COURT OF COMMON PLEAS
LORAIN COUNTY, OHIO

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J. TERRY ROBINSON, :
ADMINISTRATOR OF :
ESTATE OF ELSIE A. :
ROBINSON, :
Plaintiff, :
vs. :CASE NO. 99 CV 122855
DR. LYNN CHRISMER, JR. :
et al., :
Defendants. :

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Deposition of RONALD SACHER, M.D., a witness herein, taken by the defendant as upon cross-examination, pursuant to the Ohio Rules of Civil Procedure and pursuant to agreement by counsel as to the time and place and stipulations hereinafter set forth, at the offices of Hoxworth Blood Center, 3130 Highland Avenue, Cincinnati, Ohio, at 12:30 p.m. on Wednesday, the 15th day of August, 2001, before Valerie Jones Conn, Registered Professional Reporter, a Notary Public within and for the State of Ohio.

APPEARANCES:

On behalf of the plaintiff:
JOHN BURNETT, ESQ.
(Via telephone)
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On behalf of the defendant North Ohio Heart:
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On behalf of the defendant EMH Regional Medical Center:
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On behalf of the defendants Lynn Chrismer, Jr., M.D.:
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STIPULATIONS

It is stipulated by counsel for the respective parties that the deposition of RONALD SACHER, M.D., a witness herein, may be taken at this time by the plaintiff as upon cross-examination and pursuant to the Ohio Rules of Civil Procedure, all other legal formalities being waived by agreement; that the deposition may be taken in stenotypy by the Notary Public-Court Reporter and transcribed by her out of the presence of the plaintiff; that submission of the deposition to the witness for examination and signature is expressly waived.

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EXHIBITS

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NO EXHIBITS MARKED

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(Prior to the deposition beginning Ms. Petrello, Esq. requested her objections be noted at the same time other counsel entered objections.)

ROBERT SACHER, M.D.,

a witness herein, of lawful age, having been first duly sworn, as hereinafter certified, was examined and testified as follows:

CROSS-EXAMINATION

BY MR. BURNETT:

Q. Doctor, I'm John Burnett. I represent the Estate of Elsie Robinson in this case. Can you hear me, sir?

A. I can, yes.

Q. Sir, you understand this is a question and answer session under oath, right?

A. Yes.

Q. Doctor, if I ask you a question that you don't understand or is unclear I hope you will tell me and I will do my best to rephrase the question or make it clearer. Is that fair enough?

A. It is.

Q. Okay. Doctor, if you give me an answer to my question I'm going to conclude

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that you have understood it and you are giving me your best answer. Is that fair enough?

A. Yes.

Q. So my understanding is you've been designated as an expert in this case on behalf of Dr. Hulyakar and his professional group, North Ohio Heart Center; is that right?

A. Correct.

Q. And in looking at your report dated May 21, 2001 is that the only report you've authored in this case?

A. It is, yes.

Q. Did you have any drafts of this report that were revised over a period of time?

A. No, I don't recall that I had one. This is the final and only one.

Q. Okay. Doctor, tell me a little bit about -- I don't have your Curriculum Vitae in front of me. Tell me, give me a thumbnail sketch of your career starting with medical school, where you've been and what your areas of practice have been in.

A. I was educated medical school in Johannesburg, South Africa. And following training there, internship, I did a rotating

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internship in internal medicine surgery and subsequently pediatrics as well as military service, which was compulsory. I went off after that to specialize in hematology in South Africa as a pathology discipline. So I actually did pathology training in anatomic pathology and hematology and subsequently specialized in hematology.

Q. Okay.

A. In 1976 I went to McMaster University in Hamilton, Ontario, Canada where I continued my training in hematology but also did some training in laboratory medicine. And in 1977 I was recruited to Georgetown University Medical Center in Washington, D. C. to complete a fellowship in hematology joining the faculty in July of 1978.

I remained on the faculty as a clinical hematologist as well as the director of the blood bank and laboratory quality control at Georgetown until 1993 when I became department -- chairman of the Department of Laboratory Medicine at Georgetown University Medical Center.

I rose through the ranks from

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assistant professor to full professor in internal medicine and pathology and was tenured, I believe, in 1984. I stayed at Georgetown until November of last year when I left Georgetown to become the head of the Hoxworth Blood Center at the University of Cincinnati and a tenured professor in internal medicine and pathology.

I am also a member of the hematology/oncology division here in Cincinnati, as I was in Washington, D. C., as part of the Lombardi Cancer Center in Washington, and I'm in the process of setting up my practice here in Cincinnati. I had an active practice in Washington, D. C. both initially in and outpatient and subsequently predominantly outpatient.

I think that summarizes my education and appointments. I have written and edited 15 books. I have published, all in all, over 200 papers and I'm a member of many professional societies and given talks both internationally and nationally probably about five hundred times.

Q. Do you consider yourself,

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currently, a clinical hematologist?
A. Yes.
Q. What do the clinical hematologists do, in general?
A. I'm a specialist in the evaluation, diagnosis and management of patients with diseases of the blood and blood producing organs including, of course, the coagulation tests and assessment of people who have pre-disposition to clotting and bleeding.
Q. Do you manage patients on procedure when they show signs and symptoms of an internal bleed?
A. Yes.
Q. Who is the fellow who's the director of the -- used to be, I think -- maybe he still is -- the director of the Lombardi Cancer Institute? What is his name?
A. He has left Georgetown. His name is Mark Lipton.
Q. Right. I deposed Dr. Lipton last year.
A. He's now the chairman of medicine at the University of Michigan Ann Arbor. I guess a lot of us have left Georgetown for a

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variety of reasons.
Q. I keep running into Georgetown people all over the place. Small world, I guess.
As of '98 -- I've got an old deposition transcript of yours -- and as of '98 it appeared that you were not board certified in the United States in any specialty; is that correct and is that still the case?
A. Yes. I'm board certified in hematology, pathology and tropical medicine internationally. As a matter of fact, I have board certifications from Canada but I have not been required to do board certification or board examinations in the United States, although I guess they have made me eligible to do internal medicine and pathology boards.
Q. Okay. And are you going to take those?
A. No. There's no reason for me to.
Q. Okay. You've been doing medical/legal work for how long?
A. Well, actually I think the first case I ever reviewed was probably in 1979, 1980. And they -- I also was a hematology

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consultant to the Federal Aviation Administration and testified before Administrative Law Judges in matters relating to pilots. I guess that really is somewhat medical/legal. But I certainly have been doing it since 1979, although in the latter few years much more actively.
Q. Okay. By the way, when you were in Johannesburg in the service what was the compulsory Army service, for a year?
A. Correct. I actually was stationed in other cities in South Africa and also on the southwest Africa border during the war with Angola.
Q. Was your occupational specialty within the Army medicine?
A. Yes. Medicine and surgery.
Q. Okay. Very good. In '98 you testified in a deposition that the percentage of your personal income from medical/legal work was about 15 to 20 percent of your annual income. Does that sound about right for that time period?
A. That sounds about right.
Q. Is it still the case, Doctor?

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A. It's probably closer to 20 percent.
Q. Okay. Have you ever testified in court for a plaintiff on a case?
A. Yes.
Q. Okay. How often?
A. I would say the overall breakdown of the cases that I testify on is probably 75 -- 70 to 75 percent defense, 25 to 30 percent plaintiff.
Q. And so I understand your testimony you've actually given testimony for a plaintiff in a courtroom at trial; is that what you're telling me?
A. I have, yes.
Q. Okay. How many times?
A. I can only give you an estimate. But probably somewhere in the region of five times, maybe a little more.
Q. How many times have you testified in a courtroom for a defendant?
A. Probably about 15 times. I think overall, again, it's a 75 percent, 25 percent breakdown. But it may be a little more than that for plaintiffs.

Q. Okay. Talking in terms of cases you've reviewed0, and we'll get to depositions and trial testimony following this -- have you ever reviewed a case with issues similar to the one in this case, that is, post-invasive procedure, internal bleeding, monitoring the bleeding, problems with deciding whether to keep the patient on anti-coagulants or not, these types of issues?

A. Well, not exactly. Not exactly the same as this. Clearly there are many issues relating to the bleeding and issues bleed -- related to bleeding that may or may not involve invasive procedures or surgery.

Q. Okay.

A. And I do believe I've reviewed cases that involve bleeding.

Q. Okay. Do you remember -- I'm going to ask you a tough question now. I should probably start -- do you keep an overall master file of the cases you reviewed?

A. No.

Q. 1998 you testified there was a New Jersey case that involved anti-coagulation. You were deposed in the case of Ida May Evans

versus Ronald Stevens, M.D. and you were deposed, I think, in Washington on the 27th of May in 1998. Does that ring a bell?

A. Vaguely. I don't recall the exact elements of the case but I do remember that.

Q. Okay. Okay. In that deposition you reference a New Jersey case that involved anti-coagulation issues. Do you remember the name of that New Jersey case?

A. I don't remember the name of that case but I remember the attorney.

Q. You were testifying -- what was the attorney's name?

A. Barnes, if I'm not mistaken.

Q. Bond?

A. Barnes, B-A-R-N-E-S.

Q. B-A-R-N-E-S. Any idea what his first name was or her first name?

A. Timothy. Timothy.

Q. And he practiced in New Jersey. Is that your understanding?

A. Yes.

Q. And you testified for the plaintiff in that case?

A. I believe I did, yes.

Q. Are you aware of any other cases that you can name for me either by, you know, the name of the case, itself, or the attorney who retained you for which you've testified for the plaintiff on anti-coagulation or bleeding issues?

A. I don't recall specifically. However, if I'm not mistaken, that other case related to the diagnosis of Heparin induced thrombocytopenia, or HIT, if I recall.

Q. Okay. Do you remember any other cases, though, in which you represented the plaintiff and they involved bleeding issues or coagulation issues?

A. Well, that is quite a broad question because I have represented a plaintiff in issues relating to a disease called TTP, which clearly involves coagulation and bleeding.

Q. Okay.

A. But it's not pertinent to our discussion to do today.

Q. Forget about those TTP cases. Any other cases in which you testified on behalf of a plaintiff involving issues involving

coagulation and bleeding or managing of a bleed?

A. And you're asking me specifically for a plaintiff? I don't recall.

Q. That's fine. Now how about the same question for the defendants?

A. Yes, I have testified on behalf of defendants and/or reviewed cases on behalf of defendants.

Q. Do you remember the names of the cases in which you testified on behalf of defendants in issues involving, again, coagulation and bleeding management, bleeding, those issues? I'm sorry. Did you answer me?

A. No. I'm thinking.

Q. Okay.

A. In fact --

Q. As you're thinking sometimes on these speakers phones if you answer me right away I can't hear you on my end.

A. There is one case recently. And I just can't remember. It's since, I think, resolved. But I don't recall the exact name, the captions. Rightly or wrongly this relates to short term memory recall and I tend to

forget a lot about the case once it's over.
Q. All right.
A. I'm sure you know about that.
Q. That's fair enough. Have you ever testified in Federal Court?
A. Yes.
Q. Tell me when, please.
A. It's possible it was last year or the year before. I've done some testimony on transfusion transmitted disease litigation and some of those have been in Federal Court in Washington, D. C. And if I recall it was probably over a year ago. But I might have been involved in a federal case that never went to court that was settled about a year ago.
Q. You remember the name of that case? And was it in Washington, first of all?
A. There have been a number of cases. Actually that case, if I recall, was a Baltimore case; it was a Maryland case.
Q. Was it in Federal Court in Maryland?
A. I think that's where it was -- that jurisdiction, at least. However, that case didn't go to trial.

Q. Did you author a report in that case?
A. A report was authored on behalf of me based on previous testimony that I'd given in transfusion transmitted disease litigation.
Q. And as far as that report my understanding in Federal Court, when a report is submitted on behalf of an expert, it has to list all the cases in which the expert has testified as such in the past. Do you know if that was done on your behalf or not?
A. I believe it was, yes.
Q. Do you know who the attorney was who did that?
A. Thomas Cullen, C-U-L-L-E-N.
Q. Defense lawyer or plaintiff lawyer?
A. Defense.
Q. I'm sorry?
A. Defense.
Q. Defense. Sorry. Do you remember the name of the case?
A. Most of those were John or Jane Does.
Q. Who were you defending?

A. I was defending the plasma practitioners and in this particular case it was Bayer Pharmaceuticals. It was hemophilia litigation.
Q. Okay. Now aside from that case in Federal Court that we've just discussed are you aware of any other cases that you've been involved in that were in Federal Court?
A. If I recall there were perhaps two or three others and I was required to try and resurrect a list. But those were a number of years ago. I haven't had one recently.
Q. So the one with the most recent information would have been the Federal Court case last year in Maryland, right?
A. I believe so, yes.
Q. Okay. Any idea who the plaintiff's lawyer was in that case?
A. I don't recall.
Q. Okay. Fair enough.
Doctor, did you, in the review of this case, did you generate any notes?
A. I, not uncommonly, jot notes down as I'm reviewing it. But they are really simply for the point of view of developing a

chronology. I don't keep those notes and generally I throw them away.
Q. Did you do that in this case?
A. I did, yes.
Q. Do you remember taking notes in this case?
A. With regard to what? I don't take notes. I just -- it's almost like doodling, jotting down little points. But I don't keep that information. I usually throw it away. I highlight the record, though.
Q. All right. And did you highlight portions of this record?
A. Yes.
Q. Okay. Do you have your file in front of you?
A. I do, yes.
Q. I'm sorry. Did you answer my question?
A. I did. Yes.
Q. Okay. So you don't have any notes. Your file, I take it, consists of the matters you identified in your May 21st report. And I asked you have you looked at anything since then, such as deposition transcripts,

that type of thing?
A. Yes, I have.
Q. Okay. I take it you probably looked at the deposition of Dr. Loch and Dr. Ballard; is that right?
A. That is correct.
Q. I don't even know if it's been transcribed. Have you seen Dr. Solomon's deposition yet?
A. I have not.
Q. Do you know Dr. Solomon?
A. I do, yes.
Q. How do you know him?
A. We were colleagues at Georgetown University Hospital.
Q. Okay. To your knowledge how did Ms. Carulas get your name?
A. I believe from one of her partners. I was asked to review a case by her firm. In fact, it was actually referred to my predecessor here at Hoxworth and was subsequently given to me.
Q. Have you worked with Ms. Carulas before?
A. No.

Q. Have you worked with the firm she's with, Roetzel & Andress, before?
A. Yes.
Q. Okay. How many times?
A. Twice before.
Q. In those cases did you actually end up testifying at trial?
A. I did, yes.
Q. Okay. You remember the names of those cases?
A. I do. Yes. One was Hannahs, H-A-N-N-A-H-S v Jain, J-A-I-N.
Q. Was that here in Ohio?
A. It was, yes.
Q. Okay. That Cuyahoga County, the Cleveland area?
A. Well, it was my first visit to Cleveland so I wouldn't say I was an expert but that's exactly where it was.
Q. What was the next one, please, Doctor?
A. I'm blocking on the plaintiff's name but it was versus the Cleveland Clinic. Camamassie. C-A-M-A-M-A-S-S-I-E, I think. He was a Brazilian national that sued the

Cleveland Clinic and a urologist.
Q. Okay. Do you remember the names of the plaintiff's counsel in either of those cases?
A. No, I don't.
Q. All right. Now had you ever done any work for the law firm known as Jacobson, Maynard, Tuschman & Kalur?
A. No. That's unfamiliar to me. I think I might have seen the name in, perhaps, material that I've reviewed.
Q. Okay. Do you know Stanley Ballard, M.D.?
A. No.
Q. Do you know of him by reputation?
A. No.
Q. Do you know Ralph Loch, M.D.?
A. No.
Q. How about by reputation?
A. No, not at all.
Q. All right. Did you do any research, Doctor, in preparation for the authoring of your report?
A. No.
Q. Any research in preparation for

the authoring or, excuse me, in preparation for forming your opinions in this case?
A. No.
Q. I don't have your CV in front of me right now; it hasn't arrived yet for whatever reason. Regarding the issues in this case can you identify for me, whether it be a book, a book chapter or an article, anything in the past you've authored or co-authored which has -- that was discussed with issues that are pertinent to this case?
A. Again, that's a very broad question. I've certainly written on issues relating to bleeding, its management and also clotting problems and anti-coagulants.
Q. Okay. Are there any that are -- any publications that are very close to the issues involved in this case, Doctor?
A. Well, I would say that there probably are some in a very generic way. Again, the issues are bleeding and anti-coagulation and the justification for ant-coagulation as well as the management of bleeding. So those are fairly general. And there are articles that I've written that are

generally related to that sort of scenario.
Q. Are they readily apparent from a review of your Curriculum Vitae or do you think you should identify them for me as we sit here right now?
A. No. I think, in the interest of time, they would be readily apparent because there would be key words in the titles of what I've written.
Q. That's fine. Have you talked to Dr. Solomon at all about this case?
A. No.
Q. You've seen his report?
A. I have, yes.
Q. Anything in his report that you disagree with?
A. No.
Q. Doctor, in this case the likely cause of death was hypovolemic shock, right? She died from exsanguination?
A. Well, certainly that contributed. I think the cause of death was cardiac arrest.
Q. Okay. And what caused the cardiac arrest?
A. It was her primary cardiac

problem, inability to respond to the bleeding.
Q. And on what do you base that?
A. I base that on my review of the records and, of course, my background, education and experience.
Q. What, specifically, in the records leads you to conclude that she had a cardiac arrest?
A. Well, she coded and clearly she had a cardiac code. I believe that on the review of her history it is quite apparent that she had a very formidable and substantial serious medical history with many organ systems diseased and her ability to respond to a bleeding event was clearly very compromised.
Q. Is that ability to respond to a bleeding event being significantly compromised, is that something you would have expected Dr. Hulyakar to be aware of?
A. Yes. I'm sure he was aware of it.
Q. So, in essence, her compensatory mechanisms, the way the body deals with blood loss, essentially failed her and her heart stopped. Is that a good, simple way to put it?
A. Yes, I believe so.

Q. Okay. Have you seen the photographs in this case which identify the area of ecchymosis on her right side?
A. No.
Q. Okay. Doctor, the ecchymosis around which the nurses outlined with a mark, okay, they outlined the perimeter, are you aware of that in the records?
A. I don't recall. I believe certainly that the nurses were monitoring the area of ecchymosis and I think that was apparent from the record. But I don't recall the actual graphic of the perimeter.
Q. All right. But I think you recall from the record they drew they used a marker and marked around the edges of the perimeter of that hematoma?
A. Yes.
Q. Okay. I'm sorry. That ecchymosis. I apologize. You understand that?
A. I do, yes.
Q. Okay. Now the ecchymosis around which the nurses outlined with a marker was identified by CT scan on 3-3-97 as a large hematoma over the anterior abdominal wall; is

that right?
A. That is correct.
Q. So that area of ecchymosis and the flag was a visual indicator of that hematoma which was seen by CT scan, right?
A. Yes.
Q. I'm sorry?
A. I said yes.
Q. Okay. Now she had an A-V juncture intubation done on --
THE COURT REPORTER: I'm sorry?
Q. She had an A-V juncture intubation done on 2/27/97, right?
A. Correct.
Q. This procedure involved placement of an eight and a half French sheath into the right femoral vein under local anesthesia, right?
A. Yes.
Q. Dr. Solomon has testified that, and I'll rephrase that, more likely than not the source of the bleed seen at the large hematoma over the anterior abdominal wall on CT scan on 3/3/97 was from a punctured vein or artery near the site of the insertion of the

French sheath. Do you have any reason to disagree with that?
A. No.
Q. Okay. And, by the way, that's not the normal standard of care for there to be a puncture like that, that just happens under the best of care, correct?
A. Absolutely.
Q. The autopsy report identifies a huge hemorrhage, retroperitoneal space, the anterior abdominal wall on the right and down on the pubis into the anterior chest wall; is that correct?
A. Yes.
Q. Again, Dr. Solomon testified that this huge hemorrhage identified by the autopsy report likely had, as its source, the same site as that causing the bleed seen on CT scan on 3-3 of '97. Do you have any reason to disagree with that? That's not below the standard of care?
A. I'm sorry. Would you rephrase that again? I didn't get all of it.
Q. Sure. Dr. Solomon -- and I'll paraphrase his testimony -- Dr. Solomon

testified that this huge hemorrhage identified by the autopsy report likely had, as its source, the same site as that causing the bleed seen on the CT scan on 3-3-97. And I'm asking you do you have any reason to disagree with that?
A. Now specifically you're referring to, of course, the retroperitoneal hemorrhage swell now because that was found at autopsy?
Q. Yes, I am.
A. I really cannot agree or disagree. I think that is a fact. On the other hand, retroperitoneal bleeds are side effects of anti-coagulation therapy under -- even under the best of circumstances and even without a punctured site. So while it is possible and may even be probable, I don't know.
Q. Tell me, so I understand the mechanism of this, why is the retroperitoneal bleed a risk of anti-coagulation? How does it happen? Explain that to me.
A. I don't think we know other than the fact that perhaps some mechanical event occurs or there may be some pre-existing anatomic reason. But spontaneous bleeding into

the retroperitoneal area is a concern in anybody who's on anti-coagulants as it was for Dr. Hulyakar and indeed that obviously prompted the performance of the CT scan on the 3rd when it was done.
Q. Okay. And feel free to look at the chart as we go through this. I have the luxury of having gone through this and I know what my questions are. I don't want to catch you by surprise. Okay?
On 2-26-97 at the time she entered the hospital I think you'll agree with me her hemoglobin was 12.5 and hematocrit 39.5; is that right?
A. That is correct.
Q. March 5th, 1997 at 10:30 or so p.m. hemoglobin had dropped to 6.2 and her hematocrit was down to 19.4; is that correct?
A. That is correct.
Q. Okay. She was certainly anemic at this point, right?
A. Yes.
Q. Is it helpful, in your capacity as a hematologist, to quantify degrees of anemia with regard to severe, moderate or mild?

A. Not really. I don't think we use the terms as severe, moderate or mild. We are more focused on what is the value and the clinical circumstances of the patient. I think the categorization of severe, moderate and mild are very arbitrary.
Q. Okay. As of that time on the 5th, 10:30 or so, when the hematocrit, hemoglobin was found to be 6.2 and 19.4, the measurable loss of blood, volume of blood, was more than half of her entire blood volume; is that right?
A. Well --
Q. Or about half?
A. -- assuming that, in fact, the original value of 39.5 was an accurate one because, again, hematocrit is a percentage of red cells in a volume of fluid, so it is very influenced by the volume of the fluid. And assuming that she was -- was adequately hydrated at the time and not hemodilated, in other words, having received a lot of fluid to compensate for the anemia and her low blood pressure, that would probably be a reasonable statement.
Q. Do you have any reason to suspect,

by anything in the records or in the depositions, that she was not well hydrated as of 2-26-97 when her hemoglobin and hematocrit was taken?

A. No. I think she was overhydrated, so that's my point. That, in fact, value just taken in isolation of 19.4 could reflect many fluid shifts in the vascular system.

So I don't believe that you can say that this happens to be in the absolute half of what the red cell mass was when she first came in.

Q. You're telling me she was overhydrated on February 26th?

A. No. I'm just saying that certainly in response to hemorrhage a lot of fluid shifts occur and also in clinical management of perceived hemorrhage there are a lot of crystallized solutions that are given which dilute the red cells.

Q. Okay. I guess what I'm asking you is are you aware of anything, from the record or the deposition testimony or anywhere else, that would lead you to conclude in terms of probability that the hemoglobin and hematocrit

taken on 2-26-97 was not accurate?

A. I wouldn't say it wasn't accurate. It is the value that is determined. It's a calculated value based on her blood analysis. But you are asking me specifically did she lose half of her blood volume and I can't give you an accurate answer that this represents half of the blood volume because there may well be many fluid changes that reflect the concentration of red cells.

Q. In terms of probability, though, more likely than not, is this about a loss of about half of her blood volume as indicated on the hemoglobin and hematocrit tests taken on the date of 3-6-97, more likely than not?

A. More likely than not it is not a loss of half of her blood volume but it's a loss of a substantial amount of her blood volume, probably more than 30 percent.

Q. Okay. Certainly something that would cause any physician to be concerned, correct?

A. Yes.

Q. Okay. By the way, if she was experiencing continued active bleeding as of

the time the hemoglobin and hematocrit test was taken that evening on 3-5-97, the 6.2 and 19.4 numbers for the hemoglobin and hematocrit test may not have revealed the true extent of her blood loss; is that correct?

A. That is true.

Q. Okay. In fact, her blood loss may have been more severe than that reflected on that test if there was continued bleeding; is that right?

A. That is possible. It's the best measurement we have but we just don't know because of all the fluid changes that might occur.

Q. Okay. Is it likely that her blood loss was more severe than was revealed on that hemoglobin and hematocrit test that evening on March 5th, 1997?

A. No. I don't think so. Because on the basis of her response to two units of red blood cell transfusions I think that this value is probably a reasonably accurate value.

Q. I'm going to get to that. Okay? I understand your testimony.

Okay. And I just want to walk

through some facts here and then ask you a question so I know on the record we make sure we're on the same sheet of music here.

On 2-26-97 I think we've already agreed her hemoglobin and hematocrit was 12.5 and 39.5 respectively, correct?

A. Correct.

Q. On 3-2-94 the large ecchymotic area on the right flank is identified and she starts complaining of pain in that area, right?

A. Yes.

Q. Okay. On 3-3-97 her hemoglobin and hematocrit is 11.8 and 35.9 respective, correct?

A. Correct.

Q. And then of course we know that 0415 on 3-4-97 her hemoglobin and hematocrit is 11.0 and 34, right?

A. Correct.

Q. A little lower than the day before. Right?

A. Insignificantly.

Q. Okay. What was the likely cause in the change from the hemoglobin and hematocrit from 2-26-97 until 0415 on 3-4-97?

A. I would think that this is probably related to fluid replacement and also blood tests that are drawn from people. Commonest cause of anemia in the hospital population is the blood that health care providers draw to do testing.

Q. And how much blood was drawn from her during that period of time, do you know?

A. Well, she had some blood drawn from her but, as I said, I also believe that it was probably fluid replacement. She had a fair amount of fluid return.

Q. Would you have expected a reasonable physician to draw that conclusion relative to the drop from 2-26 to 3-4-97?

A. Yes. I think that I would not be concerned about this. This is very expected, in fact, in any hospitalized patient.

Q. So as of 0415 in the morning the change in her hemoglobin and hematocrit since the 26th of February was not likely a result of the large hematoma over the anterior abdominal wall later seen on the day -- on that day by CT scan, right?

A. Well, I think that it may well

have been some contribution of that. I might also point out that very likely when she came in symptomatic on the 26th she was probably a little hemo concentrated or a little dry and the value of 39.0 was probably a higher value than she really had.

Q. Why do you say you think she was probably a little dry?

A. That's not unusual for people coming in who have cardiac symptoms and she may have been breathing hard, she was short of breath.

Q. Is there anything in the record that leads you to that conclusion? Is there anything you can point to to tell me that she was a little dry or are you just making an assumption?

A. I'm just referring to her lab studies. Yes, as a matter of fact, her blood urinemia protein on the 25th was 38 with a creatinine of 1.9. That may be a contribution in part of her renal problems. But also she might have been a little dry.

Q. Okay. I know you're telling me she might have been a little dry. That would

have impacted the hematocrit. I guess what I'm asking you, on what do you base the conclusion that she might have been a little dry? Is there anything that you can point to in the records?

A. Well, as I pointed out, certainly her history and the base of symptoms. And the chemical analysis of BUN and creatinine may have also given information about the status of her fluids.

Q. Is it likely that these things you just discussed made her be, as you put it, a little dry, or are these just possibilities?

A. No. I think it is likely. In fact, as I've pointed out, I mean, this is certainly a normal hematocrit but not uncommonly patients presenting with an acute medical problem may have a slightly higher hematocrit than is really what the true value is. And then subsequently she was given fluids and her hematocrit was a little lower. But either way I don't think the 39.5 on the 26th to the 34.6 on the 4th reflect a significant change.

Q. Now she started receiving Heparin

at 1,000 units an hour on 2-27-97, right?

A. Yes.

Q. And my understanding is -- see if you agree with me -- that this was continued until about 10:30 p.m. on March 5th, '97, right?

A. Correct.

Q. She started receiving Coumadin at five milligrams on 3-3-97, correct?

A. Correct.

Q. Now when that says five milligrams how was that administered to her?

A. Orally.

Q. Okay. Per day?

A. Yes.

Q. Okay. By the way, this was continued until her death, correct?

A. Correct.

Q. Okay. This wasn't stopped at, you know, 10:30 or so like the Heparin was on the 5th, was it?

A. Well, as a matter of fact, the Coumadin's effect -- Coumadin is given as a once daily dose. I think once they appreciated the gravity of the situation they would not

have given Coumadin that next day. But you're absolutely right, on the 5th it was given.
Q. Okay. Do you have any idea what time of day it was given?
A. I don't recall the time of day. I don't think that's very important.
Q. Okay. She started receiving aspirin, one tablet per day, on the 5th, as well; is that correct?
A. Yes.
Q. Okay. Now the CT scan revealed the large hematoma over the anterior abdominal wall on 3-4-97, correct?
A. Correct.
Q. Okay. If this had been your patient after you discovered the large hematoma over the anterior abdominal wall and having learned of the hemoglobin and hematocrit test that morning, 0415, and recognizing she was on the anti-coagulants we just discussed can we agree you would have ordered hemoglobin and hematocrit tests to be done every six to eight hours throughout the rest of the day on March 4th?
A. I don't know that I would have

ordered it every four to six hours.
Q. I'm sorry. I said six to eight hours?
A. I'm sorry, six to eight hours. I would probably have repeated the hematocrit but I'd be certainly observing the patient.
Q. When would you have repeated it?
MS. CARULAS: Just note a continuing line of objection as to what one particular doctor did. Go ahead. Did you hear that?
Q. I'm sorry. I didn't hear it.
MS. CARULAS: Just put in my standard objection, as I did with Dr. Solomon, as to what this one particular doctor would have done.
Q. I understand. I'm sorry, Doctor. Would you --
MS. CARULAS: I'll just have a continuing line so I don't have to interrupt.
A. Again, it would be my standard, as a hematologist called in a situation like this, to monitor hemoglobins and hematocrits. So I would certainly monitor that.
Q. And how often would you monitor

it? I mean, assuming one was done at 4:15 in the morning on the 4th when would you have next run a hemoglobin and hematocrit test?
A. Probably sometime in the middle part of the day.
Q. And after that had been done in this case do you have an opinion as to what the likely result would have been?
A. I do.
Q. And what was that? What would that be?
A. It probably would have been somewhat lower. But I really don't have any opinion in terms of how low it would have been.
Q. Okay. And assuming it was somewhat lower would you then continue to monitor the hemoglobin and hematocrit?
A. Yes.
Q. When would you run the next test?
A. That clearly would depend upon the circumstances. And, of course, I now have the benefit of hindsight, which is clearly jaundicing my response to it. But prospectively I would have been guided by the clinical circumstances of the patient to guide

when I'd do it, repeat the test.
Q. Okay. Given the clinical circumstances of this patient on the 4th my understanding is she continued to complain of pain in the area of the ecchymosis. And assuming you would have, around the middle of the day, run a hemoglobin and hematocrit test that was somewhat lower when would you have next run a hemoglobin and hematocrit test on that day?
MS. CARULAS: Note my objection as to both a factual basis and the same set of objections I've raised before.
A. Well, again, the response would be the same. I think I would be really guided by the circumstances of the patient and in terms of whether I would have repeated that earlier or repeated it another time I really don't know prospectively. I might have repeated it later on in the evening.
Q. Okay. By the way, we've talked about what you would have done. Can we agree given this presentation, the anti-coagulation that we've agreed this patient was on as of the 4th, the CT scan result which showed the large

hematoma over the anterior abdominal wall and the hemoglobin and hematocrit values taken at 0415, can we agree that the standard of care required a reasonably prudent physician to repeat the hemoglobin and hematocrit tests sometime toward the middle of that day?

MS. CARULAS: Note my objection. Go ahead.

A. I don't know that the standard of care would have required it. I think that the physicians were certainly attentive and were in attendance and were guided by the clinical circumstances in their judgment at the time.

Q. In that capacity is Dr. Hulyakar acting, when he's monitoring this area of ecchymosis, is he acting as a cardiologist? Is he acting as an internist? What hat is he wearing?

A. I would think that he is acting as a physician who has experience in internal medicine with an expertise in cardiology.

Q. And you have experience in internal medicine, as well; is that correct?

A. Yes.

Q. Now, again, if this had been your

patient and you learned that a CT scan showed this hematoma on the 4th would you have ordered another CT scan on the 5th?

MS. CARULAS: Objection.

A. I don't know that I would have ordered a CT scan on the 5th.

Q. Was there another way for you to monitor this anterior abdominal wall hematoma than by CT scan?

A. Yes. I think the benefit, of course, of an external hematoma is that you have physical signs that are available to you. So I would be guided by the physical signs of the patient, the nurses' monitoring of the patient and the patient's vital signs.

Q. What physical signs would you look for?

A. I'd look for more significant anatomical change in the actual hematoma externally.

Q. What do you mean by that? You mean you would be looking to see if it expanded beyond the markings they draw around the monitor?

A. That would be one indication or,

in fact, if it became more protuberant because, of course, the line of least resistance is external rather than internal since one has muscles and other tissue that would prevent the hematoma from extending internally.

Q. Is there any indication -- well, how would you do that? Would you palpate it?

A. Yes.

Q. Okay. Is there any indication, from the record and the depositions, that Dr. Hulyakar or anybody else palpated this ecchymotic area on the 4th or the 5th?

A. Well, I don't know exactly how they assessed it from the point of view of hands-on. But there is documentation that they were looking at it quite carefully. That's evident in the nurses notes.

Q. Is it possible that the bleed which manifested itself at the area of ecchymosis and which was seen on CT scan could have continued to expand internally and not show an expansion beyond the line drawn around the area of ecchymosis?

A. Well, I think it is apparent that this hematoma was tracking in muscle planes and

tissue planes. But, again, that would, in all probability, have presented a change in physical signs.

Q. Would it have entered a change in physical signs in the sense of complaint of pain?

A. Well, certainly symptoms were there and she had a complaint of pain and they were monitoring it. But I was referring to the physical signs of either extension of the hematoma externally, in other words, becoming more protuberant or perhaps extension of the ecchymosis or perhaps more rigidity of the muscles.

Q. Okay. Rigidity of the muscles, did you notice -- do you note from the chart or the depositions whether anybody commented on the rigidity of the muscles?

A. Yes, I think the hematologist certainly commented on the rigidity of the muscles on his examination.

Q. And when did he examine her?

A. On the 5th, I believe. The 6th.

Q. On the 6th. He examined her after she had -- after she'd had an event where she

was -- her blood pressure had dropped precipitously at six or seven in the morning, right?

A. Correct.

Q. I'm going to take you back to the 4th, comments on the rigidity of the muscles in the records or depositions?

A. I certainly remember comments about the nature and description of the hematoma but I will have to refer to the progress notes. On the 4th there is a comment by the house officer, when she was complaining of right lower quadrant discomfort, that there was no apparent change in the size of her ecchymosis. And there is a statement about his examination, mild right lower quadrant tenderness without guarding. So with regard to rigidity I was referring to guarding and/or rigidity. So there is a comment.

Q. Okay. Any indication that Dr. Hulyakar or Dr. Chrismer, on the 4th or the 5th, ever evaluated the ecchymotic area in terms of protuberance or muscle rigidity?

A. Well, again, I think the record is self-evident in terms of evaluations by

physicians and/or nurses of this anatomic site. So that information would be available to them. In terms of whether they did it or not I don't know.

Q. Okay. If they didn't do it, if they didn't evaluate this ecchymotic area in terms of protuberance and muscle rigidity on the 4th and the 5th, can we agree that they both fell below the standard of care?

A. Well, I would say that if, in fact, they didn't follow up on this issue then they would have deviated from the standard of care. But I think that's not facts in evidence.

Q. And, again, I'm not clear, in your testimony with regard to this bleed which manifested itself at the area of ecchymosis in the right flank and seen as an abdominal wall hematoma by CT scan, had it continued to bleed internally and not spread beyond the line, the markings on the skin, is that possible for it to do that?

A. It is possible. It could erode through some tissue if it was extensive enough.

Q. Okay. But you're saying that if

it does that it may further reveal itself in terms of muscle rigidity or protuberance, correct?

A. Right. And other clinical signs, for example, signs of peritonism if it actually erodes through the muscle planes into the abdominal cavity.

Q. Signs of infection?

A. Peritonism. Inflammation of the peritoneal cavity.

Q. And how does that manifest itself clinically? How do you determine if that's there?

A. Well, the patient's symptoms would change. They would very likely be nausea and vomiting. There would be clinical signs of guarding and certainly rigidity and there may well be absence of bowel sounds or what's termed an ileus, I-L-E-U-S.

Q. Did that happen in this case?

A. No.

Q. I'm sorry. Did you say something?

A. I said no.

Q. Okay. I'm sorry. I may have asked you this and I apologize. Had a CT scan

been done on the 5th, that day, what would it have likely revealed?

A. You asking me midday on the 5th?

Q. Yes.

A. I think it would have revealed the same as it revealed the day before. Perhaps.

Q. Why do you say that?

A. Well, perhaps there may have been some marginal change. CTs are not that discriminating in terms of absolute volumes. I think that her hematoma would have been obviously apparent. But I don't believe that her retroperitoneal bleed would have been noted. I think this was an acute event.

Q. Okay. And we've got to talk about that in a minute. All right. So I understand what you're saying.

By the way, relative to complaints of pain in the area of the ecchymosis with this patient her complaints of pain, those, of course, were likely a result of the hematoma on the anterior abdominal wall, right?

A. Yes. And/or the femoral puncturing that was made previously. But I would agree with that.

Q. Yeah. Is it likely that puncture continued to bleed throughout the day on the 4th and the 5th?

A. Well, I believe it was the origin of the abdominal wall hematoma. So it could conceivably have continued to bleed or it may have sealed off and then subsequently opened up again.

Q. Tell me why you believe this was, so I understand your testimony, I think you believe this is an acute bleed. Right?

A. Correct.

Q. And, again, the bleed I'm talking about was the bleed that ultimately killed her and that was described in the autopsy report, correct?

A. Well, it was the contributing factor to her death, yes.

Q. Yes. I understand. Tell me why, each and every reason why, you believe it was an acute bleed?

A. Well, based on my review of the record and the chronology of events and the vital signs something acutely happened. And this something that acutely happened was, at

least by virtue of the clinical signs, not apparent for most of the day on the 5th. So subsequently towards the latter part of the 5th when she went into the -- when she dropped her blood pressure and went into the intensive care an event happened. And I believe that this was the contributing event that a hemorrhage occurred and this hemorrhage continued well into the 6th, obviously until when she coded. And by that stage, of course, she had no cardiac reserve that was able to adapt to this, or very limited cardiac reserve or very limited body reserve. And that caused her death.

Q. You say that something acutely happened that was not apparent for most of the day on the 5th. And my question to you is what acutely happened? Did the bleed happen that was not apparent for most of the day on the 5th?

A. Well, I think the bleed started when she dropped her blood pressure.

Q. And when was that?

A. Certainly she had evidence of an abdominal wall hematoma. I believe that the cause of her death was the retroperitoneal

hematoma because there was a massive bleed into her retroperitoneum which certainly wasn't evident on the CT scan. So it must have happened after the CT scan.

Q. In terms of probability when did it start?

A. I think it started at the time when she dropped her blood pressure.

Q. And, I'm sorry, Doctor, when was that?

A. That was on the 5th, probably around -- started around 1600 hours, I would say, as to 1800 hours, to 8:00 in the evening.

Q. Until 8:00 in the evening. So 2000 hours is when her blood pressure dropped?

A. Well, I think there's evidence that her blood pressure did drop at 1600 hours, that's 4:00. But then 8:00 it was 79 over 48.

Q. Okay. So more likely than not, in your opinion, this bleed started at about 4:00 in the afternoon, right?

A. Very likely; that would be the earliest time I would think that it would have started. Shortly before that.

Q. And, Doctor, what, in terms of

probability, was the cause of this bleed?

A. Well, again, we're not totally sure. I mean, it's very easy to say that it was related to the femoral catheter and the needle stick that reopened. But I think that it's also well known that spontaneous bleeding can occur.

Q. Now I want you to understand something. In Ohio here we talk in terms of probability, that is, 51 percent or greater certainty of a fact. Allows you to state things to a reasonable degree of medical probability. And that's probably how Ms. Carulas will ask you questions at trial, but I'll leave that up to her.

My question to you, though, in terms of probability, is it more likely than not or to a reasonable degree of medical probability that the bleed that began at 1600 on the 5th was from the puncture wound in the area of the femoral vein in the groin?

A. I really can't say.

Q. Okay. Can you, again, to a reasonable degree of medical probability, can you say what was the cause -- or strike that.

What was the etiology of that bleed?

A. I can't say. All I can say is one of those two possibilities. That's the differential diagnosis of that retroperitoneal bleed. But I don't know what the cause was.

Q. Okay.

A. I would have expected that if it was from the femoral puncture site you would have seen it on the CT scan before that because the femoral puncture was done, of course, days before that, too. And she was on anti-coagulants so I really don't know. Neither do, I think, anybody does.

Q. You said something that confuses me. You would have seen what on the CT scan?

A. Retroperitoneal bleed.

Q. Why would you have seen it on the CT scan?

A. Well, I think, obviously, there was an invasion of a blood vessel and that was done at the time of the initial puncture on the 27th, I believe it was.

Q. Okay.

A. So if there was continued bleeding

from a blood vessel to bleed into the retroperitoneum, which is an open space, either it's sealed off for some reason and then didn't -- then reopened, which I suppose it's possible, again, it's possible, or if it continued I would have expected to see blood in that space done when the CT scan was performed on the 4th.

Q. Why?

A. Because it is a space without resistance. It really is an open space. It's beneath the peritoneum.

Q. What if the blood just hadn't made its way there yet through the tissue planes?

A. Well, she was on anti-coagulants. There would be expectation that, in fact, if there was a puncture in the vessel causing a leak into that space that there would have been a substantial amount of blood there.

And, again, I should point out that it is well known to hematologists that spontaneous bleeding can occur for some reason in the retroperitoneum. And I have personally seen a patient who was not punctured who has had a life threatening bleeding into the

retroperitoneum.

Q. Did you salvage that patient?

A. Actually I've seen it several times and I've seen it cause death.

Q. Okay. Of the several times you've seen it how many times has it caused death?

A. I can recall one time that a patient died.

Q. And how many other times did the patient survive?

A. I don't recall.

Q. But at least several, right?

A. Yes.

Q. And in those circumstances did you provide care for the patient?

A. Well, I assume I was consulted because I know about the cases but I cannot remember exactly what my role was. Mostly it relates to blood component therapy, I believe --

Q. Okay.

A. -- and coagulation parameters.

Q. You said something, again, I want to make sure I understand. The medicine -- you said something that confuses me and that is, I

guess, you know, I'm thinking internally. Is there something about a -- that the route the blood would flow, that we see the collection of blood on the CT scan around the interior wall of the abdomen but we don't see it in the retroperitoneum. Are you telling me that you would, given the fact that she was on anti-coagulants, you would have expected to see blood in the retroperitoneum at the same time you saw abdominal wall hematoma?

A. No. I didn't answer it exactly that way.

Q. Okay.

A. But given the fact that she ultimately died and was found at autopsy that she had an extensive retroperitoneal bleed, and given the fact that she was on anti-coagulants, had this been going on I would have expected to see blood in the retroperitoneum at a time when the CT scan was done because it was a puncture of her femoral vein and her artery on the 27th.

Q. Okay. But it's certainly possible that -- so I understand your testimony -- it's possible that the bleed that began at about 1600 on 3-5 was from that same site, correct?

A. Oh, yes.
Q. Okay.
A. Again, I think I've explained to you that there are a number of possibilities. But I cannot tell you which, exactly, was the one that caused it.
Q. And the other possibility is the spontaneous retroperitoneal bleed that people who are an anti-coagulants sometimes have, correct?
A. Correct.
Q. By the way, given her cardiac problems and the expectations with her limited reserve to deal with a blood loss the standard of care requires a physician to monitor very closely a patient for bleeding under these circumstances, correct?
A. Yes.
Q. Now had a hemoglobin and hematocrit test been run at 1600 or 1700 that evening do you have an opinion as to what it would have likely shown?
A. On the evening of the 5th, you referring to?
Q. On the 5th, yes, shortly after the

bleed began?
A. I think it would have been lower.
Q. Okay. At that point in time -- well, let me ask it to you this way. Is there a point in time between when the bleed began at 1600 and when the patient expired the next morning when this patient was salvageable, that is, when her life could have been saved by proper medical intervention?
A. I don't think this patient was salvageable.
Q. Tell me why.
A. Because of all the medical problems that existed in her, and I'd be happy to enumerate them.
Q. Well, yes. Enumerate them for me and explain how they relate to her not being salvageable in your mind. Please tell me.
A. Well, first of all, and I think certainly preeminently, this lady had heart muscle disease. She had a cardiomyopathy. She had an abnormal heart rhythm that was refractory to medical management and, of course, that's why she came into the hospital in order to attempt to control this.

She also had pulmonary hypertension which, in and of itself, can be a life threatening condition. She had a history of congestive heart failure. She had poor circulation particularly affecting her peripheral circulation. She had a past history of a stroke affecting her left cerebella hemisphere. She had two previous pulmonary emboli. She had chronic obstructive lung disease. She also had hepatitis C and that may have also been playing a role to some extent, although I think minimally because her liver functions were not that bad.
But this lady had multiple medical problems and, in essence, her protoplasm was such that any event which would tip the apple cart would, I don't believe, allow her to be salvaged. She really had very, very limited medical and cardiovascular reserve.
Q. Given this woman with vast limited cardiovascular reserve that you discussed can we agree that the standard of care required at least one more hemoglobin and hematocrit test run by Dr. Hulyakar on the 4th and at least one more hemoglobin and hematocrit test run by Dr.

Hulyakar or Dr. Chrismer on both these questions on the day of the 5th to monitor this?
A. Again, I think I've answered that. And I referred to the fact that I don't believe the standard of care would necessarily require the measurement of the hemoglobin and hematocrit which, in fact, in and of itself in bleeding can be misleading. But the standard of care does require monitoring of vital signs and close attention to the patient, which I think the record reflects was given.
Q. But certainly the hemoglobin and hematocrit test would have shown if the patient was becoming more anemic, right?
MS. CARULAS: Objection.
A. Well, certainly would have shown if the patient was becoming more and more anemic. But, again, I think I agree with Dr. Ballard, that there are erroneous values is that don't necessarily reflect the physiologics intravascularly that's going on because of fluid shift in an acute bleed.
Q. This patient was given two units of blood late in the evening, right?

A. Yes.
Q. Late in the evening hours and early morning hours, right?
A. Yes.
Q. Okay. How did she react to those?
A. She had a response. The hematocrit and hemoglobin went up.
Q. Well, how do you know the hemoglobin and hematocrit went up?
A. Well, I can refer to the fact that on the 6th of March at almost two in the morning she had a hematocrit of 27.2.
Q. Okay. And what was the hemoglobin?
A. 9.1. There's usually a 3 to 1 relationship.
Q. Did the standard of care require her to have been given more blood than was given to her?
A. No. I don't believe so. I think at that point in time, again, if you use the hemoglobin and hematocrit values, it would have been appropriate response. But, as I said, it also needs to be guided by vital signs. And, in addition, she was being given a fair amount

of fluid resuscitation at that time. So it's very likely that her actual hematocrit may have been higher.
Q. Is it -- you're mixing words here. As lawyers we pay attention to these things. You say it likely may have been higher?
A. More probable than not it would have been higher if, in fact, she wasn't given -- actual fact, what her absolute red cell mass was, was probably a little higher than was reflected by the percentage of red cells as determined by the lab tests.
Q. As of the time of this hemoglobin and hematocrit test about 0200 in the morning was there likely still a bleed occurring?
A. Yes. I believe so.
Q. What was done to control that bleed?
A. Well, subsequently, again, to control the bleed I think that the physicians were monitoring the clinical signs and vital signs in giving fluids. But in terms of controlling the bleed I'm not sure what you mean. There was nothing done that could have been done to actually try and intervene to stop

the area of hemorrhage.
Q. Why?
A. Because, well, certainly I know that mention has been made about surgical consults. I think that's totally inappropriate. This patient would not be a surgical candidate; neither, for that matter, would there have been a site identified which could have changed things.
Q. At late in the evening, 10:30 time frame, when Dr. Hulyakar orders the Heparin discontinued my understanding is he does that after he learns of the hemoglobin and hematocrit test, correct?
A. Correct.
Q. Okay. Why wasn't a hemoglobin and hematocrit test run at 1600 or 1700 in the afternoon, do you know?
A. I don't know.
Q. Would the standard of care have required it at that point with this patient --
MS. CARULAS: Objection.
Q. -- immediately when he noticed blood beginning to drop run a hemoglobin and hematocrit test?

MS. PETRELLO: Objection. Asked and answered.
A. Again, I think I answered that.
Q. I don't think you did. If you did humor me and answer it again, please.
MS. PETRELLO: That's the third time you've asked it.
A. I think what I had said was it related to certainly the clinical signs of the patient and I already articulated the issues relating to the measurement of hematocrits during bleeding. So it's the same issue.
Q. Was the fact that the woman hadn't passed urine all day and had to be straight cathed and 100 cc's, I think, of concentrated dark urine were obtained at about 1700, is that related to the blood loss in this case in terms of probability?
A. I think that the blood loss probably contributed in terms of probability. However, as was pointed out by the nephrology consult, there were other factors that were playing into that equation.
Q. By 0300 in the morning I think you will agree with me by looking at the chart the

woman had not passed any more urine. Assuming that to be the case is that fact evidence of Mrs. Robinson entering a state of hypovolemic shock or in a state of hypovolemic shock?

A. I think, on the basis of retrospective, it probably contributed to it. But prospectively better than -- already had chronic renal insufficiency. Had already been seen by a physician who was a nephrologist who was an expert in fluid management and kidney function. There were other factors that were playing into the equation there. And I think they were concerned about her actual kidney function period.

Q. I'm not talking standard of care here. I'm not talking whether someone managed this right or wrong. What I'm asking is was the fact that she was not passing urine at 0300 in the morning likely a sign or symptom of hypovolemic shock?

A. It likely was.

Q. Okay. That's certainly something, if you're managing this patient, you want to know that she's not passing urine as of 0300 in the morning; is that correct?

A. Yes.

Q. Was the fact that they were having a difficult time getting a peripheral pulse on this patient, as of 0300 in the morning and throughout the morning hours, was that also a sign or symptom of hypovolemic shock in this patient?

A. Yes.

Q. Again, something as a physician you want to know about if you're talking to a nurse at 0300 in the morning, right?

A. Yes.

Q. Your conclude that this patient was not salvageable once this bleed began at 1600 on the 5th. Can you be any more specific than you've been in describing the mechanism as to why she was not salvageable?

A. No. I don't think so.

Q. Just basically based on the -- on her history with the difficulties with cardiomyopathy. I wrote them all down. Hypertension, congestive heart failure, poor circulation, past history of stroke, two previous pulmonary lung -- pulmonary emboli?

A. Well, actually it was veinous --

deep veinous thrombosis.

Q. I'm sorry, deep veinous thrombosis, and hepatitis C. Just by the mere fact that these -- this collection of problems you just don't believe she was likely going to survive once this bleed started at 4:00 in the afternoon?

A. That is correct. I should also mention I didn't specifically mention her incompetence of her valves; her cardiac valves were not functioning well either. Both the tricuspid and the mitral valves. She really had marginal reserve at best. And it was no chance of salvaging her, I don't think.

Q. No chance at all? Zero chance?

A. Well, very limited. That's all I could say. I mean --

Q. I mean, was there a 30 or 40 percent chance of salvaging her?

MS. CARULAS: Objection.

A. No. I think that, again, now I have the benefit of the retrospectoscope analyzing her circumstances and I don't believe that she was salvageable at all.

Q. If you were managing this patient

would you have even bothered to give her blood product?

A. No. Of course prospectively I would be assuming that everything I could do to salvage her would be done. I think -- but certainly her prognosis was very poor and I'm sure the physicians realized that and indeed I believe it was communicated to her son that she had a very grave prognosis even at that time.

Q. Doctor, hypothetically, Dr. Hulyakar sees the CT scan results on the 4th, he knows hemoglobin and hematocrit tests at 0400 in the morning on the 4th, why wouldn't he -- strike that.

Would it have been reasonable for him to have discontinued the Heparin and monitored her hemoglobin and hematocrit for 24 hours to ensure that there was no continued bleeding?

MS. CARULAS: Note my objection. Go ahead.

A. Would it be reasonable?

Q. Yes.

A. It would be reasonable.

Q. Okay.

A. However, again, one has to carefully weigh the risk of discontinuing it versus the risks of continuing it. And this is a judgment call that would be made by physicians at the time who have knowledge of the patient.

Q. Were there other options available to him aside from Heparin which would have guarded against DVT and the arrythmia problems and reduced the risk of the bleed?

A. I don't believe there were other options. And I think I know what you're referring to as, I think, your expert referred to the Greenfield filter.

Q. Yes.

A. This woman was not a candidate for a Greenfield filter.

Q. Tell my why.

A. Greenfield filters certainly can impede, mechanically, the possibility of a thrombosis in the lower extremities. But certainly one would not prevent any clots from occurring in an individual who has paroxysmal atrial fibrillation who had previously had a stroke. We know that for a fact, as well. But

there would be a great likelihood of clots developing in the heart and spreading out. Greenfield filter has no role in that.

Q. You state in your report on the -- gosh, I think it's the third full paragraph in reference to the primary indication for anti-coagulation, state that, and I'll quote, this is based on the statistically greater probability of the patient with her risk factors having a life threatening thromboembolic event than one of a hemorrhagic nature, closed quote. Do you see that?

A. Yes.

Q. Okay. On what are you relying for that statement, Doctor, when you talk about a technically greater probability?

A. I'm relying on my background, education and experience and my knowledge of the patient's records.

Q. As part of your background, education and training are you relying on any kind of studies?

A. Well, I don't think there have been any studies specifically getting an aggregate of patients with exactly the same

issues that she has and being able to give us some statistics on this. But --

Q. So I guess where I'm coming from is what's your basis for a statistically greater probability? I mean, that -- I guess that means to me that there's a study you're relying on. Does that mean the same to you?

A. No, not at all. What I'm saying is that it's more probable than not statistically, in fact, substantially more probable than not statistically that she would have a thrombo embolic event versus a hemorrhagic event that would be life threatening. Hemorrhagic events, more often than not, are controllable and manageable. Thrombolic events cause death of tissue. That's very likely irreversible.

Q. So this statistically greater probability is just something that you are relying on, I mean, you're coming to that conclusion based on your experience; is that right?

A. Well, it's based on my experience and this particular patient. I'm referring to what is her statistical probability, not the

literature in the world's published material because she is a very unique patient.

Q. Break it down statistically for me. How would you describe that?

A. Well, again, you might use more probable than not. That, statistically, would be greater than 50 percent. And I am using that same analogy to base my statement.

Q. What's your basis for the statement that this was a difficult yet carefully weighted decision? How do you know it was a carefully weighted decision?

A. Well, I have no doubt that, in fact, there was many doctors that were involved in it. None of them expressed any concern about the continuation of the anti-coagulants. They clearly realized the difficulty and the difficult situation they were faced with. And also base it on my review of Dr. Hulyakar's deposition.

Q. How do you know that Dr. Chrismer carefully weighted this decision?

A. Well, I think you'd have to ask Dr. Chrismer but I would imagine, again, this is my assessment based on my review of the

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medical record and the number of physicians involved and the deposition.
Q. With regard to Dr. Chrismer you're assuming it is a carefully weighted decision correct?
A. Yes.
Q. Okay. With regard to Dr. Hulyakar are you assuming it was a carefully weighted decision?
A. I am absolutely.
Q. You're assuming?
A. Yes.
Q. Okay. By the way, given the fact that she was on Heparin, and we note that her blood pressure began to fall at 4:00 in the afternoon, wouldn't it have been appropriate that her Heparin had been discontinued at 4:00 in the afternoon?
A. It would be appropriate to consider the timing when Heparin should be stopped, yes.
Q. Okay. Heparin should have been stopped more quickly than it was in this case, correct --
MS. CARULAS: Objection.

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Q. -- or stopped sooner than it was in this case, correct?
A. No. I think that, again, faced with all the events that were happening prospectively I think the decisions that were taken were reasonable decisions. Certainly I have the blend of hindsight looking at all the records after her death. And I might say that it could have been stopped earlier, yes.
Q. Now protamine reversing the Heparin in the report, you say it's not uncommonly associated with severe reactions?
A. That's correct.
Q. Yet that can be life threatening, right?
A. Yes.
Q. What are those, please?
A. Anaphylactic reactions, severe allergic reactions to the protamine, and protamine in and of itself is also an anti-coagulant. It can also anti-coagulate.
Q. Were there any other options available to her physicians to reverse the effecting of the Heparin?
A. No. This is the standard

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medication that, in fact, is used to reverse Heparin. It works in an antagonistic way to Heparin but, of course, as I pointed out it can also be an anti-coagulant.
Q. Does it also act as an anti-coagulant?
A. If enough of it is given, yes.
Q. How much needs to be given to act as an anti-coagulant?
A. That's very variable. It depends upon patient's idiosyncracy.
Q. Okay.
A. But it can certainly do that.
Q. Okay. What should have been given to this patient such that it would not have acted as an anti-coagulant? What amount?
A. I don't know.
Q. Why don't you know?
A. Well, I think there were a number of dynamic things that were happening in this patient at the time. In general, what one does is one sort of does an empiric cardiovascular bypass surgery which is where protamine is usually used. This is an acute amount of Heparin that is given. The measurement of

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activated clotting time is done at the time and an empiric amount of protamine is given to reverse it.
Q. Did Dr. Hulyakar consider reversing this with protamine?
A. I don't know what he considered. I would imagine that would have been a thought that would have gone through his mind.
Q. Okay. Was there an amount that could have been given to her that would have fallen short of acting as an anti-coagulant?
A. Again, as I've answered the question, it is very idiosyncratic and depends upon the kinetics of Heparin. But an amount can be given to reverse Heparin.
Q. What do you mean by kinetics of Heparin? I don't understand that.
A. The amount of Heparin is excreted by the liver and the kidney. And it is not easy to get a Heparin level in a community hospital. There are some research centers where you can get an actual Heparin level. Most often it is done by surgical testing.
But in a person who has kidney and liver disease there may be more Heparin on

board than is simply estimated on the basis of either the surrogate tests or the amount of Heparin that was given as a total amount and the half life of Heparin, which is about an hour and a half.

Q. What does that mean?

A. What it means is that there are many factors that go into that equation. And the factors are the amount of Heparin that is given, the test that is used which is a surrogate for Heparin and the metabolism of Heparin and the uniqueness of the patient's clinical condition.

Q. Do you have any indication that Dr. Hulyakar entertained any of this?

A. I don't know. I would imagine that in a patient who's bleeding, was on Heparin, when one considers continuing anti-coagulation these factors go into the assessment.

Q. Certainly, Doctor, you would have expected that, to meet the standard of care, Dr. Hulyakar, at some time during the course of the evening, had to have considered utilizing protamine in an amount that would have been

such that it would not have acted as an anti-coagulant in this patient, correct?

A. No. I wouldn't. As I pointed out I'm not sure that I would have used protamine, or I would have recommended protamine in this patient. Prospectively, considering all the events that were happening.

Q. What adverse reactions would you have expected from this patient? You say in terms of probability whether she would have had any adverse reactions to the administration of protamine?

A. Well, I think as a premise, first off, I would not have recommended protamine.

Q. Because it can act as anti-coagulant?

A. No. Because I at least would have been following the patient, following vital signs and following fluid and blood replacement. And I believe that, in fact, her risk of thrombo embolic events were quite substantial.

I do not believe that, in fact, giving protamine to this patient would have made any difference or would have changed the

circumstances. I would not have recommended protamine.

Q. And just so I understand, you talk in terms of acting an as anti-coagulant and you also talk in terms of other adverse reactions. You mentioned severe allergic reactions. Were there any other severe reactions that one could expect from the protamine?

A. No. Certainly the literature is replete with protamine adverse events including people dying from the administration of protamine. The cardiovascular literature has many articles about this. In fact --

Q. What severe reactions would you have been concerned about in this patient, just so I understand your testimony?

A. Well, I was talking about, generically, about protamine. As I pointed out it is associated with and can be associated with anaphylactic reactions which further drop blood pressure.

Q. Okay. What else?

A. Well, I think I've already mentioned its potential if excess is given for anti-coagulation.

Q. Anything else?

A. No. Those are the main ones.

Q. Any minor ones?

A. Well, I think in any person getting any medication there are always idiosyncratic reactions but I think we've spoken about the reactions.

Q. Doctor, if Mrs. Robinson had not been on Heparin following the procedure on the 27th could we agree it's more likely than not that she would not have experienced this bleed that would have or that had led to her death?

MS. CARULAS: Note my objection. Go ahead.

A. No. We can't agree with that.

Q. Okay. Why not?

A. Because needle punctures into vessels would certainly have or can cause bleeding into the tissues. And I think I've already articulated that I'm not sure what the cause of the retroperitoneal bleed was. And it may have indeed been related to the vessel punctures. I cannot say whether it was that versus the Heparin. So I can't agree with that.

Q. You're telling me that if she had not been on Heparin during this hospitalization that it's more likely than not that the puncture in the femoral vein area would have bled to this extent anyways? Is that what you're saying?
A. No, that's not what I'm saying.
Q. Okay.
A. I think originally you asked me a question as to what was the cause of the retroperitoneal bleed. And I answered that I don't know exactly what the cause. But there are several possibilities. One of the possibilities was spontaneous bleed from the anti-coagulation.
Q. Okay.
A. Then another was that it was a bleed from the puncture site which either stopped or possibly re-bled. But I really don't know which was the reason for the bleed.
And I think in this hypothetical I cannot discriminate in terms of what the cause was so I certainly cannot say that she wouldn't have bled had she not been on Heparin.
Q. Okay. I understand. Hold on a

minute. Let me review my notes, Doctor. I may almost be done with you.
Does anybody else have any questions of the doctor while I'm reviewing this?
MS. PETRELLO: No.
MR. HUDAK: No.
Q. Okay. I'm going to put the phone down for just a moment. Doctor, are you still there?
A. Yes.
Q. Let me just ask you, again, hypothetically, you learned what Dr. Hulyakar learned with regard to this patient as of 10:30 or so that evening on the 5th. It's your patient, okay -- and Ann, I understand your objection -- what would you have done in this scenario?
MS. CARULAS: Note my objection.
A. I certainly would have stopped the Heparin as was done subsequently. And I would have continued to do what the physicians did at that time. As I've already answered it would be my practice to get a hemoglobin/hematocrit. But otherwise I would have done pretty much

what they did.
Q. Hold on a minute. And, Doctor, just -- I think I know what you're going to say and where you're going but I have to ask you your opinion with regard to her life span. Two more years. Why do you say that?
A. Well, I think that was being generous. I think what I said was --
Q. I think you said at most two more years?
A. At most. Yeah. I think that's based on my knowledge of pathology and the diseases that she has, or had.
Q. Was she hemodynamically stable from 1:20 in the morning until six a.m. in the morning?
A. On the 6th?
Q. On the 6th, yes.
A. No, I think she was hemodynamically fragile.
Q. From when to when?
A. Well, I think it's apparent obviously when her blood pressures were low.
Q. When were her blood pressures low? And I'm talking about after she presents to the

CCU at 1:30 in the morning?
A. I'm just going to refer to the vital sign monitoring.
Q. Yeah. Please go ahead.
A. Okay. There's a flow sheet termed critical care flow sheet which I'm looking at now.
Q. Okay.
A. And this is obviously what you're referring to 1:30 in the morning. Up until nearly 10 in the morning, I guess it was nine, 9:05, there are values for blood pressure. And it's apparent that at least with some of the resuscitative measures when she first presented and was admitted to the ICU that her pressures went up, that the pressure's up to about actually 3:20, it dropped again below -- but in actual fact at 4:30 there is a systolic reading that looks like 130. But I'm not sure what this diastolic is. It says 26. I can't believe that.
Q. Why?
A. Because I think in general when you have a diastolic of 26 you don't register a diastolic. You might get a palpable systolic.

Q. Okay.
A. Especially with a systolic of 130. But, overall, the point being that there were attempts at resuscitation during this period and her blood pressures were not able to be sustained in any reasonable value. So that's the reason that I'm saying she was hemodynamically fragile and I guess you could say unstable certainly from beyond 3:20 in the morning.
Q. At 3:20 in the morning would the administration of additional blood products have at least served to make her more stable than she was in terms of probability?
MS. CARULAS: Objection. This has been gone over extensively but go ahead one more time. And then you'll let me get my plane, right?
Q. Yeah.
A. I actually don't believe so. Because I think at this point in time she is shocked, her reserve probably is really quite depleted and even the administration of additional blood products probably would not -- more probable than not, I should say, have made

any difference.
Q. Would they possibly have made any difference?
A. I don't know.
Q. All right. Doctor, that's all I have.
A. Thank you.
Q. Thank you, Doctor. Thank you for the time.
MS. PETRELLO: I have no questions.
MR. HUDAK: Nor do I.
MS. CARULAS: You have the right to read over the transcript to make sure it's been taken down accurate on your behalf. It's your option.
THE WITNESS: I'll waive it.

(Signature waived)
RONALD SACHER, M.D.
- - -
(DEPOSITION CONCLUDED AT 2:15 P.M.)
- - -

CERTIFICATE

STATE OF OHIO
: SS
COUNTY OF HAMILTON

I, Valerie Jones Conn, the undersigned, a duly qualified notary public within and for the State of Ohio, do hereby certify that RONALD SACHER, M.D. was by me first duly sworn to depose the truth and nothing but the truth; foregoing is the deposition given at said time and place by said witness; deposition was taken pursuant to stipulations hereinbefore set forth; deposition was taken by me in stenotypy and transcribed by me by means of computer; deposition was submitted to the witness for examination and signature; I am neither a relative or any of the parties or any of their counsel; I am not, nor is the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D) and have no financial interest in the result of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal of office at Cincinnati, Ohio, this ____ day of _____, 2001.

_____
My commission expires Valerie Jones Conn, RPR
September 4, 2002 Notary Public - State of Ohio