MR. NORTON: Sure.

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(Deposition concluded at 12:20 p.m.)

(Signature not waived.)

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PATRICK N. WHELAN, M.D.

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CERTIFICATE

- - -

State of Ohio,)
)
County of Cuyahoga.)

I, Kristin A. Beutler, RPR, a Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named witness, PATRICK N. WHELAN, M.D, was by me first duly sworn to testify the truth, the whole truth and nothing but the truth, in the cause aforesaid; that the testimony then given by him was by me reduced to stenotypy in the presence of said witness, afterwards transcribed, and that the foregoing is a true and correct transcript of the testimony so given by him.

I do further certify that this deposition was taken at the time and place in the foregoing caption specified, and was completed without adjournment.

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

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Cleveland, Ohio on this 1st day of May, 2002.

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Kristin A. Beutler, RPR, Notary Public in and for the State of Ohio. My Commission expires October 8, 2006