The State of Ohio)
County of Franklin.) SS:

IN THE COURT OF COMMON PLEAS

OHIO CIVIL DIVISION

LINDA K. MAULLER, Individually)
and on behalf of the Estate of)
DALE MAULLER,)
Plaintiffs,)
vs.)Case No.
STEVEN J. YAKUBOV, M.D.,)95CVA-11-7855
et al.,)
Defendants.)

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Videotaped deposition of STEVEN J. YAKUBOV, M.D., a Defendant herein, called by the Plaintiffs as if upon cross-examination, and taken before Lynn A. Regovich, Notary Public within and for the State of Ohio, pursuant to agreement of counsel, and pursuant to the further stipulations of counsel herein contained, on Tuesday, the 8th day of April, 1997, at 3:00 p.m., at the offices of Mid-Ohio Cardiology Consultants, 3545 Olentangy River Road, City of Columbus, County of Franklin and the State of Ohio.

APPEARANCES:

On Behalf of the Plaintiffs:
Becker & Mishkind, by:
MICHAEL F. BECKER, ESQ.
JEANNE M. TOSTI, ESQ.
and
AMY SUE TAYLOR, ESQ.

On Behalf of the Defendants
Steven J. Yakubov, M.D. and
Barry S. George, M.D.:
Jacobson, Maynard, Tuschman & Kalur,
by:
MAURICE N. MILINE, ESQ.

On Behalf of the Defendant
Riverside Memorial Hospital:
Lane, Alton & Horst, by:
THOMAS A. DILLQN, ESQ.

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P R O C E E D I N G S

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STEVEN J. YAKUBOV, M.D., of lawful age, having been first duly sworn, as hereinafter certified, was examined and testified as follows:

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(Plaintiff's Exhibit 1 marked for identification purposes.)

MR. BECKER: Good afternoon, Doctor. I'm Michael Becker. We met a few minutes ago.

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CROSS-EXAMINATION

BY MR. BECKER:

Q I'm going to hand you -- first of all, tell us your name, please.

A Steven Joseph Yakubov.

Q Okay. Dr. Yakubov, I'm handing you what's been marked as Plaintiff's Exhibit 1. Will you identify that for us, please?

A This is my curriculum vitae.

Q Okay. Is it current?

A It is -- there's probably been additional publications that I've authored

that may not quite be on here yet.

Q Okay. As to what is contained on Exhibit 1, is everything accurate thereon?

A Yes.

Q Okay.

A I believe this to be accurate. I've looked at my CV before.

Q Okay. What -- what publications are there that you have authored or co-authored that are not reflected on Exhibit 1?

A There have been additional studies that have occurred within the last year. The heart meetings were just two weeks ago and I was part of a couple of multi-center trials, mostly dealing with thrombolytic therapy or anti-platelet agents.

Q Okay. Have you authored or co-authored any articles that deal with complications of catheterizations?

A Specifically complications?

Q Yes.

A No, not specifically complications.

Q Okay. Now, based on your understanding of what actually occurred to Mr. Mauller, have you authored anything that in any way,

shape or form might be relevant to his medical subject matter?

A Well, all of the -- all of my publications deal, with cardiology.

Q Right.

A And since he was a cardiac case, I would suspect that there may be some relevance to all of those publications.

Q Okay. Nothing that you can think of that would be very specific to him off the top of your head? And take your time and look through your publications, if you would.

A I did author a chapter in a interventional coronary text on coronary intervention, via the arm approach. We talked about different types of coronary interventions. That would pertain. I did talk about agents for coronary stenting, which was title number 13 under abstracts and presentations at scientific meetings. There are other -- there are other publications such as number 12 that deal -- that dealt with coronary atherectomy. There are numerous patients within publication

number 11, Integrelin and Unstable Angina, many of those patients went on to have coronary intervention, directional atherectomy, rotational atherectomy, et cetera. A8 you can see, number 10 was another abstract presented at American Heart Association meetings regarding intracoronary stent usage. Number 9, again on intracoronary stent usage and coronary intervention. And then there are numerous articles on thrombolytic therapy for direct -- for during angioplasty. Another atherectomy, article number 3. So I think that there are several articles here that talk about our experience with atherectomy and angioplasty that may pertain to his case.

Q What is your opinion as to the reason that Mr. Mauller had an arrest?

A I assume that you're talking about the first arrest that he had; is that correct?

Q Well --

A Could you be --

Q Sure.

A Could you be more specific?

Q Absolutely. Sure. On the 28th.
A The 28th, was that the Saturday of his hospitalization? Was that the day after I had completed his --
Q Yes.
A -- intervention?
Q Yes.
A I suspect that the cause of his arrest was hypotension, a heart rate that had decreased, perhaps even an arrhythmia, probably from closure of at least one of his coronary arteries.
Q Okay. Do you think it's likely that all his coronary arteries were closed at the time that he arrested?
A They may have been. It's hard to tell. You don't have to have all of your coronary arteries closed to have an arrest.
Q I see.
A It can be one or even a small branch.
Q I understand that. What is your opinion as to the likely reason that one or more of his arteries closed down that precipitated his arrest?
A There can be many reasons why a

coronary artery closes. There can be a dissection.

Q In this case.

A It's hard to tell. You can't be absolutely certain.

Q Do you have an opinion more likely than not as to what the reason was in this case as to why his artery or arteries closed down?

A I have an opinion.

Q What is it?

A My opinion is that I can't be absolutely certain.

Q Okay. Listen to my question.

A I am.

Q Have you had your deposition taken before?

A Yes, sir.

Q Okay. There's some standard caveats. This is a question answer session. It's important that you understand the question I ask you. If you don't understand the question, you tell me so and I'll attempt to rephrase --

A Okay.

Q -- or restate the question. Unless you indicate otherwise to me, I'm going to assume that you fully understood the question that has been posed; okay?
A That's fine.
Q Now listen, my question utilized the word likely, more likely than not, not certainty. Do you have an opinion more likely than not as to what the reason was for the vessel or vessels closure that precipitated his arrest?
MR. MILINE: Objection. Go ahead.
A I can't be absolutely certain. There's two very highly likely causes.
Q Okay.
A And it is as an angiographer, as an angioplaster, it is -- often they occur together. It is hard for me to be absolutely certain, or even likely, that one caused it excluding the other causes.
Q Okay. Tell me what those two are.
A I think the most likely causes are dissection of the artery that ultimately closed down, or thrombus of the blockage

site.
Q Okay. And if it was a dissection of the artery, what was the likely reason or precipitating factor for the dissection?
A Dissections can occur as a normal -- they're a normal process during coronary intervention. If they don't heal normally, they can't -- the dissection flap can fall into the lumen, occluding the artery, ~€ten accompanied by thrombus, and there's several mitigating factors that can contribute to that dissection flap, helping to close the artery.
Q Right. But in this case, bringing you back to his case.
A Yes.
Q Do you have an opinion more likely than not as to what the likely cause of the dissection was?
A The dissection is a normal process of coronary intervention. Dissection planes occur with balloon angioplasty.
Q Okay.
A They can occur with rotational atherectomy, directional atherectomy,

intracoronary ~tenting,all of those. Every intervention we do --

Q Okay.

A -- can cause it.

Q Which artery closed down that you're certain of that precipitated the arrest?

A When he was taken back to the catheterization lab by Dr. George, both the LAD and the right coronary artery were both closed.

Q Okay. And do you feel that a dissection occurred in both of those? That is likely dissection occurred in both of them?

A Yes.

MR. MILINE: Objection.

A Clearly dissection happened in both of those.

Q Okay. And now, do you feel there was any evidence of a thrombus in either of those arteries?

A There may have been.

Q Okay.

A You can't always see that angiographically.

Q Did you see any evidence of it angiographically of a thrombus?
A When I was doing his procedure?
Q Did you see any evidence of a thrombus angiographically at the time of caths done subsequent to his arrest?
A Well, all I have is the films to review after his arrest. I wasn't in the room when he did that.
Q And have you looked at those films?
A Yes, I have.
Q Is there any evidence of a thrombus?
A There may have been. Again, it's very difficult to see all thrombus --
Q All right.
A -- angiographically.
Q Let me ask you this.
A I'll even reference one of my publications if you'd like to look at that further.
Q No. That's okay.
A All right.
Q I don't mean to be cute, but I'm mindful of the time factor here and I want to move things along.

MR. M

procedure. There's dilution of the hemoglobin, hematocrit that occur with giving volume during the procedure. He had two different days worth of procedure. We expect some decrease in his hemoglobin.

Q Okay. And did that expected -- was that expected range exceeded by his H and H numbers?

A I don't recall. I'd have to look at his laboratory values to tell you that for sure.

Q Okay. Would it be safe for me to say right now that during the time, up until the time of his arrest you never had within your differential any type of a bleed going on in Mr. Mauller's case?

A I think -- you're -- I'd like to know what you mean by bleed and --

Q Okay. Good. And what I mean by bleed is something other than normal amount of blood loss,

A Please repeat the question. I'm sorry.

Q Did you ever have any type of a bleed, for example, a retroperitoneal bleed within your differential while you were rendering

hands-on care to this patient up until the time of his arrest?

A The only way to suspect a retroperitoneal --

Q Doctor, yes or no, did you ever have it within your differential?

A I --

MR. MILINE: Objection.

A I think --

MR. MILINE: He can answer the question any way he wants.

A I think of a retroperitoneal bleed in every patient I treat with Heparin. That is always in the back of my mind. I don't always document that on the chart, but we have -- I've done so many angioplasties. We give Heparin to every angioplasty. It's a known complication of Heparin use. It's always in the back of my mind.

Q Let me ask the question a different way. Can we agree that prudence and the standard of care demands that if you have retroperitoneal bleed within your differential, you have a duty as a physician to take steps to rule that out?

MR. MILINE: Objection.

Q Does that make sense?

A That's not necessarily true.

Q That you don't have a duty to rule out a suspected retroperitoneal bleed?

A Well, sometimes you treat it as if it's a retroperitoneal bleed if you have a high index of suspicion.

Q How do you treat it?

A You stop Heparin.

Q Okay.

A You support the patient with intravenous fluids. Sometimes they need blood product replacement.

Q Okay.

A Now --

Q Let me -- let me word the question different.

MR. MILINE: You've cut him off twice now.

A That's okay. I have nothing further to add.

Q I don't mean to cut you off, Doctor.

A I understand.

Q So can we agree that if you have a

retroperitoneal bleed within your differential, you have a responsibility as an attending physician to do one of two things, either take steps to rule it out or take steps to treat it as if it were there?

MR. MILINE: Objection.

Q Is that fair?

A It all depends. You know, we treat patients, we don't treat it as a disease entity. Retroperitoneal bleeds come in various contexts. Our decision on how we treat a patient depends on the patient's vital signs, their clinical condition, their laboratory data. It is not purely based on one diagnostic entity as you state.

MR. BECKER: Okay. Could I have my question back? Listen to the question, Doctor. See if you can respond directly to the question.

(Question read.)

MR. MILINE: Objection.

A I think that if you have a -- if you are considering a retroperitoneal bleed, you interpret that diagnostic entity within the patient's clinical condition and you treat

it accordingly.
Q So that would be a yes to my answer?
A It may be a yes. There's a lot of conditions. It's not as simple as your question is. If you could word your question differently, I might be able to answer it a little more clearly.
Q All right. What is the name of your professional group here?
A Mid-Ohio Cardiology Consultants.
Q Okay. And I see by your vitae that since you finished your Fellowships, you have been an employee of that group; is that correct?
A I am a partner of the group now.
Q You're also an employee of the group?
A I don't -- yes.
Q Okay. And at the time that you rendered care to Dale Mauller you were an employee of the group; correct?
A That is correct.
Q And I'm gathering that at the time you rendered care to him you were not a partner?
A That's correct.
Q Okay. All right. You've had your

deposition taken before. What were the circumstances?
A I was involved in a prior court case and I've given a deposition a8 an expert witness once. Just once before.
a Were you named -- the first matter you referenced, were you named as a party defendant?
A They were -- they --
MR. BECKER: You can have a continuing objection.
MR. MILINE: Thank you very much. So I don't interrupt.
A Our group was named.
a Okay. You weren't individually named?
A You know, it became very confusing. I think they named several physicians and then they changed it to the group.
a Okay. Do you remember what the name of the plaintiff was?
A Jean Koehl.
Q Was that a case in Franklin County?
A Yes.
a Okay. And to your knowledge what was the alleged wrongdoing, if you can

generalize for us?

MR. MILINE: Continuing objection.

MR. BECKER: Sure.

A Mrs. Koehl presented with an acute myocardial infarction --

Q All right.

A -- to Riverside. She was hypotensive. We took her to the catheterization lab, one of my partners did. He did direct angioplasty in her artery. He initially did a heart catheterization, put her on Heparin, next day came back and did a balloon angioplasty procedure on her, and she really -- he really did a great job on her. Her -- it was the large right coronary artery. It had significantly affected her. She was bradicardic, hypotensive. Good chance of dying. And she had a wonderful result, went home and stated that we had given -- that we had given her a knee infection.

Q All right. Let me stop you right there. All right. You gave -- you acted as an expert before?

A Yes, sir.

A It was a -- it was an attorney for the defendant.
Q Okay. And you gave a deposition?
A No. Oh, I'm sorry. You're talking about the one I actually did give a deposition?
Q Yes.
A Yes.

Q And that was for the defendant?
A Yes.
Q And what was the defendant's name, do you remember?
A Huh-uh. I don't recall.
Q Was it a case locally here in Mid Ohio?
A Yes. It was Toledo.
Q Okay. And did you in fact -- you gave a deposition. What was the medical subject matter of that case?
MR. MILINE: Continuing objection, please.
A Let me think. It was a patient who came into the emergency room with chest pain, was treated by an emergency room physician, and then care was taken over by the cardiologist.
Q Okay.
A And they asked me about the -- was the care appropriate. That's what I was --
Q What did the cardiologist do?
A Well, the cardiologist took care of the patient while he was in the hospital.
Q Okay. Was there any intervention?
A And then he sent him off to the

Cleveland Clinic afterwards. No, he did not do an intervention on the patient.
Q Okay. So your role was simply acting as an expert for the attending cardiologist --
A Yes.
Q -- that took care of him in this community hospital, outside hospital that the patient was there a short time and ultimately transferred to the Clinic?
A That's correct.
Q Okay. Doctor, I want you to know throughout the balance of this deposition you're more than free to look at the chart --
A Okay.
Q -- at any time before responding to a question. This is not a memory contest. So in the event that you feel more comfortable looking at the chart before responding, I want you to know you're more than free to do so. Okay?
A I should probably have the chart in front of me then, most likely.
Q All right. During the course of your

career, you've never had your privileges called into question by any hospital?
A No, sir.
MR. MILINE: Objection.
A I've never had my privileges called into question.
Q Have you ever had your license called into question by any state?
A No, sir.
Q Have you ever been licensed in any state other than Ohio?
A I did my Fellowship in Michigan and I'm sure that I had temporary licensure in Michigan then.
Q And your Board certified; correct?
A That's correct.
Q In internal medicine, also, as well as cardiovascular disease?
A That's correct.
Q And I assume that you passed those exams, whether verbal or in writing at first attempt?
A You bet.
Q Okay. Is there another Board certification that I've missed, or is that

it, internal medicine and cardiovascular disease?
A Right.
Q Okay.
A I just took another exam in electrocardiograms sponsored by our college, passed that the first time too.
Q Have you ever lectured, given a formal presentation on cardiac catheterization or atherectomies?
A I lecture all the time.
Q To whom do you lecture?
A Mostly community physicians. Sometimes at national meetings.
Q Have any of those lectures been reduced to videotape or audiotape recordings?
A Not to my knowledge.
Q Okay. What have you reviewed in preparation for this deposition?
A I have looked through this chart as much as I could read it.
Q Okay.
A And then I reviewed my cine angiograms.
Q Okay. And are those the originals?
A The cines?

Q Yes.
A That's all there are.
Q Okay. Your counsel is shaking his head no and you're answering the affirmative.
MR. MIEINE: Excuse me. I thought you were talking about these are my records.
MR. BECKER: I'm up to the films already.
MR. MIEINE: You skipped a question. Okay. Good.
Q Did you look at Br. George's films as well?
A Yes.
Q How recently did you look at those films?
A Well, I think this was originally scheduled to go in February.
Q Right.
A And it was cancelled. So it probably was back.
Q Okay. Have you had an opportunity recently to look at those films again?
A No. In fact, I didn't even know this deposition was happening until this morning,

so I didn't have a chance to review the chart again or the films.

Q Okay. And I understand that we do have the original cine films here. Okay. And what I'd like you to do, Doctor, after I finish these preliminary questions is we're going to go off the record and get set up somehow so that we can view your interpretation of that first catheterization of Dale: okay?

A That would be no problem.

Q Okay. We talked -- I want to cover what you reviewed for this deposition. What about any textbooks or journal articles, did you look at any of those?

A No, sir.

Q Okay. Was this case subject to a cath committee review?

MR. MIEPNE: Objection as to any peer review.

Q I'm not talking about peer review. I'm talking about your group gets together, looks at a cath film, says this is how we should manage it.

MR. MILINE: Objection as to

it breaches their -- goes to any peer review from any method. I don't want you to respond to that question.

Q Well, prior to your recommending intervention to Mr. Mauller, did you consult with any other cardiologist?

A The heart catheterization was done and after discussion with Mr. Mauller the angioplasty was done. So there wasn't really time to --

Q The answer would be no then; right? My question -- my question is very simple. Did you consult with any other cardiologists prior to intervention of Mr. Mauller?

A There were two days of intervention, so I --

Q During the first day of intervention did you consult with anybody?

A No.

Q Okay. And between the first and second intervention do you have any specific recollection of whether you consulted with anybody?

A I don't know.

Q Okay.

A I don't recall.
Q Okay. Do you have any personal notes or personal files you keep on your cases outside of the medical -- the hospital chart or the office chart?
A On this case?
Q Yes.
A No, sir.
Q All right. Which textbooks in interventional cardiology would you consider the most reliable?
MR. MILINE: Objection.
A I think there are many textbooks of cardiology, some of which I've contributed to that are helpful sources of information.
Q All right. Any of them that you consider authoritative?
A No.
MR. MILINE: Objection.
Q In May of '94, did Riverside have a standby emergency CABG surgical team as a backup for failed coronary angioplasty procedures?
A There is always a -- the ability to take somebody immediately from the

catheterization lab to open heart surgery. It varies -- it may vary from time of day to what day of the week, but there is always the ability to take somebody directly from the cath lab over to open heart surgery.

Q I appreciate there's the ability to do that, but are there surgeons on standby?

A They're always considered to be on standby.

Q Within the hospital?

A Virtually -- sometimes at night we do direct angioplasty and there are not surgeons in the house that I specifically know of.

Q All right. You joined this group in what month in 1992?

A July.

Q Okay. And from July of '92 until May of '94, can you tell me how many angioplasties you were averaging a month?

A Probably at least 40.

Q And when did you begin doing atherectomies?

A Well, I did directional atherectomy in my Fellowship training. I don't recall

exactly when I started doing rotational atherectomy.

Q Okay. Did you get special training for rotational atherectomy?

A I had to be certified in that. Yes, I did.

Q When did you become certified in that?

A I -- I am not sure. I'm sure I have a plaque on the wall saying that I went through the required --

Q Who was the certifying body?

A I don't recall. It's been a long time.

Q But it was prior to '92?

A No, I didn't say that.

Q Okay. When -- can you tell me approximately how many months or years it was prior to the time you rendered care to Dale Mauller?

A I don't -- I don't recall.

Q Okay. Is that something you could simply look at a plaque and give your counsel notice of the date and he can get back to me so we can move along?

A Well, I can't be absolutely certain that that's the first time that I became

trained in that. I may have been doing rotational atherectomy for some time until the plaque was given. You know, you don't just walk into somewhere and get a plaque.

Q Right.

A You have to demonstrate or expertise.

Q You have to complete an application form to that certifying body; correct?

A Yeah, most likely. You probably have to -- since it's an interventional technique you probably would have to do the procedure.

Q Okay. You said that there's two different -- you implied that there's two different types of atherectomy. One is rotational. What's the other one call?

A There's directional, there's extraction. There's probably more than that.

Q What type did you use on Dale Mauller?

A Rotational atherectomy.

Q And prior to the time that you rendered care to him, can you estimate how many rotational atherectomies you were doing a month?

A I don't recall.

Q Can you just give me a ballpark? Are we talking one or two, or are we talking at least 10 or 151

MR. MILINE: Objection.

A Again, I can't be specific. I was doing a lot of -- I mean, a lot. That's a relative term, obviously, but I did many rotational atherectomy procedures a month at that time.

Q Bo you keep -- some physicians keep their own data spread sheet on number of procedures performed, complications, outcome. Do you do that for yourself, sir?

A The hospital does that.

Q The hospital does that?

A Yes.

Q Okay.

A Unfortunately they don't always release the statistics to us, but we have to fill out a form at the end of every intervention that lists that.

Q Okay. And to your knowledge how long has the hospital been requesting that?

A I -- I remember doing -- filling out those forms after every procedure ever since

I was a Fellow.
Q Okay.
A So that would have been back in '92, '91.
Q Now, to your knowledge are those forms kind of tabulated and analyzed and then reports sent to the various cardiology groups?
A They -- right, To some extent. They don't always put out everything on the form and they don't put them out every month, but they -- they try to get them out quarterly or twice a year.
Q All right. Dale underwent a thallium stress on May 9th, 1994; correct?
A I don't know that for sure.
Q Okay. I'll represent to you that it's my understanding that he did. That test showed that he had anterior apical area of decreased profusion with stress.
A Okay.
Q What does that mean?
A That means that when he was -- they did a thallium scan on him both in a rest and exercise state. I presume that he had an

exercise treadmill test --
Q Right.
A -- as part of that thallium, and there was a difference in profusion of his heart both at rest and at peek exertion.
Q In a specific area?
A Yes.
Q All right. Now, what blood vessel of the heart usually supplies the anterior apical portion of the heart?
A Usually?
Q Yes.
A Usually it is the LAD.
Q Okay. Was it something different in him?
A I don't recall. It's been awhile since I looked at his film.
Q Do you have an opinion -- strike that.
Would you agree that it is likely that blockage in his LAD was likely the cause of ischemia in his anterior apical portion of the heart?
MR. MILINE: Objection.
A According to the stress test, it may have been the LAD since the LAD most often

supplies the anterior apical portion of the heart.

Q Now, when a patient has multi vessel disease, how do you determine which vessel will undergo intervention first? What is the rule of prudence?

A There is no rule. It is a judgment call. There are multiple reasons for choosing which artery to go after first. The part of it -- there is no hard and fast rule to tell you which vessel to perform angioplasty on first.

Q If someone were to suggest that the general rule is to attack the quote culprit artery, would you disagree with that?

MR. MILINE: Objection.

A Who is someone?

Q I don't know.

A Oh, okay. I think especially in acute MI, that's the general rule. I think in a patient who has angina there's other factors that come into play.

Q Okay. Would another factor be which vessel would appear to be the most challenging to do?

A That could perhaps be a reason.
Q Okay. To do that one first as well?
A And there are other reasons. You know, for instance, just one that I'll offer to you is that when a vessel may supply a large distribution, you want to have everything going for you before you go after that.
Q I'm sorry. Would you repeat that?
A Well, I think that in some instances if a vessel, if you feel it may be the culprit, yet there are multi vessel diseases, you may want to take care of some of the other vessels if it is supplying a very large distribution first.
Q All right. Let's -- let's take a break and just set up so we can go right to the cine films or the cath films of Dale Mauller, and before I go off, this is so you understand what I'm going to be asking you to do, Doctor, is start from the first cath film you did on him, this is obviously prior to the first intervention, and take each artery and identify it by a pointer, and what I'm interested in is your assessment of the degree of narrowing or blockage and the

severity within that particular vessel.
A Okay.
Q And I'd ask you to go through that slowly; okay?
A Okay.
Q Because I'm going to have to watch from here and I want to be able to see it and we're going to have to zoom in on that cine film, re-focus it, so it's going to take some time, so please do it slowly.
MR. BECKER: All right. Let's take a short break, set that up and let's do that.
(Discussion had off the record.)
(Plaintiff's Exhibits 2-A, 2-B and 2-C marked for identification purposes.)
BY MR. BECKER:
Q Doctor, at my request, are you willing to review the original cine film of Dale Mauller and describe in detail your assessment?
A Sure.
MR. MILINE: Objection.
Q And would you -- can we agree and stipulate that you have taken that cine film

out of a container that's been marked as Exhibit 2-A, entitled Riverside Heart Institute, with a lab number 943287; is that fair?

A Yes.

Q Okay, Doctor. What I'd like you to do is start the film on Dale Mauller and go through your assessment of his diseases within his artery. The disease within his artery, if you would.

A Sure. The first picture is just the name plate and the time of day that it was taken.

Next we -- the first part of the procedure is what we call the left ventricular gram. It is a pigtail catheter that sits in the ventricle after crossing the aortic valve. It is -- I don't remember quite what size catheters were being used back then. It is an injection of the ventricle to determine the heart muscle motion.

Q Okay.

A This is an RAO view, which stands for right anterior oblique. The view of the

ventricle is then taken in the left oblique view also, and it demonstrates the wall motion in the left anterior oblique view.

Q Can you tell whether the LV function is good based on that?

A It's good.

Q Okay. That's a good sign for prognosis; correct?

A That's correct,

The next pictures that were taken were of the left coronary system. This is a Judkins left catheter that comes from the groin. It is the catheter is introduced in the left main coronary artery and that's where it sits here. This is the left main coronary artery. The LAD comes down in front and the circumflex artery travels posteriorly. As you can see here there is a severe lesion in the proximal left anterior descending artery. There are other lesions in the mid LAD, there are diagonal branches and septal perforator branches that come off of this vessel.

Q Can you estimate the length of that lesion for me?

A It's hard --

MR. MILINE: Which lesion?

A It's hard to be absolutely certain --

Q The severe lesion in the LAD.

A It's always hard to be, you know, precise about lengths of lesions in any coronary artery, and often when you see disease segments such as this., there's often disease segments in either the artery before or after. I can't be absolutely certain, but I would say it's less than 15 millimeters in length this first proximal LAD stenosis.

Q Okay.

A And it looks like the second LAD lesion the severe lesion is probably less than 15 millimeters in length also.

Q What's the degree of narrowing of the most severe one?

A In varying views it looks about 90 percent stenosed in the proximal LAD and about 80 to 90 percent in the mid LAD. It may be 95 percent in the proximal LAD.

Q Hold on one second. Go ahead, Doctor.

MR. MILINE: What question do

you want him to answer?
Q I want him to continue to find the coronary --
A To find the coronary --
Q Correct.
A Okay. Is it okay if I go on from this?
Q Yes.
A Okay.
Q We've now talked about the left anterior descending; correct?
A Yes.
Q Let's speak to the circumflex.
A Well, the circumflex artery is somewhat difficult to -- the LEO cranial view, which is the first view taken, is not the best view to determine severity of stenosis in the circumflex artery and we'll get to other views that show the circumflex even better.
Q Okay.
A The next view is typically a PA cranial view or an RAO cranial view. Again, these are shots that are mostly useful to determine severity of the LAD stenosis, and again, this is the left anterior descending

artery traveling down to the apex of the heart. This is the left main coronary artery. There is a septal perforator branch for which there is a lesion of the LAB. In this view it doesn't Book quite as severe as it did in the LAO cranial view. There is another stenosis in the mid LAD, again, it looks like a much smaller in length lesion.

Q What would you estimate based on this view the size of the narrowing?

A Well, here it looks maybe 80 percent proximal LAD and maybe 70 percent, 80 percent of the apical LAD. Apical portion of the LAD. Distal portion of the LAD.

a Okay.

A Again, this view is not a very good view to see the circumflex system, but at the very end of the picture you can see some collateral branches to the right coronary artery. Indicating that some of the branches of the right coronary artery were probably occluded.

Now, this is the RAO cranial view.

Q I'm sorry?

A This is the RAO cranial view.

Q Okay.
A Again, continuing diagnostic angiography. The LAD shows again the severe lesion at the proximal LAD, and usually I refer to proximal as anything before the first septal perforator branch, and this involves the first septal perforator branch, begins just beyond it. Here, again, you have a significant lesion of the LAD. And again, a more severe lesion of the mid to distal LAD. Again, collateral branches to the occluded branch of the right coronary artery and the circumflex artery is still not well seen in these cranial views.
Q Okay.
A Is this okay so far?
Q Yeah. You're doing fine.
A Here you can see the circumflex system since this is an RAO caudal view, and the circumflex system contains the two branches, one is the first obtuse marginal branch which has diffuse disease in the proximal portion of it, and then there's a severe lesion of the proximal portion of the circumflex artery on a very significant bend

and some diffuse disease of the second obtuse marginal branch and at the bifurcation of the distal circumflex artery.

Q What would you -- how would you describe the percentage of narrowing of the most severe lesion?

A Of the circumflex artery? Of the circumflex artery?

Q Right.

A It's probably close to 90 percent in that view.

Q Okay. Would you point to where you see closest to 90?

A Right here in the proximal -- in this area of the circumflex artery.

Q Go ahead.

A This is an LAO caudal view. Again, due to shadowing of patient it's hard to absolutely determine -- this is not the best view to see lesions in either because the picture wasn't as clear, however, again, you can tell that there's a severe lesion of the proximal circumflex artery and disease of the second obtuse marginal branch.

Q Go ahead.

A Just one more view in the LAO caudal view showing the lesion of the proximal circumflex artery, That basically -- that's what that view is for,

Q All right.

A It looks already better.

Again, you can see that there are collaterals to the distal right.

Q How do you know there are two distal right rather than from the distal, rather than from the right?

A Well, they couldn't be from the right because you're injecting the left system.

Q Okay. So you're seeing --

A So the left system has to fill the right system.

Q Okay.

A If I was filling the right system and I saw right collaterals, it would be right to right collaterals.

Q I'm with you.

A And this is the right coronary artery, there is a severe lesion in the mid portion of the right coronary thought to be probably 70 percent, some more diffuse disease

throughout the entire length of the mid right coronary artery, 70, 80 percent, and then a distal lesion of the right coronary artery.

Q I want you to slow up on this one a minute.

A Okay.

Q And I guess my view is not so great. Maybe, Doctor, if you could just move back about two inches.

A No problem.

Q And I'll look at the big screen. It's a much better picture for me than this.

Now, we are on the right coronary artery?

A Yes.

Q I wonder if you could just take starting at the top and go down as to where you see the first lesion and point it out to us?

A There is disease right before the right ventricular branch comes off in here. There is significant disease within the -- or just distal to that right ventricular branch and then there's another lesion here. I believe

this whole artery to have diffuse disease in it. There's a significant change in caliber of the vessel from the proximal portion toward the mid and distal parts of the LAD without any significant branches other than this right ventricular branch coming off. And I already know from looking at the left pictures that there's disease in his system because he has collaterals coming from the left system.

Q And where is the severe narrowing?

A Here, here and here (indicating).

Q Okay. And --

A Those are the most severe of probably --

Q Diffuse disease. And how did you come to the conclusion that there was 90 -- did you say 90 percent?

A No, I said 70, maybe 80 percent stenoses in some of these. This may be 90 percent there.

Q So 70 and 80 the upper two and 90 at the bottom?

A Right.

Q Okay. Go ahead.

A Again, you can see the severe lesions of the mid right coronary artery, two locations. More disease in again the mid to distal right coronary artery and then that other severe lesion in the distal right coronary artery also. You can also see that the right coronary artery is totally occluded in its posterior lateral branch right here, and this is the vessel that is receiving collaterals from the LAD or circumflex artery. It's hard really to tell always where collaterals are coming from. I know that they're coming from the left side.

This is an RAO view, and again, you can see that this vessel has significant disease in this area of the right coronary artery before the right ventricular branch right in here. Again, significant disease here, and then you can't really tell the distal vessel very well just because of the way the artery comes off and angulation of the camera. So I can't see the distal right coronary artery real well in the RAO view.

Q Okay.

A But it helps to point out how significantly different this mid portion right coronary artery is compared to the proximal.

One other thing was there may be a trace of distal late filling in that posterior lateral branch, but it's not real clear. I think most of the filling of that posterior lateral branch is coming from the left side,

MR. MIEINE: Doctor, just listen to his question and answer that.

A Okay.

Q Have you finished the first cine film?

A I'm done with all of the angiograms.

Q Okay. What's next?

A The coronary intervention.

Q Okay. Is that on a separate film?

A No.

Q Okay.

MR. MILINE: That's Dr. George. Can we go off the record for a minute?

MR. BECKER: Sure. It looks like he wants to talk to you.

(Discussion had off the record.)
A I'll just run through the film if that's what you'd Pike. This is the rotational atherectomy bur in the right coronary artery. An injection after I presume that the bur has been passed. Further bur runs, maybe with a different size bur.
Q What size burrs did you use?
A I would have to look at the records to know exactly.
Q Okay. What -- what determines what size bur you utilize?
A How severe the lesion is, the length of the lesion and the size of the artery.
Q Okay. Go ahead.
A This is a balloon inflated within the mid to distal right coronary artery. And then a balloon inflation in the mid right coronary artery. Again, an angiogram to assess the result after all of that has been completed. Both in the LAO and the RAO view.
After I was satisfied with the right system result, went over to the

circumflex artery, Took another guiding shot of the circumflex system, both in the RAO caudal and LAO caudal views. Wired the distal circumflex vessel. Put the wire where I wanted it. Angioplastied the second obtuse marginal branch, the area of the circumflex artery just beyond the intermediate or obtuse marginal branch. Injection of that vessel following the angio -- following balloon dilitation, both in the RAO and LAO views. That's it.

Q Okay. Were the results good on the circumflex intervention?

A Yes. Results were very good. Actually, the results were very good in all arteries that I had done.

Q Okay. And that finishes --

A It's about to run out.

Q -- 2-A. Okay. Let's go on to 2-B.

MR. BECKER: We can go off the record.

(Discussion had off the record.)

A This is a cine angiogram of the following day. Pacemaker in place, injection in the left anterior descending

artery. Rotational atherectomy bur passed through the -- into the LAD, balloon angioplasty performed at both sites of the LAD.

Q So you did a balloon and an atherectomy in the same vessel?

A We typically follow atherectomy procedures with balloons.

Q Okay.

A And that's what that shows.

Q Go ahead.

A Would you like me to continue?

Further balloon angioplasty at the lesion sites. And then that was -- those are the pictures of the -- just the final angiographic results of the LAD.

Q So you did an atherectomy of all three vessels and followed that with a balloon?

A No, I don't -- I don't -- I don't recall doing an atherectomy of the --

Q Circumflex?

A Yeah.

Q Okay.

A I don't recall that happening. I thought that was just the angioplasty alone.

Q Okay.
A I'd have to look at the record to be certain.
Q All right. That's fine.
A Do you need to see anything more with this? I'm done with this film.
Q Okay. Let's just finish the film up so any expert that looks at this can analyze it.
A The last film is Dr. George's film. Do you want to see that also with me or --
Q Yeah, let's take a look at it right now. Obviously you were not present?
A No, I wasn't. I wasn't there on this film day.

MR. BECKER: Can we get a stipulation that the film that was just played was from a canister marked 2-B?

MR. MILINE: Yeah. If that's what you marked, sure.

MR. BECKER: Yeah. And can we get a stipulation that the film the Doctor is about to play was taken during Dr. George's procedure is marked as 2-C?

MR. DILLON: Yes.

MR. MILINE: Just note the objection that he wasn't here during that period of time,

MR. BECKER: "He" being Dr. Yakubov?

MR. MPLINE: Correct.

A Are we on the record still?

Q Yes.

A Okay. Do you want me to run through this film?

Q Yes. Run through it and based -- I appreciate the fact that you were not there, but what is your understanding as to what you're seeing.

A Okay.

Q That's what I'd like you to speak to.

MR. MILINE: And if he has any questions for you, Doctor, he'll ask you.

A There's a catheter in the right coronary artery. There is slow flow and total occlusion of the right coronary artery in the proximal portion. Diagnostic angiography of the left system shows a certain large intermediate branch of the

circumflex artery to be open. Slow flow in the LAD. Here you can see that beyond the first septal perforator branch and the first diagonal branch the LAD is totally occluded. There's faint distal filling of the apical portion of the LAD.

Q Now, can you tell whether or not that's a dissection or just simply an occlusion?

A There's some features of dissection, some features of thrombus. Probably a combination of both.

Q Of course once you have a dissection, that sets the system up for a thrombus formation?

A It can be contributory to formation thrombus.

Q Okay. Go ahead.

A There's also occlusion of the distal circumflex artery. The intermediate branch or first obtuse marginal branch is still widely patent. Just further angiogram showing that.

Here's a guide catheter placed in the right coronary artery. A wire is through the right coronary artery. Balloon

angioplasty was performed in the right coronary artery, flows re-established. Further diagnostic angiograms, I presume after balloon inflation such as that. Still in the right coronary artery. Intracoronary stenting of the right coronary artery.

Now, to the left anterior descending artery a wire is placed to the distal part of the LAD, guide catheter is in the left main coronary artery. Balloon angioplasty is performed of the proximal LAD, and then the mid to distal LAD. Flow re-established in the LAD. Further balloon angioplasty in the LAD, different views. Again, the angiographic results of the balloon angioplasty in the LAD. Intracoronary stenting of the LAD followed by balloon dilitation. That's about it.

Q Okay.

A That's the final -- there might be something after it. No, that's it.

Q Okay.

A That's the final angiograph.

MR. BECKER: Let's go off the record just for a moment.

(Discussion had off the record.)
BY MR. BECKER:
Q Doctor, when it came to the time to make some recommendations to Mr. Mauller, you had those discussions with Mr. Mauller and his wife?
A I don't recall if I had the discussions with his wife.
Q Okay. Do you recall any specifics or any specifics of the conversation you had with Mr. Mauller relative to your recommendations?
A I recall speaking with him about options of what he is -- he can have done.
Q Okay. And was CABG one of the options?
A Yes, it was.
Q Okay. And did you have a recommendation to him?
A I -- you know, based on his clinical scenario, I felt that multi vessel angioplasty was a reasonable option. I felt that coronary bypass grafting is an option. I usually allow the patients to make their choice, trying to lay out the success rate and the complications of each.

Q Okay. What likely would you have told him since you don't recall the specifics?
A I likely would have told him that the right coronary artery had several lesions. I think the success rate with rotational atherectomy and balloon angioplasty in that case was probably 98 percent. Complication rates are as -- probably no greater than other direct or rotational atherectomy cases, incidents of myocardial infarction of 2 to 4 percent, incidents of death of about one-half to one percent, risk of stroke of somewhere around one-half to one percent. And then I probably went through the same thing with the circumflex artery with less chance of death with that artery.
Q Okay. Same statistics, same risk of complications?
A Right.
Q And with the --
A And with the LAD, I would have told him that here are the -- this is the presumed success rate, knowing his lesions now in each of those vessels, here are the risks of complications with each of those, with

angioplasty, and then give him the usual statistics for coronary bypass grafting.

Q All right, Mow, did you come to the point either in your mind or to the point of documenting a grading of his lesions?

A I'm not real clear on what you mean by that.

Q Okay. Are you familiar with grading of lesions as A, B, C or D, of the type of lesion, severity of the lesion?

A For directional atherectomy -- or for coronary intervention.

Q Coronary intervention.

A I don't recall explaining that to him.

Q Okay. But did you come in your mind as to what grade his lesions likely were in?

A I probably automatically do that in my own mind.

Q Okay.

A When I -- when I think about the case and try to present as objectively as possible what my success rate with that intervention would be to the patient.

Q Okay. And what grades would you call his lesions?

A I would probably say the lesions in the right coronary artery -- the total occlusion is certainly a grade C lesion, and I'm using the A, B, C classification.

Q Uh-huh.

A The lesions in the mid and distal right coronary arteries are either B-1 or B-2. Circumflex artery lesion was certainly a B or a C lesion. Intermediate branch was probably an A lesion and the LAD stenoses were A or B.

Q Okay. And as you get lower in the alphabet towards the C, the greater the severity of the lesion and the less likely chance of success?

MR. MILINE: Objection.

A More -- well, statistically that is true. The way an angiographer interprets that is kind of the complexity of the lesion.

Q Okay. I appreciate you laying out the options, but my experience with interventionalists is they usually make a recommendation one way or the other. Did you specifically make a recommendation after

you'd laid out the options?
A I'm not your typical interventionafist and I always explain to patients and I try to let them make the decision all the time.
Q So the answer to my question is that you did not make a specific recommendation?
A Unless the patient said what would you do to your brother or to yourself, if this was you on the table, then I may have done that.
Q Okay. You don't know if you did that or not?
A I don't recall that.
Q Okay. Now, you made the decision to do a multi-staged intervention over two days?
A Yes, sir.
Q Okay. And what was the reason for that?
A Well, it's very common that if you have multi-vessel cases., that they're done in a stage fashion. I don't recall the exact reason at the time that it was going through my mind.
Q Okay. And what was the basis for your decision to do the RCA and the circumflex

vessels first?
A The right coronary artery had a totally occluded distal vessel. So I felt that if we can open the distal occlusion first, that it may be helpful in supplying collateral to the left side if I got into trouble during that part of the procedure.
Q All right. What are the indications for doing an atherectomy versus a -- merely a balloon angioplasty?
A Rotational atherectomy I presume you're talking about; is that correct?
Q Right.
A Rotational atherectomy is useful in long lesions, patients that have diffuse disease through the coronary anteriors. It's also useful in vessels that have calcified lesions. On the other hand, it's also very good for what we would term soft plaque, and at that -- and that time of interventional cardiology it was felt like that was a very reasonable option for the LAD and the right coronary artery.
Q Has that viewpoint changed?
A I think that, you know, there's a lot

of different opinions about rotational atherectomy and interventional cardiology. I think that it's very, very useful for calcific plaque. We know that it is very good for soft plaque also, but it can sometimes lead to higher re-stenosis rates.

Q Did he have soft plaque or hard plaque?

A You don't absolutely know until you get in there. I would --

Q Can you tell by sensation, or you tell by what you see?

A Well, there's two -- two things. Number one is you can often see calcification on the cine angiograms. I didn't see much of that. Often though when you're putting a balloon into a coronary artery and it won't dilate easily, then you know that the plaque is much harder. As you know, the right coronary artery had rotational atherectomy done first, so I can't tell you that answer.

Q Had Mr. Mauller's left anterior descending not closed down on the 28th of May, do you have an opinion whether or not he would have arrested?

MR. MILINE: Objection,

A He had two arteries that closed down. Actually three. He had the LAD, the right coronary artery and distal circumflex artery, so that's truly speculation on my part, if he would have arrested based on one artery.

8 Do you have an opinion whether Mr. Mauller sustained any type of brain injury during his resuscitation in the cath lab on the 28th of May?

MR. MILINE: Objection.

A I -- I'm not sure of that answer.

Q You don't have an opinion one way or another?

A Well, I have an opinion you can't be certain during the procedure.

Q Do you have an opinion more likely than not as to whether he sustained any brain damage during his time in the cath lab on May 28th, 1994?

A I have an opinion.

8 What is that?

A And I am not certain.

8 Do you have an opinion as to whether he

likely sustained brain damage?
A Well, the reason I can't be certain about that question is because I wasn't there to talk to the patient or, you know, he could have been neurologically fine up until the time of coronary intervention. He could have awakened during the intervention. I don't know the events that happened during the case.
Q Okay, You don't have an opinion; is that correct?
A I think there's a lot -- there's a lot of possibilities that could have happened in there. I'm not sure I understand the question real well.
Q Would you defer to Dr. George as to whether or not Mr. Mauller sustained brain injury, brain damage during that -- his time in the cath lab on May 28th, 1994?
MR. MILINE: Objection.
A Yes.
Q Now, what does the term asystole mean?
A That means the absence of a pulse.
Q Okay.
A No -- no electrical activity.

Q Okay. And someone who undergoes intervention like Bale Mauller, he is monitored to pick up any evidence of asystole?
A During the procedure?
Q No. Post-intervention. I suppose during the procedure as well.
A Sure.
Q And between procedures he's monitored for that as well; correct?
A That's correct,
Q Now, is a sinus node the primary pacemaker of the heart?
A It is the primary pacemaker.
Q If a patient develops an episode of asystole after intervention of the right coronary artery, wouldn't you agree that it is highly suspicious for a problem in the right coronary artery?
MR. MILINE: Objection.
A Not necessarily.
Q Okay. Are you aware that there is evidence of asystole between your first and second interventions?
A There may have been -- I am not

absolutely aware. I'd have to check the record for that.

Q If nurses had brought to your attention evidence of asystole between the first and second intervention, is it likely that you would have re-shot the right coronary artery during the second intervention to see how it looked?

A That's not necessarily true. What I'd like to know is how long the asystole was and did the temporary pacemaker have to kick in. There was a temporary pacemaker in there the whole time.

Q After the first intervention?

A Between the first and the second intervention.

Q Okay.

A The temporary pacemaker is clearly seen.

(Plaintiff's Exhibit 3 marked for identification purposes,)

Q I'm going to hand you what's marked as Plaintiff's Exhibit 3, which is evidence of the chart which I suspect is asystole. Would you tell us whether or not that

reflects asystole?

MR. BILLON: What are we looking at first, please?

MR. BECKER: It's part of your hospital chart, I can't tell you what page.

MR. DILLON: Well, it's a big chart, so.

MR. BECKER: It's nursing -- it's dated 5-26 1994.

A It looks like one episode of asystole during --

Q Yeah. How long?

A I'd have to get calipers. I'll trust your judgment that it's about six seconds.

Q Okay. Is that significant for someone that's just undergone intervention?

A There are many things that I would consider in here, and it said very clearly here that he was straining to urinate. That's a well-known cause of delayed sinus function.

Q Okay.

A There's a very good explanation for this.

A It sure can happen.

a Okay. Is it likely?

A I don't know what the likelihood is.

Q Okay.

A You'd have --

Q Okay. The fact that asystole occurred after your first intervention, would you have wanted to know that? Would you have wanted the nurses at Riverside Memorial Hospital to bring that to your attention?

A Well, there's a very high likelihood that I probably saw that. I mean I --

Q Okay. Listen to my question.

A Yes.

Q I didn't ask you if you saw it or you didn't saw it. Would you have expected the nurses to bring this evidence of asystole to your attention?
A Yes.
Q Okay. And would you have expected them to immediately bring it to your attention, shortly within minutes after it occurred?
A No.
Q When would you have expected them to bring it to your attention?
A It depends on what time of day that it happened. I don't believe that it is an emergency, so I don't believe that they need to call me immediately or run over and find me in the cath lab.
Q Okay.
A Because straining to urinate and having temporary asystole is not unusual.
Q Okay. Would you have -- would you have wanted to rule out any closure of vessels if --
A Based on this finding alone?
Q Right.
A I don't feel that you need to re-squirt

be brought to my attention.
Q Okay. And if it's brought to your attention, what action likely would you take?
A None.
Q Okay. All right. He comes in with a normal hematocrit of what? Is -- I'm going to represent to you that pre-intervention he had a hematocrit of 15.8.
A Okay.
(Plaintiff's Exhibits 4-A, 4-B and 4-C marked for identification purposes.)
Q And I'm going to hand you what's been

marked as Plaintiff's Exhibit -- that"~all right. What number are we up to? 4? 4-A.

MR. BECKER: And counsel, we can agree to leave all exhibits with the court reporter, she can attach them to the depositions?

MR. DILLON: Yeah, that's fine.

a 4-B, 4-C, and I'm going to represent to you that these are the lab printouts from Riverside Memorial Hospital on Mr. Mauller. I want you to take a look at the hematocrits, the levels of them and the timing of the --

MR. MILINE: May I take a look at those? Thank you.

d And before I ask you some specific questions off of that, we can agree that the hemoglobin is the oxygen carrying component of the blood?

A Correct.

Q And as a person's hemoglobin count goes down, the oxygen carrying capability of the blood also goes down?

MR. MILINE: Objection.

Q Correct?
A That's correct.
Q Would you agree that oxygen supply to the heart muscle is dependent upon oxygen carrying capacity of the blood?
A It's -- it depends on many things. Would you please say that again? I'm sorry.
Q The oxygen supply to the heart muscle --
A Okay.
Q -- is dependent upon the oxygen carrying capacity of the blood?
A Not only that. That's one of the components.
Q Okay. What other components are there?
A Cardiac output.
Q Okay. Would you agree that heart muscle that is deprived of adequate oxygen is more likely to generate a ventricular arrhythmia than heart muscle that receives adequate oxygen supply?
MR. MILINE: Objection.
A Again, generation of -- that's quite not specific enough. If you can make the question more specific, I'd be happy to

answer that.

Q Well, as oxygen delivery is reduced, such increases the risk of an arrhythmia in the heart?

A Assuming -- I think if you have two hearts that are comparable ejection fractions and one has less oxygen delivered to it, significantly less, that statement may be correct.

Q Okay. Would you agree that a patient with ischemic heart disease who has a drop of 7 points in hemoglobin within a matter of approximately 30 or 36 hours, that would place the patient at increase risk for a ventricular arrhythmia?

MR. MILINE: Objection.

A It may.

Q Okay.

A That of course doesn't apply here because 7 grams of hemoglobin didn't fall within 36 hours it appears, and much of the decrease in the initial hemoglobin may be due to delusion, et cetera, because I'm sure the patient came in without food or drink at the time.

Q Doctor, excuse me, I didn't mean to cut you off. Are you done?
A 36 hours certainly is the time.
Q Take a look at those hemoglobin numbers and tell me if there's anything that would be concerning to you as an attending interventionalist.
A Sure. There is a drop in the hemoglobin.
Q Okay. And was that brought to your attention as the attending interventionalist?
A I don't recall.
Q Okay. Would you consider that drop in hemoglobin given the time frame within which that drop occurred to be alarming?
A Yes.
Q What action, if any, did you take as a result of that drop in hemoglobin?
A I don't recall.
Q If you took any action as a result of drop in hemoglobin, minimally that should be documented; correct?
A Not necessarily. There are many things that go through my mind that I don't

actually document on the chart. I apologize for that. I may be considering a retroperitoneal bleed, I may be observing a groin hematoma site, There may be other reasons for this. Maybe I know that there was a tremendous amount of blood loss during the procedure. There are many things that go through my mind. I don't document them all on the chart.

Q If there was a tremendous amount of blood loss during the initial procedure, you wouldn't see a gradual drop in hemoglobin, you would see a sudden drop; correct?

A That's not true. It takes awhile for the blood to equilibrate.

Q Is there any evidence in this chart that there was a tremendous amount of blood lost in the procedure?

A I didn't --

Q In the chart3

A I don't know for sure.

Q Do you want to take a look at the chart? Again, Doctor, you're more than free to look at the chart before responding to my questions.

considering that he had had a rotational atherectomy, multiple catheters exchanged at

the time of the heart catheterization, burs were passed in and out of the guide catheter and balloons were passed out -- passed through there. On the 28th of May I did not see the patient. So do I find that there is tremendous alarm between 13.3 hemoglobin on the first day that. I took care of him and a 11.6 on the second day? The answer to your question is that is not tremendously alarming to me.

Q Okay.

A And I don't feel that that required documentation by me.

Q All right. Don't you want to know what he was pre-procedure to make a full and fair assessment of whether that drop is significant?

A Well, you know, the --

Q Is that -- listen to my question.

A I'm listening to you.

Q Okay.

A You have --

MR. BECKER: Answer, would you, Miss Reporter, would you read that question back? Just listen to the question.

MR. MILINE: I'd appreciate you not being argumentative and giving him the opportunity to respond, Mr. Becker.

(Question read.)

A Yes.

Q Thank you.

Now, I want you to assume it's true that pre-intervention his hemoglobin was 15.8. Okay. Assuming that to be true, Doctor, is your answer the same relative to the drop after the first procedure?

A Can I ask you a question where that 15.8 came from?

Q Sure. It's a -- it's part of the chart. I do not have a page though. I'd be happy to show you the page, but I don't have a page number.

A Why wasn't it part of the Riverside documents that I would have typical access to? Did that come from an outside source, not the same time?

Q Well, let me just read it to you for the record and I'll happy to show it to you.

A All right.

Q It says, "Cardiovascular Lab, Cardiac

Catheterization Flow Sheet." I'll show it to defense counsel as to what it looks like.

MR. DILLON: What's the date on it? Okay.

Q Let's mark this. We're up to 5.

(Plaintiff's Exhibit 5 marked for identification purposes.)

Q Doctor, I'm going to hand you what's marked as Exhibit 5.

A Okay.

Q Which I represent to you is part of Dale Mauller's, chart and in the upper section of that it reflects a hematocrit -- I'm sorry, a hemoglobin of 15.8; is that -- is that accurate?

MR. MILINE: Objection.

Q Is that accurate that that documents reflects that?

A That's correct.

Q Okay. And do you have some reason to believe that that pre-intervention hemoglobin is inaccurate? Do you have any reason to --

A No.

Q -- question that?

A No, but I also don't know exactly when that -- where that information was derived from because it's not part of the laboratory work at Riverside during the time I was working on him.

Q Okay. Well, do we -- based on your familiarity with the chart, is there any evidence as to what his pre-hemoglobin was prior to your first intervention?

A That is -- his hemoglobin was probably 15.8 at sometime prior to my intervention. It could have been a day, two days, who knows.

Q I'm gathering that -- are you suggesting that maybe his hemoglobin wasn't 15.8, that it dropped prior to the procedure?

A No. What I'm saying is I don't know exactly what time this was done.

Q Okay. But what's the significance of what time it was done, whether it was done in the morning before the intervention, or the evening before his intervention? What's the significance of that towards your ultimate assessment as to whether this drop

in hemoglobin was concerning and alarming?
A This is the first --
MR. MILINE: Objection.
A -- hemoglobin that I have a record of, so I don't really know where that came from.
Q Yeah, I mean, wouldn't you want to know what his hemoglobin was before you proceeded with intervention of this patient?
A I may have known what his hemoglobin was. I usually know what the hemoglobin is before I proceed with --
Q Okay.
A -- intervention of the patient.
Q It's your duty and responsibility to know that?
A Exactly.
Q I want you to assume it's true that his hemoglobin was 15.8.
A Okay.
Q Okay? Prior to your intervention.
A Yes.
Q And it dropped to 15.3.
A Okay.
Q Would you consider that an anticipated normal drop, or would you consider that

something outside the realm of anticipated normal drop?

MR. MILINE: Objection.

A Now, assuming that the 14:42 on the 26th was after the coronary intervention.

Q We gotta help the record. What are you referring to as 14:42. The CBC?

A The time. The time that it was drawn.

Q Excuse me one second. I'm not sure that's --

MR. DILLON: Is that the 13.8?

A Yeah. 13.3 I think.

a I'm sorry, Doctor. You are correct, and I don't know what this CBC over here means.

A I think they just have them offset.

Q Okay. You are correct. So that is 2:42?

A Okay. Now I would -- going from 15.8, assuming that this is his hemoglobin before the procedure.

Q Right.

A Probably in a dehydrated state, consider the amount of fluids that we give

him, this is not an alarming drop --
Q Well, waft a minute.
A -- after -- after the procedure.
Q What's this -- what did you say about dehydration?
A Yes. Patients are asked not to eat or drink before they come into the cath lab.
Q Okay, So --
A He was an outpatient. I would have expected him not to have eaten or drink anything from the previous night.
Q so --
A So your hemoglobin would automatically go up.
a Well, if he was in a dehydrated state, would you expect that to be reflected on his chemistry?
A Do I expect that to be consistent?
a Yeah.
A No. He's well hydrated by this point.
a Okay.
A So there's delusional affects of his hemoglobin --
Q Okay.
A -- that occurred during the procedure.

That was not a short procedure.
Q Okay. What is your belief that he -- is it your claim here that he was dehydrated at the time that this first hemoglobin was taken; is that accurate?
MR. MILINE: Objection, Argumentative.
A My claim is that most patients that come in as outpatient to the catheterization lab as Mr. Mauller did, are dehydrated because they're not allowed to eat or drink.
Q For how long?
A Usually before midnight of the day of the procedure.
Q And what time was his procedure?
A The day preceding the procedure.
Q What time was his procedure?
A Well, the second hemoglobin was done at least 14 hours after midnight, so there's a least probably 14 hours difference.
Q Well, let's stick with the first hemoglobin. This is the one -- you're implying, sir, that this was inaccurate due to some state of dehydration.
MR. MILINE: Objection to

characterization.
A No, I'm saying it's accurate. I'm saying it's the state of the patient.
Q Okay.
A I didn't say that it was an inaccurate blood draw.
Q If it was drawn before he got into the hospital, is it likely that that would be his true reading and normal hemoglobin?
MR. MILINE: Objection.
A Again, it depends on if -- you know, often times when patients go to the physician to get blood drawn they are asked to fasting --
Q Okay.
A -- for a variety of reasons. So he could have been fasting.
Q Okay. I'm with you.
A Got it.
Q Let's move along.
A Good.
Q All right? I want you to assume it's true that this is an accurate hemoglobin, that it is accurate and not reflective of a dehydration state for the purposes of the

balance of my questions. Just assume that --

A That's a big assumption.

MR. DILLON: You're talking 15.8?

MR. BECKER: Yes, sir.

MR. MILINE: Can I have a continuing objection?

MR. BECKER: Absolutely.

MR. MILINE: Thank you.

Q Are you with me? Do you understand what I want you to do?

A Yeah. I think that's a huge assumption though.

Q Well --

A All right.

Q We talked about why you think it's a huge assumption.

A Okay.

Q Is there any other reason why you feel it's a huge assumption other than what you've already talked about?

A Well, because I don't have documentation of this, so this came from somewhere else.

Q Okay. I want to make sure I explore each and every bases for your conclusion that this is a huge assumption.
A Okay.
Q Have I left anything out?
A I don't believe so.
Q All right.
A Maybe something will come to mind.
Q If it does, let me know, or let your counsel know.
A I'm sure I will.
Q Okay. Now, let's assume that that 15.8 is an accurate hemoglobin and not reflected -- not reflective of a true dehydration state.
A Uh-huh.
Q Now, if you go from 15.8 to 13.3 after the first procedure, is that within the normal expected range or outside of the normal expected range?
A I think that that's -- that can be construed as being a very reasonable drop.
Q Okay. Same question on the next drawing, which is at 1:58?
A 13 -- okay. P.m.

Q Okay. Now we have a drop from 13.3 to 11.6.
A Uh-huh.
Q You still think that's within a normal range?
A Considering the procedures that he had done, the length of the procedures, the type of the procedures, the amount of fluid that he had gotten for both procedures, I think that that is still not truly alarming.
Q Does it become alarming, sir, on the 28th?
A It starts to become concerning.
Q And because it continues to drop from the 27th to the 28th, does that reflect whether or not this continued drop was due to normal expected blood loss, or likely due to some other source of blood loss?
MR. MILINE: Objection.
A It can be due to multiple reasons. I think part of it is normal expected blood loss. The rotational atherectomy procedures are not real clean procedures, so there's more blood loss at that than plain angioplasty. There's delusional effects

that occur from giving patients fluid, and so although this is a significant blood drop, it has to be interpreted in light of the whole patient's scenario.

Q Okay. Now, have you ever had a patient develop a retroperitoneal bleed?

A Yes.

Q Okay. How often has that happened to you, sir?

A I'd probably say, you know, I don't know the usual statistics. Often I explain to patients, any time I'm putting them on Heparin, the risks of bleeding from the Heparin are anywhere from 1 to 3 percent. And retroperitoneal hemorrhage, which is the concerning type of bleeding, can be as high as one-half to one percent I would suspect. I don't know the exact instance.

Q It's a known complication --

A Yes.

Q -- from the procedure he had undergone?

A No doubt about it.

Q No question about that?

A No doubt.

Q Did you tell him about that?

A I may have. I take a lot of time to explain to patients all the complications of the procedure.

Q Okay. What are the signs and symptoms of a retroperitoneal bleed?

A Hypotension.

Q Hypotension?

A Yes.

Q Anything else?

A It can be back pain.

Q Back pain?

A But not always. Many times retroperitoneal hemorrhaging can be silent.

Q Okay.

A There can be leg pain.

Q How about abdominal pain? Can there be abdominal pain?

A Usually when it's abdominal pain we don't think as much of retroperitoneal bleeding. We may think of rectasheath hematomas.

Q Abdominal pain is consistent with a hematoma, it's just not consistent with a retroperitoneal hematoma?

A It can be if there's radiation, but

it's not --
Q Okay.
A It's certainly not the first sign that we look for.
Q Any other signs and symptoms?
A Oh, those are the major signs and symptoms.
Q Okay. And of course by definition a falling H and H?
A Yes. Yes.
Q Okay.
A But that's not a sign or --
Q That's a sign I guess?
A Well, a laboratory eval. You're right.
Q Okay. Now, when you have a retroperitoneal bleed, when you suspect it, there -- we got into this discussion earlier on, there's things you can do to rule it out or you just assume it's there and you treat it; right?
MR. MILINE: Objection.
A It depends on the clinical -- you remember you're treating a patient --
Q Absolutely.
A -- and not just a laboratory value.

Q Right. And some of the ways to diagnose a retroperitoneal bleed would be what?
A CT scan of the abdomen.
Q Okay. Anything else? Would that be your first line of approach?
A Yes.
Q Okay. Did you order one of those for Mr. Mauller?
A No. Again, I -- when I saw this patient, his hemoglobin was in a relatively acceptable range.
Q But if you take these numbers, Doctor, and you add on complaints of back and abdominal pain, doesn't that send out big red flags to you as an attending interventionalist?
MR. MILINE: Objection. Argumentative.
A About what?
Q That there's something going on with this patient.
A Well, I'm concerned about all complaints the patient has.
Q Okay.

A With a hemoglobin of 11.6 over, you know, 24 hours or more after the two procedures that have significant amount of blood loss and a patient's been down for a couple of days, it's easy to understand he has back pain. Mot all back pain is retroperitoneal hematoma.
Q I'm sorry. Why is it easy to figure that he's going to have back pain?
A Patient's lying flat on their back for many hours --
Q Okay.
A -- after the procedure.
Q And it's your experience that patients usually -- they're rolling in their bed from back pain just because of the procedure?
A There's some patients that are rolling on the cath lab table after being only on there for half an hour. It's a very uncomfortable bed.
Q Can we agree, Doctor, that if you take a drop in H and H like we have here, and you add some symptoms Pike back pain, abdominal pain, that takes -- that takes that -- your index of suspicion for any kind of a bleed

much higher?
A I always have that index of suspicion.
Q But doesn't it raise it much higher?
MR. MILINE: Objection.
A I don't know how much higher you're referring to.
Q Well --
A Are you -- do you want to tell me how much higher?
Q Is it high enough to the point where you want to undertake some diagnostic tests?
A Such as?
Q Ultrasound, CT scan.
A I don't do ultrasounds for retroperitoneal hematomas.
Q Okay. How about CT scans?
A Given this clinical scenario I would not have ordered a CT scan of his abdomen to rule out retroperitoneal bleed.
Q You stated that in light of his complaints of back and abdominal pain?
A In light of the fact that -- back pain and abdominal pain are very common after procedures, and his hemoglobin drop was not so alarming that I would have suspected

retroperitoneal hematoma at the time that I had seen him.

Q Okay. Do you routinely order pain medication for your patients for back pain?

A Often. Yes,

Q Okay. What medication do you generally order?

A The most common drug that's used at Riverside is Dilaudid.

Q Okay. And what's the source of the back pain if they don't have a bleed going on, why would they have --

A It's usually muscular pain.

Q If a patient had a drop in H and H like we see here on Exhibit 4-A, and I guess 4-B and 4-C, would you expect the nurses at Riverside Hospital to bring these drops in these laboratory values to your attention or --

A The nurses bring the hemoglobin to my attention virtually every time that it goes --

Q The answer to my question would be yes?

A Yes, because that's routine.

Q So you would expect them to bring those

drops to your attention; correct?
A Yes.
Q Now, if a patient on top of these drops in hemoglobin also had complaints of severe abdominal or back pain, you would expect the nurses at Riverside Memorial Hospital to bring those to your attention; correct?
A Sever abdominal pain? Is that the way you characterized it?
Q Yes.
A Yes.
Q Okay. And if the nurses at Riverside Memorial Hospital failed to bring to your attention severe abdominal and/or severe back pain in light of these H and H numbers that we just talked about, that would be substandard care by the Riverside Memorial Hospital nurses; correct?
MR. DILLON: Objection.
A You know, you're using a term severe, and I don't know -- that is a word that's subject to interpretation. If it is -- if it is severe abdominal pain, severe back pain that's out of the ordinary for patients that have rotational atherectomy, balloon

angioplasty, they bring it to my attention.
Q That's their duty to bring it to your attention?
A That's correct,
Q And if they don't, that would be substandard care on their part?
A That is correct.
Q Okay. Now -- okay. All right. Okay.
Now, when you think you have a retroperitoneal bleed and you want to -- you want to treat it, one of the first things you want to do is remove the sheaths?
MR. MILINE: Objection.
Q What would be one of the first things you want to do?
A I would think you want to get rid of the Heparin.
Q Okay. Stop the Heparin?
A Yeah.
Q Anything else?
A It's usually Heparin induced bleeding in the retroperitoneum. The treatment is --
Q Stop the Heparin?
A Stopping the Heparin and fluid support.
Q Was there any contradiction to stopping

the Heparin after the first procedure?
A Not -- contraindication?
Q Yes.
A What do you mean by that?
Q Was there any danger to him by stopping the Heparin?
A Sure.
Q After the first procedure?
A Sure.
Q What was the danger?
A He may have abrupt vessel closure.
Q Okay. Weighing the risks and benefits when you suspect a retroperitoneal bleed, which option do you choose?
MR. MILINE: Objection.
A Well, you know, considering, between the first and second procedure I wasn't alarmed at the hemoglobin drop, so there is absolutely no reason to stop the Heparin.
Q Okay.
A Stopping the Heparin was not what I would have done in that circumstance.
Q Okay.
A And I didn't do it.
Q I think my question -- I forgot what my

Q Right.
A The number one thing to do is to stop the Heparin.
Q Right.
A And then probably since there is nothing to keep the sheaths from clotting off, you would have to pull the sheath.
Q Okay.
A But it's not because of a retroperitoneal bleed.
Q Okay. What criteria do you use to determine if blood products should be given to a patient who has fallen hemoglobin and hematocrit following cardiac catheterization?
A One --
MR. MILINE: Objection.
A One of the criteria is the absolute blood count.
Q Any others?
A Well, I think that you have to take into account patients normal hemoglobin, underlying medical conditions, condition of the left ventricle and the performance of the left ventricle, ability to tolerate

fluids, coronary disease status. I think I hit the highlights.

MIS. BECKER: Okay. We're going to have to take a short break and let one of the lawyers out of here.

(Discussion had off the record.)

(Ms. Taylor exits proceedings.)

BY MR. BECKER:

Q Doctor, you indicated that you wanted to know what the absolute blood count would be before you would administer blood products, also look at the patient's clinical state as well; correct?

A That's correct.

Q At what number would you have administered, what number of hemoglobin would you have administered blood products to a patient who has a drop as demonstrated in Mr. Mauller who has complaints of severe back pain?

MR. MILINE: Objection.

Q Who has multiple complaints of severe back pain.

MR. MILINE: Objection.

A I don't -- I don't think that the back

pain would enter in the issue of whether I would transfuse blood products.

Q Fine. At what number hemoglobin would you have transfused?

A You know, it's all conjecture, not seeing the patient at the time of the significant blood drop, but you know, patients with coronary disease, especially if it's not fixed, hemoglobins of around 8 or lower are certainly a consideration to receive blood.

Q I want you to assume it's true that Dale's hemoglobin was 15.8 and had a hematocrit of 46.1 prior to procedure, within a day prior to your procedure. Would you agree that would be a normal range for a 39 year old male?

A I think that's at the upper limits of normal.

Q Would you agree that based on this chart that's been marked 4-A, B and C, that he, he being Dale, had a progressive fall in hemoglobin and hematocrit while under your care and Dr. George?

A That's correct.

Q And would you agree, Doctor, that 5-28, that's on May 28, 1994, at 10:36 p.m., he had lost over half of his blood cells?

MR. MILINE: Objection.

MR. DILLON: I'm sorry. Would you read that again, Mike?

Q On May 28th, 1994, by 10:36 p.m., he had lost over half of his blood cells?

A Where do you find that? Where is that on here?

Q I want you to assume -- to move things along, I want you to assume it's true that his hemoglobin was 6.8 and his hematocrit was 19.3. Assuming those to be true and reflective of his status by roughly 10:00 p.m. on May 28th, would you agree that he lost over -- Dale had lost over half his blood cells?

MR. MILINE: Objection.

A Assuming that those laboratory numbers are true, I would agree, except I don't see those laboratory --

Q May be on another page, Doctor.

A Okay. Because there's nothing to suggest here, at least the chart in front of

me that -- oh, here we go. 22:36. If those are collected in the same fashion, I would say that that's a possibility that he may have lost half of his blood volume.

Q And that's clearly a life threatening circumstance; correct?

A It may be. You know, life threatening is dependent upon the patient's clinical condition.

a What, Doctor, as you sit here now and have refreshed your memory as to the drop of Dale's H and H and have been reminded about his complaints of severe back pain, do you feel is the likely reason for the drop in H and H over the approximate three day, three and a half day period?

A Well, certainly 5-26 it's easily -- easy to account that drop in delusional effects as well as blood loss at the time of the procedure. On 5-27 I think the same holds to be true. Now, on 5-28 the decrease to 9.1 is probably -- it could be more than just the delusional effects or the blood loss at the time of the procedure. Maybe he's had multiple blood draws, maybe he's

had groin hematomas that contributed to that. Maybe he's had a retroperitoneal bleed. All things would be considered at that point in time. Maybe he's having bleeding from his stool or upper G.I. bleeding. It's hard to tell.

Q Would you agree that giving Heparin after coronary intervention does not reduce the chance of vessel closure?

A There have been articles that have been published suggesting that you don't always have to give Heparin, but as, you know, every case isn't the same, and I think when you -- there is tremendous amount of interpretive variability on the result of the angioplasty and sometimes we feel that Heparin is necessary and for a long time Heparin was standard to be given after all coronary interventions for up to 24 hours after the procedure or longer.

Q Would you agree, Doctor, that untreated anemia, sudden untreated anemia from blood loss increases the risk of closure of vessels after coronary angioplasty?

MR. MILINE: Objection.

A If the sudden drop in hemoglobin can contribute to thrombus formation or hypotension, it's enough to close the artery, then I think I would agree with that statement.

Q Have you heard of the term "Shear force"?

A Sure.

Q What does it mean?

A I think it's probably a physics term.

Q Relative to your specialty, how is it utilized, if you know?

A I don't know.

Q Can we agree, Doctor, that a significant drop in H and H that occurs over a short period of time will cause the heart to beat more forcefully when it contracts?

MR. MILINE: Objection.

A It may.

Q Would you agree, Doctor, that a significant drop in H and H that occurs over a short period of time can actually increase the shear force that is exerted against the interior components of the coronary arteries?

MR. MILINE: Objection.

A I don't know that for sure.

Q Bo you have an opinion on that one way or the other?

A I'm not -- I'm not sure. I have no opinion.

Q And can we agree, Doctor, that if a dissection is occurring or is present in a coronary artery, an increase in shear force increases the risk for closure of that artery?

MR. MILINE: Objection.

A Would you please repeat that. I'm sorry.

Q Would you agree that if we have a dissection occurring or present in an artery and we have concurrently an increase in shear force, would that increase the risk for closure of that artery?

MR. MILINE: Objection.

A I certainly can't answer that question because I'm not sure what you mean by shear force.

MR. BECKER: Off the record a minute.

(Discussion had off the record.)
BY MR. BECKER:
Q For purposes of the balance of this deposition, when I utilize the word shear force, I'm assuming -- I'm meaning that it is internal pressure exerted on the internal wall of the artery.
A By?
Q By blood flow.
A So blood flow is exerting the pressure on the artery?
Q Right. Okay? Have you heard of that concept before?
A No, I guess I can't -- I can't say that I absolutely understand that concept of shear force. You're not using shear as a descriptive; right? You're not saying it's the shear force of the --
Q Correct. S-H-E-A-R.
A I obviously don't understand that term very well.
Q Okay. Now, Doctor, does an acute systemic infection increase the risk for vessel closure after coronary angioplasty?
A Only if it would make you acutely

hypotensive.
Q Was there any sign of infection in Dale Mauller between -- on the 27th of May and the 28th of May?
A The signs of infection would be noted by significantly increased white cell counts, significantly increased temperatures. I don't know for sure what his temperature was.
Q Okay. I want you to assume that his temperature was 101 degrees at 11:30 p.m. on May 27th and his WBC was 15.8 at 1:36 a.m.
A That's on a different day; correct?
Q On the next day. The 28th. Correct.
A Do you know what his temperature was? I mean, we typically, again, treat patients, not one single number, and I'd like to know what the trend of his -- his --
Q WBC is more important than temp?
A No. I'd like to take all of that into consideration. You know, what does the patient look like clinically. There's many reasons why you could have stress demargination of white cell counts and they can go up. I'd like to know if his

temperature was a steady climb, was it just one spike in temperature. What exactly was the whole clinical picture rather than just one isolated event.

a Would you agree, Doctor, that if sheaths are in for longer than 24 hours, any potential. sign of infection, including elevated WBC and temperature, warrant the discontinuation of the sheaths or the removal of the sheaths and administering antibiotics?

MR. MILINE: Objection.

A Again, you have to look at the whole patient. Sometimes it's not reasonable to remove the sheaths. You don't treat one number or one laboratory eval. You have to treat the patient.

Q Do you recall whether or not the nurses at Riverside Memorial Hospital brought to your attention the temperature of 101 and his -- on the late evening of the 27th and his WBC of 15.8 on the early morning of the 28th?

A I don't recall.

a Okay. Would you have expected them to

do that?
A Well, it depends if I was the physician on call that night, As I recall the 27th was a weekend and there's a chance they may have called ft to another physician.
Q Okay. Would you have expected them to call that into the physician on call, that data?
A I think if it was a new significant finding, yes.
Q What evidence would you likely have taken or expect a prudent interventionalist to take in someone like Dale post two interventions and with a sheath in for longer than 24 hours, with those potential signs of infection?
MR. MILINE: Objection.
A Well, there is -- you know, I'm truly speculating on the patient's clinical condition. I would like to know if they're showing blood pressure changes, heart rate changes consistent with an infection, if it was truly just one isolated temperature change. I think consideration of antibiotics is reasonable. I think

consideration taking out the sheaths if the angioplasty result is adequate in stopping the anticoagulation is an option. Those are all options. It's up to the physician to take in all that information and choose.

Q Who was on call? Excuse me.

A But I -- typically our group has one physician on call.

Q Okay.

A Every night.

Q Do you have an opinion whether Dale Mauller's cardiac arrest was preventable?

MR. MILINE: Objection.

A Can you be more clear by what you mean by preventable?

Q Well --

A Preventable by what?

Q Well, for example, administering blood products to this patient when there is -- when we began a -- to see a pattern of drop in H and H. That's just one example.

A I think to answer your question then I would have to presume that the fall in hemoglobin was what precipitated his arterial closure, and it's not all -- that

doesn't always happen that you can prevent a cardiac or a vessel from closing purely by administering blood products.

Q I appreciate that, Doctor, but if you look at the whole big picture here, what is the likelihood of three arteries you work on all at the same time closing down absent some external force having an effect upon those arteries?

A I don't know for sure what the likelihood is. It would be low.

Q If someone suggested that it would be one in 10,000 odds of that occurring, would you disagree with it?

A It's pure speculation. There's many reasons that may happen.

Q Well, I understand that there's a risk of closure of one percent in each artery after a closing down?

A And sometimes it's higher depending on how many vessels or how many lesions there are in the artery, the length of the lesion, et cetera. One percent is a standard number for any given artery.

Q Do you have any criticism of any of the

medical providers that rendered care to Dale Mauller, including nurses and fellow physicians?
A I do not.
Q Do you recall what you said to the family member after Dale's arrest?
A I don't recall.
Q Do you recall any conversations that you had with Dale and/or his wife subsequent to his arrest?
A None.
Q In specifics or in generalities.
A I don't recall specifically what 1 said to them.
Q Do you recall any generalities?
MR. MILINE: At what point in time?
Q Either while Dale was still alive or post-arrest.
MR. MILINE: Objection,
A I do know that there was some -- that between the first and second night there was some concerns about his cooperativity, and I think we may have addressed that. I'm not absolutely sure. I can't tell you

specifically what was addressed.
Q Do you generate an entry or a note, a progress note every time you see a patient?
A Not every time.
Q Okay.
A I do that at least once a day when I see patients.
Q Okay. Do you have any reason to believe that you have more contact with Dale Mauller than -- physical contact with Dale Mauller other than what's reflected in the chart?
A That would not be unusual since I see patients in the IRU since it's very close to the cath lab often several times a day.
Q Are you aware that he sustained a cardiac arrest and there was 17 minutes of CPR while in the cath lab on the 28th?
A I am aware of that.
Q Okay. And do you agree, do you recognize that that event and the 17 minutes of CPR of and by itself creates a risk of brain injury secondary to hypoxic deprivation?
MR. MILINE: Objection.

A It's a possibility.
Q Now, he -- Dale suffered a V fib in the cath lab when Dr. George was present?
A You know, I don't know exactly all the events that occurred in the cath lab.
Q Okay. Do you agree that, assuming he did suffer a V fib, that the likely reason he went into V fib is all his arteries had closed down?
MR. MILINE: Objection.
A Well, not all the arteries closed down. There were several arteries that closed down.
Q The three main arteries that closed down?
A Well, actually the intermediate artery in the back did not close down. That's much bigger than the other main branch of the circumflex artery.
Q Was he amenable to a CABG based on his disease process and his arteries?
MR. MILINE: Objection.
A Do you mean -- do I mean that -- please --
Q Let me help you.

A Yeah.
Q Let me restate it.
A Okay.
Q After looking at the cath films --
A Yes.
Q -- for the first time, then you went back and made some recommendations to him.
A Yeah.
Q Did you give him an option for a CABG?
A As I usually do, yes.
Q Okay. So by giving him the option, it would have meant that you concluded that he was likely amenable to a CABG?
A Was he a candidate --
Q Yes.
A -- for a bypass? Yes, he was a candidate for a coronary artery bypass.
Q Why was a candidate for a coronary artery bypass?
A Because he had blockages in locations that surgeons could obviously put bypass graphs past to help ameliorate his symptoms of angina.
Q Can we agree that prior to intervention, be it angioplasty or

atherectomy, the degree of blockage should be at least 75 percent?
A On visual interpretation?
Q Yes.
A Probably 70, 75 percent. As *you* can tell, it's hard to tell exactly how bad the blockage is on the angiogram. It's not so easy to tell immediately.
Q Okay. You don't say roter blading simply for severe, very severe blockage; correct?
A At that time we did not.
Q Okay.
VIDEOGRAPHER: Go off the record?
MR. BECKER: Yeah.
(Discussion had off the record.)
BY MR. BECKER:
Q Doctor, we were talking earlier about what recommendations you would have made to Dale, and I think you indicated that, well, if someone asked me if it was my brother, or if you were I kind of thing, I would give them my recommendation. What was Dale's best treatment option based on your opinion,

based on his total pathological and clinical status?

MR. MILINE: Objection.

A As I probably would explain to him and my own personal opinion is that I think that he was a good candidate for either procedure. Multi-vessel angioplasty or coronary bypass grafting. I don't think that you can say absolutely that one treatment option was better than another when you look at the patient's clinical status and his long-term prognosis.

Q Okay. Are you suggesting that you didn't recommend angioplasty and atherectomy to him?

A No. I didn't say that.

Q Okay. If you did recommend angioplasty and atherectomy to him, would that have been, at least at that time, of your advice, your view as to the best treatment option for him?

A Well, if he would have asked me specifically, you know, Doctor, if I were your dad or this were you on the table, which option would you have chosen, probably

I would have chosen multi-vessel coronary intervention rather than bypass.

a And the reason?

A Because I think that his -- most of his lesions were very. amenable to angioplasty. I thought that we could get a very good result and I wasn't not pleased with his results at the time of the intervention. And also, the way the option that bypass surgery has some complications associated with it, especiaPly long-term complications. You can't put arterial graphs to every artery in a 39 year old.

Q Well, would there have been sufficient mammory arteries to graft him? Would there have been sufficient length of the marnmory artery to graft him?

A Completely? That's an important question.

Q Okay.

A Completely or incompletely.

Q To take care of his major lesions.

A No.

Q Okay. So then if you have to utilize rnammory arteries, then you need more when

you resort to grafting his veins?
A Typically at Riverside where he would have been referred for a bypass surgery, it's not common that they use two mammory arteries, but it does happen. He had a complicated lesion of his LAD, which I don't believe one graph alone would be able to fix.
Q Well --
A so --
Q Excuse me.
A Go ahead.
Q Maybe I misunderstood or you misunderstood me. Would the two mammory arteries have been sufficient to completely bypass it?
A No. No.
Q Okay. So had he been -- it's your opinion, Doctor, that had it been necessary -- had he elected a CABG, they would have had to have utilized the shaft in his veins as well as the two mammory arteries?
A That's correct.
Q He was not a diabetic; correct?
A As far as I know he was not a diabetic.

Q Okay. Now, you were contacted on midnight on May 27th?
A Okay.
Q I want you to pull the nurses note, and they received an order from you on May 27th at midnight.
A Okay.
Q And I want to talk about that order a little bit.
MR. MILINE: To save some time, could you show us the order?
Q Well, we couldn't find the order, but we could find the nurses notes reflecting --
MR. MILINE: Whatever you want to refer to, why don't you show it to him.
A I'd be happy to look at it.
Q This is called a critical care flow sheet, and I want to draw your attention, Doctor, this goes from the late evening of the 27th through the early morning of the 28th, and it looks like the day *you* were contacted on the 27th between 11:00 and twelve o'clock, and it says here --
A 11:00 p.m. and 12:00 midnight?

Q 12:00 midnight.
A All right.
Q And if you could just -- I know it's not in your handwriting, but it looks like that's some medication, the highlighted line at 23:45. What does it say?
MR. MILINE: Objection. He didn't write that document.
MR. BECRER: I know, counsel.
Q What is your interpretation of that document?
A Dilaudid 1 milligram for, an arrow pointing down, abdominal pain, back pain, IV.
Q Okay.
A I think it says IV.
Q So in other words you -- at least the nurse has charted that she gave more pain medication to reduce his back pain and abdominal pain?
A Yeah, that's what it looks like.
Q Okay. And then the next Pine?
A The next line says, Dr. Yakubov updated on temperature, anxiety, low abdominal

pain. I can't read the rest.
Q I see a word "ordered" there.
A Orders.
Q Orders. Now, if you give orders, would you have expected the nurses of Riverside Memorial Hospital to chart somewhere specifically what the orders were since they would have been telephone orders?
A That's typically the case.
Q Is it possible, Doctor, that you ordered a CBC on him at that time, because we do see one being undertaken within the next hour?
A I think that's a stretch from -- you don't know what I ordered. I don't know what I ordered.
a All right.
A Because it's not stated what was ordered.
Q All right.
A And she was telling me about temperature, anxiety and abdominal pain. There's a possibility I ordered it. There's a chance that it could have been routine after the angioplasty too.

MR. MILINE: Objection.

A It's a possibility. I don't know if it's likely. I guess it all depends on the patient's clinical scenario.

Q Did you have any discussion with Mrs. Mauller after Dale's death?

A I don't recall.

Q Okay. Is that something you make a point of doing, is talking to your patient's survivors?

A Often I do.

Q Okay. Do you recall what you said to her?

A I don't recall. After his death?

Q Yes.

A I don't recall what I said.

Q Okay. Have you talked to Dr. George about this case?

A No.

Q You have no idea what Dr. George's opinion is as to why Dale had a drop in H and H?
A No. I've never discussed that with him.
Q Okay. And is it practice at this office that if there's a death, to review the cath films again?
MR. MPLINE: Objection.
A As a routine?
Q Yeah.
A No, sir.
Q Okay. Have you done that in the past when there's been a death of the patient, you get the original films out that -- prior to intervention to review the films within the office?
A After someone has died?
Q Yes.
A Someone that I treated died?
Q Yes.
A It's often that I do that.
Q And is it often that some other physicians within this group would review them with you?

A That may be the case.
Q Okay. Do you know if that was done in this case?
A Not that I'm aware of. That may have been. It's been several years.
MR. BECKER: Okay. That's all I have.
MR. BILLON: I have no questions.
MR. MILINE: We'd like to read and we'd like to have 28 days.
(Discussion had off the record.)
MR. MILINE: Any problem with 28 days?
MR. BECKER: No.
MR. MILINE: Thank you.
VIDEOGRAPHER: Doctor, do you waive the viewing of the videotape? You don't want to see this, do you? The video.
THE WITNESS: Sure.
MR. BECKER: You want to see how you look on TV?
THE WITNESS: Is that reasonable?
MR. MILINE: I'll order a

COPY.

VIDEOGRAPHER: Okay. Because usually they show it to them now.

MR. MIEINE: Okay. How about we get a copy.

VIBEOGRAPHER: Okay.

(Deposition concluded at 5:54 p.m.)

C E R T I F I C A T E

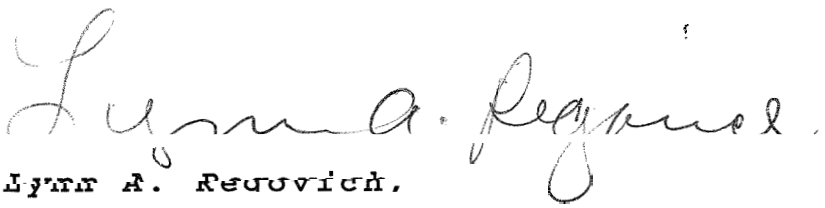
The State of Ohio,)
County of Cuyahoga.) SS:

I, Lynn A. Regovich, Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named witness, STEVEN J. YAKUBOV, M.D., was by me first duly sworn to testify to the truth, the whole truth and nothing but the truth in the cause aforesaid; that the testimony then given by the above-referenced witness was by me reduced to stenotype in the presence of said witness; afterwards transcribed, and that the foregoing is a true and correct transcription of the testimony so given by the above-referenced witness.

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, counsel or attorney for 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, this 3rd day of June, 1997.



Lynn A. Perovich,
Notary Public/State of Ohio.
My commission expires: 6-14-98.

CURRICULUM VITAE

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Born:	February 8, 1961
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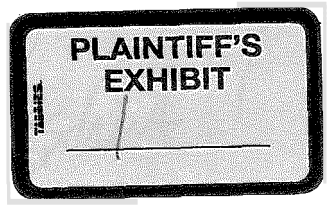
EDUCATION

Undergraduate: Youngstown State University
Youngstown, Ohio 1979-1981
Degree: B.S.
Major: Combined Sciences
Graduated: Summa Cum Laude

Medical School: Northeastern Ohio Universities College of Medicine
Rootstown, Ohio 1981-1985
Degree: M.D.
Graduated: 6th in class
Alpha Omega Alpha Member

POSTDOCTORAL TRAINING



Internship: Internal Medicine
Riverside Methodist Hospitals
Columbus, Ohio
1985 - 1986

Residency:	Internal Medicine Riverside Methodist Hospitals Columbus, Ohio 1986 - 1988
Chief Residency:	Internal Medicine Riverside Methodist Hospitals Columbus, Ohio 1988 - 1989
Fellowship:	Fellow in Cardiovascular Medicine University of Michigan Hospitals Ann Arbor, Michigan 1989 - 1991
	Interventional Fellow Cardiovascular Medicine Riverside Methodist Hospitals Columbus, Ohio 1991 - 1992

CERTIFICATION AND LICENSURE

Medical License:	Ohio, 1991 #53291
Board Certification:	Diplomate, National Board of Medical Examiners, 1986 Diplomate, American Board of Internal Medicine, 1989 Diplomate, Board of Cardiovascular Disease, 1991

HONORS AND AWARDS

Undergraduate:	Scholastic Achievement Award Phi Beta Kappa
Medical School:	Alpha Omega Alpha (1985) Ideal Physician Award (1985)
Residency:	Resident Teacher of the Year (1987)

PROFESSIONAL SOCIETIES

Diplomate, American Board of Cardiovascular Disease
Member, American Medical Association
Ohio Academy of Medicine
Ohio State Medical Association
Member, American Heart Association

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