COURT OF COMMON PLEAS 1 2 CUYAHOGA COUNTY, OHIO 3 4 PATRICK A. YURICK, EXECUTRIX) OF THE ESTATE OF MARTIN A.) 5 6 YURICK,) 7 PLAINTIFFS,) NO. 326719 8 vs.) 9 CLEVELAND CLINIC FOUNDATION,) 10 ET AL.,) 11 DEFENDANTS.) 12 13 14 15 16 VIDEOTAPED DEPOSITION OF: 17 JAY N. SCHAPIRA, M.D. 18 TUESDAY, FEBRUARY 6, 2001 19 8:12 A.M. 20 21 22 23 **REPORTED BY:** 24 SUSAN NELSON 25 C.S.R. No. 3202

2	
1	Videotaped deposition of JAY N. SCHAPIRA, M.D., the
2	witness, taken on behalf of the Plaintiff, at
3	8:12 A.M., TUESDAY, FEBRUARY 6, 2001, at 8635 West
4	Third Street, Los Angeles, California, before SUSAN
5	NELSON, C.S.R. No. 3202.
6	
7	APPEARANCES OF COUNSEL
8	
9	FOR PLAINTIFF:
10	FINELLI & MARGOLIS P.L.L.
11	BY: RONALD A. MARGOLIS, ESQ.
12	DANIEL M. FINELLI, ESQ.
13	730 Leader Building
14	526 Superior Avenue
15	Cleveland, Ohio 44114
16	Telephone No. (216) 621-2222
17	
18	FOR DEFENDANTS:
19	ROETZEL & ANDRESS
20	BY: R. MARK JONES, ESQ.
21	1375 East Ninth Street
22	One Cleveland Center
23	Tenth Floor
24	Cleveland, Ohio 44114
25	Telephone No. (216) 623-0150

		3
1	APPEARANCES CONTINUED:	
2		
3	ALSO PRESENT:	
4	DAVID J. MOLITERNO, M.D.	
5	DAVID HANLEY, VIDEOGRAPHER	
6	3	
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
F		

5 1 LOS ANGELES, CALIFORNIA; TUESDAY, FEBRUARY 6, 2001; 2 8:12 A.M. 3 4 THE VIDEOGRAPHER: This begins Volume 1, videotape number 1, in the deposition of Dr. Jay N. 5 Schapira in the matter of Patrick Yurick versus 6 Cleveland Clinic Foundation in the Court of Common 7 8 Pleas, Cuyahoga County, Ohio, case number 326719. 9 Today's date is February 6, 2001. The time 10 on the video monitor is 8:12 a.m. The video 11 operator today is David Hanley, a notary public contracted by Wishnow.Tearney.Killion, Encino, 12 California. 13 14 This video deposition is taking place at 8635 West Third Street in Los Angeles, California, 15 and it was noticed by Ronald Margolis of Finelli & 16 17 Margolis. 18 Counsel, please identify yourselves and 19 state whom you represent. 20 MR. MARGOLIS: My name is Ronald Margolis. Daniel Finelli and myself represent the estate of 21 Martin Yurick. 22 MR. JONES: This is Mark Jones. 23 Т 24 represent the Cleveland Clinic Foundation. 25 THE VIDEOGRAPHER: The court reporter today

6 is Susan Nelson of Wishnow. Tearney. Killion. Would 1 the reporter please swear in the witness. 2 111 111 3 JAY N. SCHAPIRA, M.D., 4 having been first duly sworn, was 5 examined and testified as follows: 6 7 DIRECT EXAMINATION 8 9 THE VIDEOGRAPHER: Please begin. 10 BY MR. MARGOLIS: 11 Doctor, would you please state your full 12 0. name for ladies and gentlemen of the jury. 13 14 Α. Yes. Jay Schapira. Dr. Schapira, what type of medicine do you 15 0. 16 practice? I practice cardiology and internal 17 Α. 18 medicine. Q. Doctor, I'd like to review with you at this 19 time your medical education and training to prepare 20you for being a cardiologist. Would you please tell 21 ladies and gentlemen of the jury where you went to 22 college, medical school, and then your training 23 24 thereafter. I went to college at the University 25 Α. Yes.

	7
1	of Texas at Austin in Austin, Texas. Following my
2	training in Austin, graduating from college, I then
3	went to Baylor College of Medicine in Houston,
4	Texas. In Houston, Texas, I was there for four
5	years as a medical student graduating from medical
6	school in 1973. Following that, I did an internship
7	residency, and chief residency at the Baylor College
8	of Medicine-affiliated hospitals in Houston, Texas.
9	Following that, I did a cardiology
10	fellowship at Stanford University in Palo Alto in
11	1976, 1977, and '78 finishing in '78 and beginning
12	my practice in Los Angeles.
13	Q. Doctor, what does a cardiologist do?
14	A. A cardiologist diagnoses and treats heart
15	disease.
16	Q. Are there invasive and noninvasive
17	cardiologists?
18	A. There are, yes. There are noninvasive as
19	well as invasive cardiologists. Invasive and
20	noninvasive referring to invading the body or doing
21	diagnostic and treatment without invading the body.
22	Q. What type of cardiology do you practice,
23	Dr. Schapira?
24	A. I practice both invasive and noninvasive
25	cardiology.
11	

8	
1	Q. Doctor, from the time you graduated medical
2	school until the time you completed your cardiology
3	fellowship, how many years passed?
4	A. From the time that I graduated from medical
5	school to the time I finished my cardiology
6	training, there is three years of residency and two
7	years of fellowship so that's a total of five years.
8	Q. Doctor, are you presently involved in any
9	teaching capacity?
10	A. Yes, sir, I am.
11	Q. And would you please tell us where.
12	A. Yes. I'm an associate clinical professor
13	of medicine at UCLA School of Medicine which is
14	about four miles to the west here. I teach through
15	my credentials at UCLA at Cedars and at UCLA.
16	Cedars is a UCLA teaching hospital. Cedars also has
17	their own program independently as well so it's a
18	double labeling for for Cedars-Sinai.
19	The program I teach in is mainly the
20	cardiology program teaching cardiocatheterization,
21	teaching interventional cardiology, teaching
22	cardiology fellows noninvasively, teaching
23	residents, interns, and internal medicine residents
24	in internal medicine. But mainly it's cardiology
25	fellows in the cath lab.

	9
1	Q. Doctor, what hospitals do you have
2	appointments at?
3	A. Cedars-Sinai, which is immediately behind
4	you. About a hundred yards here. There is UCLA.
5	And two smaller hospitals, Century City Hospital and
6	Midway Hospital.
7	Q. In Cleveland there two major hospitals,
8	the University Hospital and the Cleveland Clinic
9	Foundation.
10	How large is Cedars-Sinai Medical Center?
11	A. Cedars-Sinai Medical Center is a large
12	hospital. It's approximately a thousand beds with a
13	large department of cardiology.
14	Q. Doctor, are you licensed to practice
15	medicine?
16	A. Yes, sir.
17	Q. What states are you licensed to practice
18	medicine in?
19	A. I'm licensed in California. I'm licensed
20	in Texas. And I have a summer license in Maine.
21	Q. Doctor, what is board certification?
22	A. Board certification is the certification
23	that cardiologists receive after successfully
24	completing training in a certified program and
25	passing a written examination that is given

10 nationally. It's a national examination. Board 1 certification is a national standard of 2 accomplishment for cardiologists. 3 Have you participated in the board 4 0. 5 certification process? Yes, I have. Α. 6 And are you board certified in 7 Q. cardiovascular medicine? 8 9 Yes, I am board certified in cardiovascular Α. 10 medicine. 0. Are you also board certified in internal 11 medicine? 12 A. Yes. I'm board certified in internal 13 medicine also. 14 Doctor, without going through all the 15 0. various societies, are you members of various 16 cardiology societies and internal medicine 17 18 societies? A. Yes, sir, I am. 19 Doctor, have you ever served in the 20 Q. 21 capacity as an editorial consultant for various medical articles and abstracts? 22 Yes, sir, I have. 23 Α. Would you please share with ladies and 24 Q. gentlemen of the jury what that position involves. 25

What that involves is the reviewing of peer 1 Α. 2 journals, articles written by colleagues you don't 3 know that you grade, critique, and decide if they 4 are proper for publication or to make suggestions 5 that might make them more fit for publication or to 6 accept them. They're graded based upon originality, 7 validity. They're graded based upon the contribution to the literature. It's important that 8 this be done because the literature is a very 9 portant -- important means by which we learn and a 10 11 very important means by which we guide our treatment in our therapy of patients. When articles come out 12 13 into the general literature, we expect other 14 doctors, cardiologists, to read them. We expect them to be very significant contributions and to 15 help the practice of medicine. 16

17 Similarly, when I read an article or when my colleagues read an article, we follow the -- the 18 concepts of that article. I'm called upon from time 19 20 to time to grade an article to see if it is a good contribution. If it's valid, if it's something new 21 and if it's helpful and will help with patient care. 22 23 0. Doctor, as your practice demands have grown, have you had less time to serve in the 24 25 capacity of a editorial consultant?

12	
1	A. Yes.
2	Q. Doctor, do you hold any positions relative
3	to the Medical Board of California?
4	A. Yes.
5	Q. First thing, what is the Medical Board of
6	California?
7	A. The Medical Board of California is an
8	official licensing agency of the state of
9	California. It grants licenses to health
10	professionals, including physicians. It also is
11	responsible for policing those health professionals
12	in terms of investigating breaches and standard of
13	care, gross negligence, and looking at reasons why
14	licenses should be suspended, doctors should undergo
15	discipline, or there should be discipline, or
16	censure against physicians who are practicing.
17	Q. What do you do in the position as a
18	consultant to the Medical Board of California?
19	A. My position is to, from time to time,
20	review cases and to give competency examinations.
21	My particular area where they call upon me is in
22	invasive cardiology. There are not very many
23	physicians who give their time for this purpose, and
24	I think in Southern California there are only two
25	invasive cardiologists who do review other doctors.

çeve e e

I'm one of them. And I'm asked to review cases, 1 2 give competency examinations, which is usually a 3 written plus an oral examination to the physician, 4 and to visit that physician at their facility to try to get a feeling as to their competency to practice 5 medicine and should they receive discipline, should 6 7 they have reeducation or whatever remedial steps need to be taken to recommend to the medical board. 8 9 Why do you choose to participate as a Q. 10 consultant to the Medical Board of California? 11 The reason I choose to do it is because I, Α. in a general sense, feel as though it's a -- if you 12 look at medicine, medicine is a national community. 13 Medicine also has privileges. Medicine also has 14 responsibilities. One of those responsibilities is 15 our civic responsibility to police ourselves. 16 We 17 can't expect our patients to have trust in us unless 18 we have some quality assurance in our own activities. And unless we have the ability to 19 20 critique ourselves and to say what's good and what's 21bad, I think that's true of any profession where there's a certain blind item and a blind aspect to 22 the public's trust. 23 24 I want to emphasize it's uncomfortable most

25 of the time to do it, but I think it's a very

Rennillo Reporting Services

14	
1	important thing to do, and I'm always encouraging my
2	colleagues to do the same thing, to speak up when a
3	doctor does right and to defend that doctor, and to
4	speak up when the doctor does wrong and to correct
5	the situation.
6	Q. Dr. Schapira, are you a licensed physician
7	assistant supervisor in the state of California?
8	A. Yes, I am.
9	Q. What does that involve?
10	A. Well, physicians' assistants are pretty
11	much do what the name suggests. They assist
12	physicians. They help physicians. They don't
13	substitute for but they help physicians. And years
14	ago, we had a pilot program in the cath lab at
15	Cedars-Sinai where there was some physicians'
16	assistants who were brought in experimentally to see
17	how they worked out in the cath lab with assisting
18	in cases and other duties. And three of us were
19	chosen to get certified by the state and get the
20	license so that we could officially supervise the
21	physicians' assistants, not to just work with us but
22	to work with the whole group. But three of us had
23	to be responsible for them, and I was one of the
24	ones who chose was chosen to do that.
25	Q. Doctor, do you volunteer any time in your

	13
_1	area of specialization in cardiology?
2	A. Yes, sir, I do. I work at the Los Angeles
3	Free Clinic, which is a clinic that is near here.
4	It's for indigent patients, those that do not have
5	Medicare. Those that do not have any form of
6	support. And what I do is donate my time plus my
7	cardiology services ECHOs, EKGs and other
8	services that we can get from companies for these
9	patients. Medications. Those types of things that
10	we can get for free to give to these patients.
11	Q. Doctor, in your career, have you had the
12	opportunity to publish various books, articles, and
13	medical abstracts in your area of specialization?
14	A. Yes, sir. Early in my career that was a
15	priority and back 25 years ago, published articles,
16	wrote books. As time has gone on, I've gotten less
17	out of the publishing, stayed within teaching but
18	really emphasized more clinical practice and and
19	new interests but mainly clinical practice.
20	Q. Dr. Schapira, I'd like to speak with you
21	now about the nature of your medical practice.
22	How long have you been practicing
23	cardiology in the state of California?
24	A. I've been practicing cardiology in the
25	state of California since 1976.
11	

Q. And what is the present makeup of your
 present practice as far as how much of your time is
 devoted to cardiology and how much of your time is
 devoted to internal medicine?

Approximately two-thirds of my patients are 5 Α. cardiology patients. About one-third of my patients 6 are internal medicine patients. Roughly it -- it 7 occurs that some of the cardiology patients also 8 have some internal medicine issues which I deal with 9 10 as well. Internal medicine and cardiology are inextricably linked, and it's hard to separate them 11 out. So I end up taking care of a few internal 12 medicine problems on cardiology patients even after 13 their cardiology issues are resolved, and that's how 14 I have somewhat of an internal medicine practice as 15 16 well.

Q. Doctor, how much of your medical practice
is based out of the hospital and treating patients
that are admitted to the hospital?

A. I would say approximately 30 to 40 percent of our hours are hospital-based issues, both with making rounds in the hospital, consulting in the hospital, and doing procedures in the hospital.

24 Q. Doctor, how many days a week are you in the 25 cath lab performing some form of interventional

cardiology in patients? 1 2 On the average, I'm in the cath lab about Α. three days a week and that is doing interventional 3 procedures, diagnostic angiograms, transplant 4 5 follow-ups, a variety of -- of invasive procedures. Doctor, approximately how many 6 0. catheterizations or angioplasties do you perform in 7 8 a normal week? 9 On the average, it would be roughly four to Α. five, roughly, angiograms and about half of those 10 11 would be angioplasties on the average. 12 Q. Doctor, do you serve as a specialist on 13 call to emergency rooms if the need arises that a 14 cardiology consult or interventional cardiology procedure needs to be performed on a patient 15 16 admitted to the emergency room? That certainly does happen from time to 17 Α. time, yes. 18 19 Q. Doctor, is more than 50 percent of your professional time spent in the active clinical 20practice of cardiology and internal medicine? 21 22 Yes, sir, it is. A. Doctor, I want to speak with you about 23 **Q**. 24 expert work that you do such as the position that you are performing in this case. 25

18	
1	When did you first start providing expert
2	witness consultation?
3	A. I first started providing expert witness
4	consultation I believe it was about 1979 was the
5	first time I was asked by a defense attorney to look
6	at a case for him that was about to go to trial and
7	did so reluctantly but nonetheless did. That was
8	the first time.
9	Q. Have you been retained by hospitals who
10	have been sued in lawsuits involving issues of
11	cardiology?
12	A. Yes, sir.
13	Q. Have you been retained by drug companies
14	that are involved in litigation involving issues of
15	cardiology?
16	A. I've been asked by drug companies to be
17	involved. I have refused to do so because of some
18	issues that related to one particular contract that
19	I was sent that had to do with an exclusivity that I
20	had to only look at cases for them and nobody else,
21	and I I did not want to look at cases on that
22	basis. I didn't think that that was a fair way to
23	prejudge the validity of the case.
24	Q. Have you been approached for expert witness
25	work in the area of cardiology by HMOs?

<u>1</u>	A. Yes, sir.
2	Q. Have you been approached by plaintiff
3	attorneys who are representing someone bringing a
4	medical malpractice action such as the present case
5	where Mr. Finelli and myself requested you to
6	review?
7	A. Yes, sir. I've I've reviewed cases for
8	patients, for patients' families, doctors, and
9	hospitals. HMOs. Really all aspects of of
10	cases. To me, a case is is worthy of reviewing
11	if the medical question has merit independent of who
12	brings it.
13	Q. And, in that regard, have you been
14	consulted and retained by defense attorneys such as
15	Mr. Jones not specifically Mr. Jones, but defense
16	attorneys who are representing doctors that cases
17	are being brought against in your area of
18	specialization?
19	A. That's correct.
20	Q. Dr. Schapira, have you provided the person
21	who has retained you to look at a case in your area
22	of specialization negative opinions?
23	A. Yes.
24	Q. Is the role that you do when you are doing
25	expert witness review similar to the role that you

20 discharge as a consultant to the Medical Board of 1 California? 2 Yes, sir. It is similar. 3 Α. In this case, did Mr. Finelli and I send 4 0. 5 you various records to review? المعاصرين Yes, sir, you did. 6 Α. And have you been provided the hospital 7 Ο. records of Mr. Yurick's medical care at the 8 Cleveland Clinic from 1/12/96 through 1/19/96? 9 A. Yes, I have. 10 Have you been provided with the deposition 11 ο. 12 of Dr. Andrefsky to review? 13 Α. Yes. Have you been provided with the two 14 Q. depositions of Dr. Moliterno to review? 15 16 Α. Yes. Have you been provided with medical records 17 Ο. from Mr. Yurick's October of 1995 care and admission 18 at the Cleveland Clinic Foundation? 19 Yes. 20A. Have you been provided with various records 21 Ο. from the Cleveland Clinic Foundation, specifically 22 an October 25, 1995, memo to the interventional 23 staff and fellows dealing with issues of ReoPro? 24 25 A. Yes, the booklet, yes.

21 And, as part of that, have you also been 1 Q. provided with the suggested protocol for ReoPro 2 administration and heparin therapy during high risk 3 4 angioplasty? 5 Α. Yes. Doctor, I want to discuss with you at this pro para 6 0. 7 time some various definitions of concepts and terms 8 that the jury needs to learn about in this case to 9 do their job. 10 Α. Okay. Could we take a little break, 11 please? 12 Q. Certainly. 13 Α. Okay. 14 THE VIDEOGRAPHER: Going off the record at 15 8:31. 16 (Discussion held off the record.) 17 THE VIDEOGRAPHER: Back on the record at 8:33. 18 19 BY MR. MARGOLIS: Doctor, would you please tell ladies and 20Q. 21 gentlemen of the jury what a heart catheterization is. 22 A heart catheterization is where the 23 Α. Yes. doctor takes a small plastic tube and inserts it 24 into the artery under a local anesthetic to run the 25

22	
1	catheter up to the heart so that pressures can be
2	measured, pictures can be made, and we can define
3	anatomical blockage in coronary arteries. We can
4	define the area of narrowing and then make a
5	decision if that narrowing needs to be treated; if
6	so, how, by medication, by surgery or by
7	angioplasty, and then to make recommendations to the
8	patient how to relieve their coronary blockage
9	problem. We call this coronary artery disease, this
10	type of blockage. We call it atherosclerosis. We
11	give it a number of different names, but basically
12	it's it's a blockage in the heart composed of
13	largely cholesterol which we are able to treat with
14	a variety of procedures, including interventional
15	procedures like angioplasty.
16	Q. And what is angioplasty?
17	A. Angioplasty refers to altering a blockage
18	within a coronary artery. If you have a coronary
19	artery that is blocked, what we try to do if I
20	could just draw a little picture.
21	Q. Sure. In a way to make sure that the
22	videographer can focused in.
23	A. Okay. We have let's say that this is a
24	coronary artery.
25	Q. Got to wait, Doctor, till we get focused in
1	

1 and then I will say proceed.

Okay, sir.

3 This is a coronary artery I've drawn and Α. 4 the blood flow is like shown with this red arrow. The blockage is the black right here. 5 And as 6 cholesterol accumulates, a blockage may accumulate 7 blocking the flow of blood. When that happens, it 8 can cause the patient a variety of symptoms and 9 problems. It can lead to heart attacks. So therefore we sometimes do what's called an 10 angioplasty which is inserting a little device into 11 12 this artery.

We blow up a balloon, is one of the 13 techniques we use, within the artery to compress the 14 15 material back against the side of the vessel in order to expand the area where the blood flows so 16 that more blood can flow through here as the black 17 accumulation of plaque is expanded and compressed, 18 and you have a wider area for blood to flow. 19 And 20 that's the basic principle of an angioplasty. 21 Now, in addition to that, there's other 22 techniques we use. There's atherectomy, which is a 23 little high-speed drill we use sometimes to remove

24 blockage. Sometimes we use a stint, which is a
25 metallic device that is used to expand the area and

24	
1	sort of to prop it open and to keep it from
2	reclosing. So there's a variety of techniques that
3	we use.
4	Q. Thank you. Doctor, can you please explain
5	for us what the concept of coagulation is?
6	A. Yes. Coagulation is blood clotting. It's
7	where blood actually goes from the liquid phase into
8	the solid phase.
9	Q. I guess your microphone fell off.
10	Were you able to pick up his last answer?
11	Okay.
12	Doctor, what is the concept of
13	anticoagulation?
14	A. Anticoagulation is the prevention of
15	coagulation or anticlotting where blood is prevented
16	from going from the liquid into the solid phase and
17	that's normally referred to as a medication called
18	an anticoagulant. It's a very complex process that
19	takes place on several levels. There are several
20	different types of coagulation levels and mechanisms
21	and several different types of anticoagulation
22	medicines that act on these different levels.
23	Q. Doctor, what is the significance of the
24	anticoagulation and coagulation concepts which you
25	have explained for us as it pertains to doctors

performing heart catheterizations and angioplasties? 1 Well, in catheterizations and 2 Ά. angioplasties, one of the problems that arises when 3 you insert devices into a coronary artery is that 4 clots can form. Sometimes we find clots even within 5 the artery before we start. We like to try to 6 7 prevent these clots because these clots can provide further blockage and further impairment of blood 8 flow and can actually lead to a heart attack. So we 9 10 need to be sure that we have this problem controlled. 11 On the other hand, at cross-purposes with 12 this is the fact that coagulation -- proper 13 coagulation is necessary for humans to live and not 14 to bleed to death. So that in terms of coagulation, 15 we need to have some anticoagulant but not too much 16 or -- because if you overanticoagulate, the person 17 18 can have a bleeding complication. If you underanticoagulate, the person can have a clotting 19 problem associated with the procedure. 2021 So there is what we call a therapeutic range. A therapeutic range is where you have enough 22 but not too many anticoagulation. We also call it a 23 therapeutic window. And thanks to studies that are 24 done, we as cardiologists know where that 25

26	
1	therapeutic window is. We know that there are
2	certain upper limits to stay away from. There are
[.] 3	certain lower limits to stay away from. And that
4	there's a range we like to stay in because that's a
5	safe range proven to be best for the patient. In
6	other words, enough to prevent a clot but not too
7	much so as to put the patient in danger for a
8	bleeding complication.
9	Q. Doctor, in order to obtain that therapeutic
10	level of coagulation during heart catheterizations
11	and angioplasties, is there specific techniques that
12	are used to enable you to monitor the level of the
13	patient's coagulation or anticoagulation?
14	A. Yes, sir, there are.
15	Q. And would you please explain what those
16	techniques are.
17	A. Yes. The techniques that we use to monitor
18	anticoagulation monitor some aspects but not all
19	aspects of the anticoagulation. The ones and
20	this is where there is you have to be you
21	know, cardiologists are are are well-informed
22	in the in the fine art and science of
23	cautiousness.
24	We're able to measure one of our
25	anticoagulants, heparin, with a test called an ACT,

 activated clotting time, in the cath lab. Some labs use another one called a PTT which is another way to measure the heparin effect, but both of these can be used in the cath lab to assess how much heparin. The good thing is that this test is easy to do. The ACT it's a quick test to do. You can get the test back and know where you are. It's a reliable test. You'll know if you don't have enough. You'll know if you're just right. You'll know if you have too much. And the reason that we check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 		27
 measure the heparin effect, but both of these can be used in the cath lab to assess how much heparin. The good thing is that this test is easy to do. The ACT it's a quick test to do. You can get the test back and know where you are. It's a reliable test. You'll know if you don't have enough. You'll know if you're just right. You'll know if you have too much. And the reason that we check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	1	activated clotting time, in the cath lab. Some labs
 used in the cath lab to assess how much heparin. The good thing is that this test is easy to do. The ACT it's a quick test to do. You can get the test back and know where you are. It's a reliable test. You'll know if you don't have enough. You'll know if you're just right. You'll know if you have too much. And the reason that we check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	2	use another one called a PTT which is another way to
5 The good thing is that this test is easy to 6 do. The ACT it's a quick test to do. You can 7 get the test back and know where you are. It's a 8 reliable test. You'll know if you don't have 9 enough. You'll know if you're just right. You'll 10 know if you have too much. And the reason that we 11 check it during the procedure and sort of more or 12 less online as we're doing the procedure itself is 13 so we can make adjustments. 14 It's like a pilot flying from Los Angeles 15 to Sidney, Australia. You check your course every 16 few minutes so if you get off course, you can 17 correct it and end up at your destination without 18 going out of your way or getting in the ending up 19 in the wrong place. That's the good news. 20 The bad news is that we are at times unable 21 to measure other of the anticoagulants we use so we 22 have to be very cautious and stay within certain 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant	3	measure the heparin effect, but both of these can be
 do. The ACT it's a quick test to do. You can get the test back and know where you are. It's a reliable test. You'll know if you don't have enough. You'll know if you're just right. You'll know if you have too much. And the reason that we check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	4	used in the cath lab to assess how much heparin.
9 get the test back and know where you are. It's a reliable test. You'll know if you don't have enough. You'll know if you're just right. You'll know if you have too much. And the reason that we check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant	5	The good thing is that this test is easy to
 8 reliable test. You'll know if you don't have 9 enough. You'll know if you're just right. You'll 10 know if you have too much. And the reason that we 11 check it during the procedure and sort of more or 12 less online as we're doing the procedure itself is 13 so we can make adjustments. 14 It's like a pilot flying from Los Angeles 15 to Sidney, Australia. You check your course every 16 few minutes so if you get off course, you can 17 correct it and end up at your destination without 18 going out of your way or getting in the ending up 19 in the wrong place. That's the good news. 20 The bad news is that we are at times unable 21 to measure other of the anticoagulants we use so we have to be very cautious and stay within certain 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant 	6	do. The ACT it's a quick test to do. You can
 9 enough. You'll know if you're just right. You'll 10 know if you have too much. And the reason that we 11 check it during the procedure and sort of more or 12 less online as we're doing the procedure itself is 13 so we can make adjustments. 14 It's like a pilot flying from Los Angeles 15 to Sidney, Australia. You check your course every 16 few minutes so if you get off course, you can 17 correct it and end up at your destination without 18 going out of your way or getting in the ending up 19 in the wrong place. That's the good news. 20 The bad news is that we are at times unable 21 to measure other of the anticoagulants we use so we 22 have to be very cautious and stay within certain 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant 	7	get the test back and know where you are. It's a
 know if you have too much. And the reason that we check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	8	reliable test. You'll know if you don't have
 check it during the procedure and sort of more or less online as we're doing the procedure itself is so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	9	enough. You'll know if you're just right. You'll
 12 less online as we're doing the procedure itself is 13 so we can make adjustments. 14 It's like a pilot flying from Los Angeles 15 to Sidney, Australia. You check your course every 16 few minutes so if you get off course, you can 17 correct it and end up at your destination without 18 going out of your way or getting in the ending up 19 in the wrong place. That's the good news. 20 The bad news is that we are at times unable 21 to measure other of the anticoagulants we use so we 22 have to be very cautious and stay within certain 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant 	10	know if you have too much. And the reason that we
 so we can make adjustments. It's like a pilot flying from Los Angeles to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	11	check it during the procedure and sort of more or
14It's like a pilot flying from Los Angeles15to Sidney, Australia. You check your course every16few minutes so if you get off course, you can17correct it and end up at your destination without18going out of your way or getting in the ending up19in the wrong place. That's the good news.20The bad news is that we are at times unable21to measure other of the anticoagulants we use so we22have to be very cautious and stay within certain23Q. Doctor, is the drug ReoPro an anticoagulant	12	less online as we're doing the procedure itself is
 to Sidney, Australia. You check your course every few minutes so if you get off course, you can correct it and end up at your destination without going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	13	so we can make adjustments.
16 few minutes so if you get off course, you can 17 correct it and end up at your destination without 18 going out of your way or getting in the ending up 19 in the wrong place. That's the good news. 20 The bad news is that we are at times unable 21 to measure other of the anticoagulants we use so we 22 have to be very cautious and stay within certain 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant	14	It's like a pilot flying from Los Angeles
 17 correct it and end up at your destination without 18 going out of your way or getting in the ending up 19 in the wrong place. That's the good news. 20 The bad news is that we are at times unable 21 to measure other of the anticoagulants we use so we 22 have to be very cautious and stay within certain 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant 	15	to Sidney, Australia. You check your course every
 going out of your way or getting in the ending up in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	16	few minutes so if you get off course, you can
 in the wrong place. That's the good news. The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	17	correct it and end up at your destination without
The bad news is that we are at times unable to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant	18	going out of your way or getting in the ending up
 to measure other of the anticoagulants we use so we have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	19	in the wrong place. That's the good news.
 have to be very cautious and stay within certain parameters for that reason. Q. Doctor, is the drug ReoPro an anticoagulant 	20	The bad news is that we are at times unable
 23 parameters for that reason. 24 Q. Doctor, is the drug ReoPro an anticoagulant 	21	to measure other of the anticoagulants we use so we
24 Q. Doctor, is the drug ReoPro an anticoagulant	22	have to be very cautious and stay within certain
	23	parameters for that reason.
25 drug?	24	Q. Doctor, is the drug ReoPro an anticoagulant
	25	drug?

28	
1	A. Yes, it is.
2	Q. Is the drug aspirin an anticoagulant drug?
3	A. Yes, it is.
4	Q. Is the drug heparin an anticoagulant drug?
5	A. Yes.
6	Q. And would you briefly explain to ladies and
7	gentlemen of the jury during a heart catheterization
8	or angioplasty why heparin and ReoPro are
9	administered to the patient, what their purpose is.
10	A. Yes. Heparin is an anticoagulant which, to
11	simplify it, thins the blood so it will not clot.
12	The effect of heparin is to prevent clotting during
13	the procedure and to help to prevent the artery that
14	I drew from blocking up with clot. The effect of
15	the heparin can be measured with the ACT test which
16	we do in the laboratory.
17	Now, the ReoPro represents a drug that
18	anticoagulates or thins the blood in a mechanism
19	separate from heparin, separate acts on a particular
20	enzyme called antithrombin III.
21	Now, let's let's change now to ReoPro
22	works by a different mechanism. It inhibits the
23	aggregation and the sticking together of platelets.
24	Q. What are platelets?
25	A. Maybe I could draw you another

29 O. Great. 1 2 Α. -- picture. 3 MR. MARGOLIS: I want to go off the record 4 while the picture is being drawn. 5 THE VIDEOGRAPHER: Okay. Going off the ger an an 6 record at 8:44. 7 (Off the record.) 8 THE VIDEOGRAPHER: Back on the record at 9 8:45. 10 MR. MARGOLIS: Get in closer 'cause I can't 11 see the writing. That's better. 12 Okay, Doctor. Q. As we were speaking about heparin a minute 13 Α. ago, that is a catalyst to one of the enzymes or a 14 clotting factors called antithrombin and that's 15 measured by the ACT. Now, that's for heparin. 16 Now for ReoPro, ReoPro acts to inhibit the 17 18 aggregational platelets. One of the key factors in 19 clotting -- one of the key elements of clotting is that platelets adhere together. They stick 20 together. And when they stick together, they can 21 22 help to form a clot. These platelets, if their sticking together is inhibited -- in other words, 23 their aggregation is inhibited, then you can inhibit 24 25 clotting and clot formation during a procedure.

In order to stop them from sticking
 together, we give aspirin first, which works, and
 then we give ReoPro, which is even a more potent way
 to stop platelets from sticking together.

The way that the ReoPro works is it is a 5 receptor blocker and there are certain receptors on 6 7 platelets which will tend to stick to other platelets and actually bind together. ReoPro would 8 act to block these receptors where they exist on the 9 10 platelets and prevent the platelets from actually sticking together thereby inhibiting the clotting 11 process. Excuse me. I dropped my microphone. 12

Now, the ReoPro, when given, will have this 13 And, of course, one of the things that we 14 effect. know about all anticoagulants is that if we're as 15 cardiologists working on the heart and we give a 16 patient aspirin, and we give them heparin, and when 17 18 he give them ReoPro, these anticoagulants just don't work on the heart. They're working all over the 19 body -- in the gastrointestinal tract, in the 20 urinary tract, in the brain, and in every part of 21the body -- so that every part of the body is going 22 to have a clotting mechanism which is now paralyzed 23 to a degree. And it's that degree which is so 24 25 critical to get right.

	31
1	You can't have too much because you're
2	going to bleed somewhere and you can't have too
3	little because if you have too little, you're going
4	to have a risk of clotting within your artery where
5	you're working. So there are certain parameters.
6	It's almost like driving on a freeway. You
7	shouldn't drive 20 miles an hour because you're
8	going to block the flow of traffic. Nor should you
9	drive 95 miles an hour. There's a certain safe
10	range.
11	Q. Doctor, you've used the term "ACT" and
12	you've explained for us what the ACT does.
13	How does one physically do an ACT?
14	A. It's obtained by getting a small sample of
15	blood from the patient which is very easy to do
16	because during a catheterization, you've got all
17	types of indwelling catheters, indwelling lines
18	through which can draw blood because the the
19	catheter is already inside the artery which is
20	makes the blood perfectly accessible.
21	You draw out a small sample, about 2 to 3
22	cc.s, which is a small amount, and you put it into a
23	machine. The nurse puts it hand it to the nurse
24	or the technician. It's put into the machine and
25	the and the sample is run. The machine then

Rennillo Reporting Services

32	
1	calculates an ACT.
2	Q. Doctor, I want to discuss with you now what
3	the concept of standard of care is in medicine.
4	Would you please define it for ladies and
5	gentlemen of the jury.
6	A. The standard of care is a national standard
7	and it's what a reasonably prudent physician would
8	do under a same or similar circumstance in the care
9	of a patient.
10	Q. And in order at arriving at a standard of
11	care, do physicians have a responsibility to review
12	the medical literature that is known at that time?
13	A. Yes, sir.
14	Q. And does the medical literature involve
15	medical articles?
16	A. Yes.
17	Q. Does it involve inserts that the drug
18	companies provide telling about the drug that the
19	doctor is using?
20	A. Yes.
21	Q. And when we're talking about drugs, you've
22	told us heparin is an anticoagulant. What is the
23	half-life of a drug? What what does that concept
24	mean?
25	A. The half-life of a drug is a concept which

	33
1	can be defined in many ways and and it's hard
2	there's not just a single half-life of a drug.
3	There's the pharmacological half-life. There is the
4	effective half-life. In other words, at what point
5	is half of of the effectiveness of the drug gone.
6	That would be the effectiveness half-life. At what
7	level is half of the drug no longer detectable in
8	the bloodstream. That's a type of half-life.
9	Frequently half-lifes have a curve which is
10	not perfectly straight down as far as decay in the
11	blood but may have a double hump, if you will,
12	because of different mechanisms. So it's just
13	basically, in just approximate terms, the half-life
14	is when half of the effectiveness of the drug is
15	gone. And that's a time that time is called the
16	half-life.
17	Q. And do you have an opinion within a
18	reasonable degree of medical certainty as to what
19	the half-life of heparin would be relative to the
20	drugs that would have been administered to
21	Mr. Yurick?
22	A. There's a complex answer and there's a
23	simple answer. The complex answer is, it's
24	dose-dependent. Depends on how long the patient has
25	been on the drug. I'll give you, though, a

34 ballpark. A ballpark is approximately 90 minutes 1 for a half-life on the average. 2 Q. All right. 3 It can be longer, however, in some 4 Ά. 5 circumstances, but I think a very conservative number is 90 minutes. 6 Doctor, this case involves primarily the 7 Ο. treatment rendered to Mr. Yurick at the Cleveland 8 Clinic Foundation when Dr. Moliterno provided a 9 heart catheterization and angioplasty on 10 January 15th, 1996, and the drugs that were 11 12 administered were preprocedurally aspirin, ReoPro, 13 and heparin. 14 I want to discuss with you at this time what the state of the knowledge was in the medical 15 16 community about those drugs during this period of time that we're focused in on which is January 15th, 17 1996. 18 In that regard, would you please tell us, 19 you know, what the medical community knew about the 20 drug ReoPro when it was given with heparin during 21 22 angioplasties. Yes, sir. We knew at the time that ReoPro 23 Â. 24 was a very interesting agent that added some ability for us to be more effective in doing angioplasties 25

Akron (330) 374-1313

1	and to prevent complications like clotting and
2	blocking up of the vessels. We also were learning
3	and had learned by a sentinel paper published in
4	1994 called the EPIC study, E.P.I.C., that talked
5	about the hazards of ReoPro use and how to use it
6	safely as well as effectively. And showed us what
7	complications can occur and how to avoid those
8	complications and to have still effectiveness with
9	regard to our ReoPro usage.
10	So, in other words, it's a paper that said
11	yes, here's this wonderful agent. Here's how you
12	use it safely so you get the benefit and reduce the
13	risk for your patient.
14	Q. Did the EPIC study have any conclusions
15	about the amount of bleeding complications that
16	would occur in a patient that was given PeoPro and

16 would occur in a patient that was given ReoPro and 17 heparin during a procedure as opposed to a patient

18 that was not given ReoPro during a procedure?

19 A. Yes, sir, it did.

20 Q. And would you share with us what that 21 information was.

A. Yes, sir. Basically, what it pointed out was there was a significantly higher incidence of significant bleeding complications when ReoPro was used along with heparin. ReoPro and bolus and drip,

36 as was used in Mr. Yurick, was used as opposed to 1 just heparin alone. So a significantly increased 2 3 amount of major bleeding complications. 4 Q. Okay. Doctor, was there any knowledge that was known again during January 15th, '96, based upon 5 6 the EPIC study about what the effect was on patients who were lower weight patients that weighed 7 8 75 kilograms or less when ReoPro and heparin was 9 administered? 10 Yes, sir, there was. And what it showed is A. 11 that the highest incidence of major bleeding 12 complications was in the lower weight patients, less than 75 kilograms. And that it showed that in --13 particularly in this group of patients, this was 14 your high risk group where the most incidence -- the 15 16 highest incidence of excessive complications of 17 bleeding was seen. How much did Mr. Yurick weigh? 18 Q. 19 A. 65 kilograms. MR. MARGOLIS: Go off the record a moment, 20 21 please. 22 THE VIDEOGRAPHER: Going off the record at 23 8:56. 24 (Discussion held off the record.) 25 (Off the video record.)
Jay N. Schapira, MD

MR. JONES: I'm going to object to anything 1 2 directly out of EPIC to be shown to the doctor or to 3 be quoted to the doctor. I mean, if it's general 4 knowledge with EPIC, I don't have any problem, but on direct examination, you're really not allowed to 5 6 use this type of material from the medical 7 literature. So I mean, obviously, we're here for a 8 video so you're going to go ahead and do it. But 9 since you're also putting up the visual, we're going 10 to have to ask the Court, if this objection is 11 sustained, to not only cut out the audio but also 12 the video. But with that objection, go ahead. 13 MR. MARGOLIS: And I will indicate to the 14 Court my objection at the appropriate time. 15 16 THE VIDEOGRAPHER: Back on the record at 8:58. 17 18 BY MR. MARGOLIS: 19 Doctor, have you had the opportunity to Ο. review the EPIC study? 20 21Yes, sir. I reviewed it when it first came Α. out --22 23 All right. 0. 24 Α. -- about seven years ago in 1994. 25 And have you had the opportunity to review Q.

lack net.

38	
1	the graph which is presently on the screen?
2	A. Yes, sir.
3	Q. And does that graph, in your opinion,
4	accurately set forth the statistics relative to the
5	major bleeding among patients' subgroups based on
6	weight that were administered ReoPro infusion plus
7	bolus as set forth in the EPIC study?
8	A. Yes, sir, it does.
9	Q. All right. And would you please make
10	reference to the graph and explain to ladies and
11	gentlemen of the jury exactly what that graph tells
12	us.
13	A. Yes. In the EPIC study, which was a large
14	study done at a number of centers, including the
15	Cleveland Clinic, the incidence of major bleeding
16	among certain groups of patients was looked at to
17	see what groups of patients had the most major
18	bleeding complications to learn about the safety of
19	the agent ReoPro. Basically a safety study.
20	It was found that in patients who weighed
21	75 kilograms or less, which for those of you who
22	still think in terms of pounds, that's less than
23	165 pounds, that the incidence of major bleeding
24	among that group, like Mr. Yurick, who got a ReoPro
25	bolus plus an infusion, that the bleeding incidence

Blank 6th

was 17.8 percent for this group. If you compare it 1 to people weighing 75 or greater, 75 to 90 2 kilograms, they had about half the incidence. 3 And 4 90 kilograms or more -- in other words, the bigger folks weighing over 198 pounds -- they had a 5 6 5 percent incidence. So, in summary, it showed that the lightest 7 group of patients -- 75 kilograms or less -- had 8 over three times the incidence of bleeding as did 9 the heavier patients and about twice as the 10 11 intermediate weight patients. So that, in 12 conclusion, the lightest group of patients, 75 kilograms or less, had a very significant --13 14 almost 20 percent -- 17.8 percent incidence of major bleeding complications. So that this, just based on 15 weight, is a high risk group of patients. 16 17 Q. Which group would Mr. Yurick have fit within of those graphs of those bars? 18 Mr. Yurick weighed approximately 19 Α. 65 kilograms so that Mr. Yurick would fit in this 20 group of the 75 kilograms or less. 21 And was this information based upon the 22 0. EPIC study known in January of 1996? 23 It was published in 1994. Yes, sir. 24 Α. 25 And do you consider the EPIC study to be a Q.

Akron (330) 374-1313

40	
1	reliable medical study and article?
2	A. Yes, sir. I can just tell you that the
3	EPIC study was discussed roundly and thoroughly in
4	the two cath labs where I work Cedars-Sinai and
5	UCLA and examined very thoroughly. And our
- 6	entire method of utilizing ReoPro was examined very
7	closely at based upon that EPIC study and we
8	began to use a modification in the way that we
9	practiced based upon that study.
10	It was a very important study to us because
11	we had concerns about this huge discrepancy in this
12	group of patients. I mean, almost 20 percent
13	incidence of major bleeding in a certain group of
14	patients was strikingly problematic.
15	MR. MARGOLIS: We'll go off the record a
16	moment.
17	THE VIDEOGRAPHER: Going off the record at
18	9:02.
19	(Discussion held off the record.)
20	(Off the video record.)
21	MR. JONES: I'm going to object to any
22	direct reference to any of the information from
23	Eli Lilly. Again, it's medical literature as the
24	doctor's been testifying to. It's not appropriate
25	for the doctor to be referring to it directly during

	41
1	direct examination. But so I'm just going to have a
2	continuing objection on any of that so I'm not
3	interrupting your video.
4	MR. MARGOLIS: Sure. And just in response,
5	the doctor has previously testified that the
6	standard of care is composed of what the medical
7	literature is at the time and what the drug inserts
8	are at the time. And that this would follow within
9	that confines.
 10	(Discussion held off the record.)
11	THE VIDEOGRAPHER: Back on the record at
12	9:04
13	BY MR. MARGOLIS:
14	Q. Doctor, are you presently looking at
15	Exhibit 24?
16	A. Yes, sir, I am.
17	Q. And would you please share with ladies and
18	gentlemen of the jury what that exhibit those
19	exhibits are.
 20	A. Yes, sir. This is a letter from Eli Lilly
21	& Company to Mr. Margolis, yourself, and it is from
22	Theresa Cotton, an attorney at Eli Lilly. And
23	Miss Cotton says, among other things, and I'll
24	quote:
25	"Attached please find a copy of

42 the original 1995 ReoPro U.S. 1 package insert pursuant to your 2 request." 3 And along with it is an affidavit that says 4 5 in part 5 that: "All packages of ReoPro shipped 6 7 by Lilly in 1995 and 1996 included a package insert such as Exhibit A." 8 And then there follows what she calls Exhibit A 9 10 which is the package insert. Now, this package insert from Eli Lilly 11 0. that we're going to make reference to, is this 12 something that you would utilize to educate you as 13 an interventional cardiologist about how to use the 14 drug ReoPro in these circumstances and what the 15 possible complications are of the drug? 16 Yes, sir. The package insert is what the 17 Α. company is telling you -- Eli Lilly is telling you 18 about the uses, all the aspects, actually, of 19 20 ReoPro. It's telling you about what it's for, its 21pharmacology, the chemical structure, the dosages, the side effects, and the safe way to use it. 22 This package insert is -- is what is 23 included with each and every vial of ReoPro in the 24 actual box, box inside comes a vial, and it's also 25

i por la construcción de la constru

	43
1	what appears in what we call the "Physicians' Desk
2	Reference," the PDR, which is available to all
3	physicians, both online through the Internet as well
4	as it's available in a book we all get free of
5	charge every year from the companies to to tell
6	us about their products.
7	Q. Does Exhibit 24-C, this drug insert for
8	ReoPro provided by Eli Lilly make any reference to
9	the incidence of bleeding in patients that weigh
10	75 kilograms or less?
11	A. Yes, sir, it does.
12	Q. What does it indicate, Doctor?
13	A. What it says is that there is in the
14	package insert an area that if I could just show
15	for a second. It's in big, bold black type.
16	Q. Wait and focus in on that. Hang on, sir.
17	Straighten it out a tad. That's good.
18	Can you focus?
19	THE VIDEOGRAPHER: That's it.
20	MR. MARGOLIS: That's as good as you get?
21	THE WITNESS: I just want to show that it's
22	in bold black type and the highlighting in yellow is
23	mine. But in big, bold black type under an area
24	called "Warnings." And under "Warnings" I'll
25	just read it.

44 1 It says: "Administration of Abciximab," 2 which is ReoPro by its chemical 3 name, "is associated with an 4 5 increased frequency of major bleeding complications, including 6 retroperitoneal bleeding, 7 8 spontaneous gastrointestinal and genitourinary bleeding and bleeding 9 at the arterial access site. 10 This risk is further increased in 11 12 patients who weigh less than 75 13 kilograms." It then goes down in listing risk factors 14 for increased risk of bleeding and it has listed 15 16 patients who weigh less than 75 kilograms. And, Doctor, does this same informational 17 Ο. insert for ReoPro that would have accompanied the 18 19 drug in January of '96 on 24-D state anything about bleeding complications of the drug? 20 Yes, sir, it does. It states that 21 Α. administration is associated with an increased 22 frequency of major bleeding complications. 23 24 And this would all have been information Q. 25 that would have been known to the cardiology

	45
1	interventional community in January of '96 at the
2	time Mr. Yurick had his cardiology procedure
3	performed at the clinic by Dr. Moliterno?
4	A. Yes, sir. Very clearly through the package
5	insert from Eli Lilly, through publications in the
6	literature, and through the EPIC study which we just
7	talked about.
8	Q. Doctor, I want to discuss with you now,
9	we've we've talked about what knowledge the
10	medical community had involving the drug ReoPro
11	during our time period. I want to discuss with you
12	now what knowledge the medical community had about
13	an ACT in January of '96 when it was basically how
14	that would be impacted by the drugs ReoPro and
15	heparin being administered. Okay? That's kind of
16	the area that we're going to talk about now.
17	A. Okay.
18	Q. What was the knowledge that the medical
19	community had at the time about how ACT values were
20	affected in patients who were given ReoPro during
21	interventional cardiology procedures in association
22	with heparin as opposed to patients that were not
23	administered ReoPro in these circumstances?
24	A. It was known that there was an augmentation
25	of the ACT. In other words, the ACT would get, to

Rennillo Reporting Services

46	
1	some degree, longer based upon the addition of
2	ReoPro to the regimen. In other words, if you give
3	a certain amount of heparin, would produce a given
4	ACT in seconds, length of ACT, the coagulation test.
5	The addition of ReoPro would add a few seconds to
6	that ACT. Addet
7	Q. Doctor, was there any information known to
8	the medical community at this time about whether
9	ReoPro patients had a higher probability of bleeding
10	complications than patients who did not receive
11	ReoPro during interventional cardiology procedures?
12	A. Yes, sir. That was clearly known.
13	Q. Doctor, was there any information known to
14	the medical community about ReoPro patients having a
15	higher ACT value than non-ReoPro patients and that
16	it was this group that had a higher likelihood of
17	bleeding complications?
18	A. Yes, it was, Mr. Margolis. It was known
19	that the effect of ReoPro was partially reflected in
20	the ACT. But not all of the ReoPro effect is
21	reflected in the ACT. It was just sort of a
22	by-product of the effect of ReoPro.
23	We know to a degree that ReoPro the
24	effect of ReoPro is not being measured by the ACT.
25	So that but yes, it does prolong your ACT by a

47 few seconds. 1 2 Doctor, was it known prior to January of 0. 1996 what the therapeutic range was that you wanted 3 to have a patient in if the patient, during an 4 interventional cardiology procedure, was provided 5 ReoPro and heparin? 6 7 Yes, sir. It was known. Α. Q. And what was the range, sir? 8 A. 300 to 350 seconds. 9 MR. MARGOLIS: Okay. Can we go off the 10 record a moment. 11 THE VIDEOGRAPHER: Going off the record at 12 13 9:12. (Discussion held off the record.) 14 (Off the video record.) 15 16 MR. JONES: I'm going to again object. 17 First of all, this wasn't given to me as an exhibit prior to this deposition. That's number one. 18 Number two is, again, it's the use of 19 literature in direct examination which is, again, 20 inappropriate. If they want to use it on 21 cross-examination of Dr. Moliterno or anyone else, 22 that's fine, but on direct, it's not appropriate. 23 24 So --25 MR. MARGOLIS: And I will object to the

48	
1	Court at the appropriate time. But just in response
2	at this point, I will indicate that this article
3	certainly was discussed during the deposition of
4	Dr. Moliterno, that this is not a surprise to
5	Mr. Jones, and that, in addition to that, the doctor
6	will give testimony as to this being a reliable
7	article. And certainly, you know, it's something
8	that is appropriate during direct. And I certainly
9	respect Mr. Jones's objection, although I do not
10	agree with it, and at this time would ask the
11	videographer to please go back to the record.
12	THE VIDEOGRAPHER: Back on the record at
13	9:15.
14	BY MR. MARGOLIS:
15	Q. Doctor, we were talking about the general
16	knowledge that the medical community had involving
17	an ACT when the drugs ReoPro and heparin are
18	utilized in interventional cardiology, and you
19	reviewed several points with us. And I asked you to
20	make reference to an article that was the first
21	author is Dr. David J. Moliterno, and it's a
22	March 15th, '95, article published in "The American
23	Journal of Cardiology."
24	Have you had an opportunity, sir, to review
25	this article?
1	

1 Α. Yes. 2 In your opinion, is this article a reliable Q. 3 medical treatise? Yes, sir, it is. 4 Α. And this article was authored, amongst 5 Q. 6 others, by Dr. Moliterno; was it not? 7 Α. Yes, sir. All right. And if you could, please, turn 8 Ο. 9 to sticky Exhibit 2, in the portion that indicates "in summary." 10 11 What does Dr. Moliterno indicate in his article about the subject that we have been speaking 12 13 about? 14 It says on the -- in the summary, the --Ά. basically the last paragraph of Dr. Moliterno's 15 article, it says: 16 17 "In summary, patients receiving C73, " which is ReoPro, "had a 18 19 substantially higher maximal 20 procedural ACT than patients 21 receiving placebo and were more 22 likely to have bleeding 23 complications. Patients with an 24 increased ACT relative to the group 25 median were more likely to have

T	
50	
1	bleeding complications. Therefore,
2	measurement of ACT during the
3	IIb/IIIa, " which is another name for
4	ReoPro, "directed therapy is
5	clinically important."
6	Q. Do you agree, sir, with those statements
7	made by Dr. Moliterno in his March 15th, 1995,
8	article?
9	A. Yes, I do.
10	Q. Now, Doctor, asking you to please make
11	reference in the binder to Exhibit 24-C.
12	Why don't we go off the record.
13	THE VIDEOGRAPHER: Going off the record at
14	9:18.
15	(Discussion held off the record.)
16	(Off the video record.)
17	MR. JONES: I just want to renew my
18	objection regarding the package insert at this time.
19	MR. MARGOLIS: Go back on, please.
20	THE VIDEOGRAPHER: Back on the record at
21	9:18.
22	BY MR. MARGOLIS:
23	Q. Doctor, Exhibit 24-C you have identified
24	earlier for us. Suffice it to say, we are, once
25	again, referring to the ReoPro insert that would be

51 1 provided by Eli Lilly in '95 and '96; is that 2 accurate? 3 Α. Yes, sir. And does that insert say anything about the 4 Q. measurement of the ACT during treatment when the 5 6 drug ReoPro is being administered? 7 Yes, sir. Α. What does it indicate? 8 Q. 9 Α. What it indicates is under a section entitled "Laboratory Monitoring." 10 It says: 11 12 "Before infusion of Abciximab," 13 which is the chemical name, "platelet count, Prothrombin time, 14 and a PTT should be measured to 15 identify pre-existing hemostatic 16 abnormalities. During and following 17 18 Abciximab treatment, platelet counts and extent of antiheparin 19 20 coagulation as assessed by activated clotting time, or a PTT, should be 21 22 monitored closely." 23 Q. Doctor, would you tell me if you agree with 24 this statement? 25 Yes, sir. I do agree with it. Α.

52 Doctor, with powerful new anticoagulation 1 ο. drugs, such as ReoPro, did it become important to 2 3 properly assess as much as possible the patient's coagulation status during and immediately after 4 interventional cardiology procedures? 5 6 A. Yes, sir. And was the ACT the best readily available 7 Ο. 8 test for this purpose in January of '96? 9 Yes, sir. Α. 10 All of the information, Doctor, that we ο. 11 have gone over involving the drug ReoPro, heparin, 12 interventional cardiology procedures, ACT, am I correct in stating that all this information was 13 14 known to the medical community by January of 1996? 15 Α. Yes, sir. 16 Does a physician have the responsibility to Ô. treat a patient in accordance with the medical 17 information that is known to the medical community 18 19 at that time? 20A. Yes. And is that one of the criteria that you 21 0. utilize in evaluating whether or not a physician has 22 23 appropriately met the standard of care in the treatment of a patient? 24 25 Α. Yes.

	53
1	Q. Doctor, I have a question that I would like
2	to ask you. I'm going to read it slowly because
3	it's rather wordy. But we have to jump through
4	certain hoops legally in the state of Ohio.
5	Dr. Schapira, do you have an opinion within
6	a reasonable medical certainty and probability based
7	upon the materials that you have reviewed in this
8	case, your education, your skill, your knowledge,
9	and your experience as a board certified
10	cardiologist performing interventional cardiological
11	procedures, if the care provided to Martin Yurick at
12	the Cleveland Clinic Foundation on January 15th,
13	1996, met the standard of medical care?
14	A. Yes, sir. I do have an opinion.
15	Q. What is the opinion?
16	A. My opinion is that the care did not meet
17	the standard.
18	Q. And, generally, why did the care not meet
19	the standard? And then we will go into specifics.
20	A. Because of the the reason it did not
21	meet the appropriate standard is because of the
22	mismanagement of the anticoagulation.
23	MR. MARGOLIS: I need to go off the record,
24	please.
25	THE VIDEOGRAPHER: Going off the record at

 $\gamma_{\rm eff} \gtrsim$

54	
1	9:22.
2	(Discussion held off the record.)
3	THE VIDEOGRAPHER: Back on the record at
4	9:32.
5	BY MR. MARGOLIS:
6	Q. Dr. Schapira, at this time, I want to speak
7	with you about the specifics in Mr. Yurick's care at
8	the Cleveland Clinic on January 15th, 1996, which go
9	into your opinion as to the Cleveland Clinic not
10	meeting the standard of care in their treatment of
11	him.
12	And I'd ask the videographer to please
13	focus in at where the red light is which is at the
14	1/15.
15	Doctor there's a time line that's up here.
16	And will this help you in the testimony you're
17	giving to the jury today?
18	A. Yes.
19	Q. Looking at where the red light is, which is
20	the 12:10 p.m. ACT of 374 of Mr. Yurick, what is
21	that telling you as an interventional cardiologist?
22	A. What it's telling me as an interventional
23	cardiologist is that Mr. Yurick has at this point in
24	time, which is into the cath now about an
25	hour-and-a-half, received as of this time both

55 heparin --1 2 Doctor, let me give you this so that you 0. 3 can --Thank you. 4 Α. 5 Q. Let me just toss it on your desk. That, as of this time, Mr. Yurick has 6 Ä. 7 received both heparin and ReoPro. ReoPro both as a bolus, which means a big injection, and as a 8 continuous infusion, a drip. So he's receiving both 9 10 ReoPro by bolus as well as by infusion. He's also gotten heparin 5,000 and heparin 11 2,000 so for a total of 7,000 units of heparin. 12 13 And, at this time, at 12:10 p.m., his ACT, the 14 activated clotting time, the coagulation test, is measured, and it's 374 seconds. 15 16 Ο. Is that within the therapeutic range? No, sir. That's above the therapeutic 17 Α. 18 range. What is the significance of this 12:10 374 19 Q. ACT examined with Mr. Yurick's low weight of 20 65 kilograms? 21 This means that Mr. Yurick is in a high 22 Ά. risk category to develop a bleeding complication, a 23 24 major bleeding complication, due to excessive 25 anticoagulation.

56 Doctor, can you look at the camera, please, 1 Q. 2 Thank you. now. Does the 12:10 374 ACT and Mr. Yurick's low 3 weight of 65 kilograms represent any specific risk 4 to Mr. Yurick at that time, in your opinion? 5 Yes, sir, it does. 6 Α. What is that risk? 7 ο. The risk is that he is at risk -- at high 8 Α. risk to have excessive bleeding based upon the 9 10 anticoagulants he's on, which are aspirin, heparin, 11 and ReoPro. Why? 12 Q. 13 Because he is excessively anticoagulated. Α. 14 He has every major clotting mechanism -- in other words, clotting to keep blood within the vascular 15 16 spaces, a mechanism that is designed in the body that is designed to keep us from bleeding into our 17 tissues -- now inhibited by aspirin, by heparin, and 18 by ReoPro inhibiting clotting factors, inhibiting 19 the platelets. And so that it's basically taken him $\mathbf{20}$ 21 way past where you need to successfully complete and accomplish the procedure of angioplasty and put him 22 into his zone -- beyond that and into a zone where 23 24 you are running up the risk of having a major bleeding complication. 25

	57
_1	Q. Do you have an opinion, Dr. Schapira,
2	within a reasonable degree of medical certainty and
3	probability what should have occurred at the 12:10
4	time period if the standard of care had been met in
5	the treatment of Mr. Yurick at the Cleveland Clinic
6	with an ACT of 374 at 12:10?
7	A. Yes.
8	Q. What is that opinion?
9	A. My opinion is that what should have
10	happened is to get the ACT back within the
11	appropriate therapeutic range by giving some
12	medication to reverse part of the heparin, it's a
13	medication called Protamine which is given
14	intravenously. It's a little injection just like
15	the heparin's given, and it will inactivate part of
16	the heparin. And then to remeasure the ACT to be
17	sure it's now within the appropriate parameters of
18	300 to 350. And then to if that works, fine. It
19	should work if you give the appropriate dose. And
20	if it doesn't, then to stop the ReoPro infusion
21	until you come back into the appropriate level, the
22	300 to 350 range, so as really to reduce your risk
23	of bleeding.
24	The patient will not suffer with regard to
25	his procedure, and you will simply reduce the chance

1997).

58	
1	that he's going to have a major bleed.
2	Q. If I understand your testimony, Doctor, are
3	you indicating within a reasonable degree of medical
4	certainty and probability that in order for the
5	standard of care to have been met in the treatment
6	of Mr. Yurick at 12:10 374, that three things should
7	have occurred: Number one, they should have given a
8	drug called Protamine to reverse some of the level
9	of heparin.
10	A. Correct.
11	Q. Number two, they should have stopped the
12	infusion of ReoPro.
13	A. Correct.
14	Q. And number three, they should have
15	rechecked his ACT after 12:10.
16	Is that accurate?
17	A. That is correct.
18	Q. What would the frequency, in your opinion,
19	within a reasonable degree of medical certainty and
20	probability have been as to when his ACT should have
21	been rechecked after the 12:10 374?
22	A. It should have been checked within
23	15 minutes after these maneuvers were performed
24	as early as five minutes after the maneuvers were
25	performed to correct the ACT and put it back within

59 the therapeutic range and out of the danger range. 1 2 Doctor, I will represent to you that 0. Dr. Moliterno ordered that the ACT should be 3 rechecked on Mr. Yurick at 4:00 p.m. 4 Does that, in your opinion, comply with the 5 standard of care within a reasonable degree of 6 7 medical certainty? No, it does not. 8 Α. 9 Why? Q. Because the ACT in a patient needs to be 10 Α. monitored closely. That's what's recommended by the 11 folks that manufacture this drug. That's what's 12 recommended in the literature. 13 Now, naturally, you would want to monitor 14 even more closely in a patient like Mr. Yurick who 15 had a clotting time out of the therapeutic range 16 above the therapeutic range in a more risky range. 17 18 You would want to monitor this patient more closely to bring him back on course in a safe range. 19 So you have got to monitor this patient not 20only closely as it says in -- for the average 21 patient but more closely in order to assure that he 22 has returned to a safe range for anticoagulation. 23 24 Q. Doctor, is there any significance to your opinion which you have shared with us given the 25

Rennillo Reporting Services

60	
1	weight factor of Mr. Yurick of 65 kilograms?
2	A. Yes, sir. There is an effect of that and
3	that is that he's at higher risk because of his low
4	body weight.
5	Q. Higher risk for what?
6	A. Higher risk for a significant major
7	bleeding complication.
8	MR. MARGOLIS: We'll go off the record a
9	moment.
10	THE VIDEOGRAPHER: Going off the record at
11	9:40.
12	(Off the record.)
13	THE VIDEOGRAPHER: Back on the record at
14	9:42.
15	MR. JONES: The record should reflect that
16	Dr. Schapira requested an opportunity to speak to
17	Plaintiff's counsel before answering any further
18	questions. I'm sorry. Got to remember to keep
19	putting my mike back on.
20	I just think the record needs to reflect
21	that Dr. Schapira requested to speak to Plaintiff's
22	counsel before answering any further questions.
23	BY MR. MARGOLIS:
24	Q. Doctor, referring you to Exhibit 22-C,
25	which I will represent to you is the suggested

	61
1	protocol for ReoPro and the administration and
2	heparin therapy during high risk angioplasty that
3	was provided to me by the Cleveland Clinic
4	Foundation, and that this would have been circulated
5	in a memorandum of October 25th, 1995.
6	Does this suggested protocol indicate
7	anything about the frequency within which ACTs
8	should be checked after a procedure such as the type
9	Mr. Yurick underwent on January 15th, 1996?
10	A. Yes, sir. It provides a a protocol
11	about the interactions and use of ReoPro and heparin
12	during angioplasty.
13	Q. What did the Cleveland Clinic tell its
14	staff physicians relative to checking the ACTs of
15	patients who have undergone the type of procedure
16	Mr. Yurick underwent?
17	A. It says that following the procedure, that
18	the doctor should check ACTs or aPTTs and, again,
19	ACT and aPTT are just two different clotting tests
20	which check the effect of the anticoagulants
21	hourly following the procedure.
22	Q. Did Dr. Moliterno do that?
23	A. No, sir, he didn't. Dr. Moliterno didn't
24	check it for three hours and 50 minutes.
25	Q. Doctor, do you have an opinion within a

Rennillo Reporting Services

62	
1	reasonable degree of medical certainty as to whether
2	the failure of Dr. Moliterno to administer any
3	medication to reverse Mr. Yurick's anticoagulation
4	status after the 12:10 374 ACT met the appropriate
5	standard of care?
6	A. Yes, sir, I do have an opinion.
7	Q. Would you please tell us what that opinion
8	is.
9	A. Yes. My opinion is that the failure to
10	check it at least hourly or hourly as recommended by
11	the suggested protocol from the Cleveland Clinic
12	directly resulted in the major complication of the
13	central nervous system bleed that Mr. Yurick
14	suffered. And if it had been checked hourly, an
15	hour after the prior one, then, to a medical
16	probability, the coagulopathy could have the
17	coagulation overcoagulation could have been
18	corrected and the central nervous system bleed
19	prevented.
20	Q. What is Protamine?
21	A. Protamine is a drug that can be given
22	intravenously that will neutralize the effects of
23	heparin either in whole or in part depending on the
24	dose that you give.
25	Q. Doctor

In other words, it can reverse some of the Α. 1 heparin. 2 So do you have an opinion within a 3 0. reasonable degree of medical certainty as to what 4 5 the Protamine would have done had it been given to Mr. Yurick sometime after the 12:10 374 ACT? 6 Yes, sir, I do. 7 A. 8 What is it? 0. My opinion is that it could have returned 9 Α. 10 his coagulation times, his ACT, his coagulation 11 system back into the reasonable recommended range and out of the danger zone. 12Doctor, do you have an opinion within a Q. 13 reasonable degree of medical certainty and 14 probability as to whether it was a deviation from 15 the acceptable standard of care for Dr. Moliterno to 16 keep Mr. Yurick's ReoPro infusion running after the 17 12:10 374 ACT until it was turned off at 4:00 p.m.? 18 19 Yes, sir, it was, particularly in the Α. absence of checking any ACT on him or aPTT. 20 In other words, there was no assessment of where this 21 22 gentleman was, and the last assessment that he had at 12:10, he was in a danger zone. So that yes, and 23 clearly that -- that is a violation of their 24 protocol and what was prudent and reasonable to do 25

1 in this patie	ent	
-----------------	-----	--

Q. What effect did it have on Mr. Yurick's
anticoagulation status after the 12:10 374 ACT for
the ReoPro infusion to keep running?

The effect that it has biologically is to 5 Α. 6 further and further inhibit the clotting mechanism, the coagulation mechanism, to make it continually 7 more likely that a significant complication will 8 occur as was outlined in the EPIC study, as was 9 10 shown in the graph where we showed the 11 17-plus percent incidence. We know that not all of the effects of ReoPro can be measured by the ACT. 12 So you're basically continuing to give a medication 13 which we can't measure the entire effects of. 14

Q. Doctor, I want to discuss with you if you could please with the laser pointer and if the videographer could please focus in on the 3:00 1/15 symptoms that were documented by the nurse's note. Let's see if we can get there. 3:00. Yes. We're right there. That's good.

The 3:00 nurse's note documents that Mr. Yurick is now back on the floor and he has a complaint of nausea, vomiting, and his blood pressure is 178 over 96.

What, if any, significance is that to you,

	00
1	Dr. Moliterno, based excuse me any
2	significance to you, Dr. Schapira, based upon the
3	fact that you have a 65-kilogram patient who at
4	12:10 had an ACT beyond the therapeutic range of
5	374?
6	A. Well, this this is a very significant
7	occurrence because at 3:00 p.m. you've got a patient
8	who has a significantly elevated blood pressure over
9	his baseline and over what it was in the cath lab.
10	He's also complaining of nausea and vomiting. And
11	these three factors together could very well
12	represent the central nervous system complication of
13	the bleed.
14	Q. What significance is it, if any,
15	Dr. Schapira, that he has complaints of nausea,
16	vomiting, increased BP, he's 65 kilograms, at 12:10
17	he's got a 374 ACT, and the ReoPro is continuing to
18	run at 3:00?
19	A. That you've got a patient who at last
20	assessment in the cath lab at 12:10 was in a danger
21	zone. He's known to be in a danger zone because of
22	the low body weight which is, of course, known to
23	the cath lab staff and Dr. Moliterno.
24	He then develops symptoms and signs
25	symptoms of nausea and vomiting and signs of a
L	

12.20

hypertensive reaction for Mr. Yurick at 3:00, all of which are suggestive of a complication and could be a central nervous system bleed. So that you've got a high risk patient who is overanticoagulated who now has signs and symptoms of a possible central nervous system bleed at 3:00 p.m.

What about at 325 where the nurse's note 7 0. documents BP is elevated, nausea, sweating, elevated 8 heart rate -- what, if any, significance does that 9 information have, taken in conjunction with the 3:00 10 complaints of nausea, vomiting, increased blood 11 pressure and the 12:10 ACT of 374 beyond the 12 therapeutic range in a patient who, based upon his 13 weight, is in the highest risk for major bleeding 14 complications and the ReoPro is still running? 15

It's the same situation at 3:00 p.m. 16 Ā. And not only that, but you have to realize that the --17 one of the anticoagulation agents that is causing 18 the problem, the ReoPro that's leading to the bleed 19 and perpetuating more bleeding, is still running. 20 21 It hasn't been stopped. It is still going which is further inhibiting the body's mechanisms to stop 22 bleeding. So that exactly what is causing the $\mathbf{23}$ problem, the ReoPro, is continuing to drip, 24 25 continuing to run.

Jay N. Schapira, MD

MR. MARGOLIS: Go off the record a minute. 1 THE VIDEOGRAPHER: Going off the record at 2 3 9:51. (Discussion held off the record.) 4 (Off the video record.) 5 6 MR. JONES: I'm going to object at this time to the doctor commenting on this. The doctor 7 8 had access to these before today. Never gave any I never got any notification from you he 9 opinion. was going to supplement his opinions as required by 10 11 the local rules. So in anticipation you're going to try to 12 get some sort of expert opinion on what this CT scan 13 shows from Dr. Schapira, who is not a neurologist 14 nor a neurosurgeon, I'm going to object to them. 15 MR. MARGOLIS: And just, Mark, so that I 16 understand your objection, you did have an opinion 17 from Dr. Schapira as to, in his opinion, that the 18 standard of care deviation was the cause of the 19 intercerebral bleed. You're just saying that he 20 21 didn't interpret the CT scan prior to today. 22 Is that accurate? MR. JONES: He gave no opinions whatsoever 23 regarding the CT scan -- apparently, that's what 24 25 you're going to ask him today. So before today, no,

Rennillo Reporting Services

68	
1	he's never let me know or you have never let me know
2	that he has any opinion relative to the CT scans,
3	correct, which is required under the local rules
4	that if he's going to supplement his opinions at the
5	time of trial, I have to receive either a
6	supplemental report or I would normally accept a
7	statement from you
8	MR. MARGOLIS: I understand.
9	MR. JONES: about what additional
10	opinions he was going to give so that I would have
11	the opportunity, if I felt it was necessary, to
12	take you know, start the deposition again or at
13	least to cover that point.
14	MR. MARGOLIS: But you're not objecting to
15	him giving an opinion on causation of an
16	intercerebral bleed. You're objecting to him
17	commenting or interpreting the CT scan.
18	MR. JONES: I I have no objection to the
19	doctor who has said at his deposition that I did
20	take that he believes that the overanticoagulation
21	that he feels was present in this case contributed
22	to the intercerebral bleed. He's given that opinion
23	before. So I have no objection to that.
24	MR. MARGOLIS: All right. I understand
25	where you're going and I'll get that in through

69 Andrefsky. You know what? We're not going to refer 1 to that. That's fine. 2 (Discussion held off the record.) 3 THE VIDEOGRAPHER: Back on the record at 4 9:54. 5 BY MR. MARGOLIS: 6 80.421 7 Doctor, as an interventional cardiologist 0. regularly using the drugs ReoPro and heparin in your 8 patients during the angioplasties and heart 9 10 catheterizations, are you aware of the complications which -- which can occur as a result of 11 mismanagement of the patient's coagulation status? 12 Α. Yes, I am. 13 And is this something that you watch for 14 0. and take steps to prevent in your daily practice in 15 the cath lab? 16 17 Α. Yes. 18 0. And, Doctor, is one of the complications that can occur from patients who are receiving 19 20 ReoPro and heparin if their coagulation is 21 mismanaged an intercerebral bleed? 22 Α. Yes, sir. And is that an opinion within reasonable 23 0. 24 medical certainty? 25 A. Yes, it is.

70 And, Doctor, in this case, ultimately, did Q. 1 Mr. Yurick suffer an intercerebral bleed? 2 Yes, sir, he did. 3 Α. Doctor, do you have an opinion within a 0. 4 reasonable medical certainty and probability based 5 upon your skill and expertise as a board certified 6 7 cardiologist practicing interventional cardiology, the material which you have reviewed in this case as 8 to whether the failure of the Cleveland Clinic 9 Foundation to meet the standard of care in the 10 management of Mr. Yurick's coagulation status on 11 1/15/96, which you have already testified to today 12 was the proximate cause of Mr. Yurick suffering an 13 intracerebral bleed on 1/15/96? 14 Yes, sir, I do have an opinion. 15 Α. What is that opinion? 16 0. My opinion is that the overanticoagulation 17 A. 18 that Mr. Yurick received at the Cleveland Clinic directly resulted in his intercranial bleed. 19 Doctor, why is it that intercranial bleeds 20 Q. such as the type suffered by Mr. Yurick do not occur 21more often in patients that are receiving the drugs 22 ReoPro and heparin during interventional cardiology 23 24 procedures? The reason for that is that, as we give 25 Α.

these drugs in the cath lab, we have a set of 1 guidelines that we adhere to with regard to the use 2 of these drugs. We adhere to certain drug dosages. 3 4 We adhere to certain high risk patient problems like low weight. We follow the ACTs very closely because 5 6 you can't always predict a hundred percent where an 7 ACT may fall so you have to then adjust. You can 8 always give more heparin and then recheck your ACT and you can check an unlimited number of ACTs during 9 the procedure. Or if you overshoot, you can give a 10 11 small dose of Protamine and back the ACT down in 12 case you overshoot.

So the idea is to give, like with any 13 14 medication, enough to be therapeutic and help the patient and not enough to make them toxic and harm 15 And we can check how much anticoagulation 16 them. 17 we're giving by checking an ACT. And -- and in Mr. Yurick's case, it was checked. 18 It was clear that he was overanticoagulated and it was not 19 remedied. Consequently, he developed bleeding 20 21 within his brain which ultimately, through other 22 complications, led to his death.

Q. Doctor, do you have an opinion within a
reasonable degree of medical certainty and
probability as to whether the cause of Mr. Yurick's

72	
1	death on January 19th, '96, was as a result of the
2	intracerebral bleed which he suffered on 1/15/96 as
3	a result of his anticoagulation status being
4	mismanaged?
5	A. Yes, I do have an opinion.
6	Q. What is that opinion?
7	A. And my opinion is is that the mismanagement
8	of his anticoagulation status in the cath lab
9	resulted in his intracranial bleed and also resulted
10	ultimately in his death.
11	MR. MARGOLIS: Okay. Go off the record.
12	THE VIDEOGRAPHER: We're going off the
13	record at 9:58.
14	(Recess taken.)
15	THE VIDEOGRAPHER: Back on the record at
16	10:10.
17	MR. MARGOLIS: Let the record reflect that
18	at the conclusion of Dr. Schapira's direct
19	testimony, Mr. Jones asked and we complied with a
20	recess where he had the opportunity to confer with
21	Dr. Moliterno.
22	MR. JONES: Absolutely.
23	/// ///
24	
25	
*	73
----	---
1	CROSS EXAMINATION
2	BY MR. JONES:
3	Q. Dr. Schapira, we've met. I've talked to
4	you over the phone when we I took your deposition
5	a month-and-a-half ago or so. I'm Mark Jones. I
6	represent the Cleveland Clinic.
7	I need to return first, Doctor, to your
8	qualifications as an expert in this case, as an
9	expert witness.
10	You've mentioned that you are board
11	certified in internal medicine and cardiovascular
12	medicine; correct?
13	A. That's correct.
14	Q. All right. And I assume you've taken the
15	effort to become board certified because you think
16	that that's a good idea for your practice, for your
17	patients, and so forth; correct?
18	A. Yes. And it's a requirement.
19	Q. Okay. And there is now a subspecialty
20	board in invasive interventional cardiology; is
21	there not, Doctor?
22	A. Just just came about, yes.
23	Q. Actually, it's it's been available for
24	the past I think they've been giving the exams
25	for two years; correct?

74 I think the first year was about '98 or '99 1 Α. so about two years, that's correct. 2 And I would -- I would assume that before 3 0. the first exam was ever given, you probably were 4 aware of the fact that they were going to be board 5 6 certifying for interventional cardiology so that people could get ready to take that exam if they 7 wanted to take it the first opportunity; correct? 8 Actually, I wasn't aware of it. That one 9 Α. 10 slipped by me so I found out about it after the 11 first one had actually passed. Okay. Well, so you hadn't -- you hadn't 12 Q. been attuned enough about what was going on in the 13 subspecialty board areas of cardiology to know about 14 it beforehand, but you've known about it now for 15 16 several years; correct? Well, no, I think there's two questions 17 Α. I had heard about it. I had heard about the 18 there. 19 new board. I'd not heard about when the exam, how it was going to be given, or where it was going to 2021 be given, and I didn't know about the sign-up dates or anything, so I -- I didn't find out about it $\mathbf{22}$ until -- really concretely till afterwards. 23 Then I heard it was going to be given not even necessarily 24 25 every year but every other year. So I knew a little

\$ 200 A

bit about it but not the -- the concrete facts. 1 2 Okay. You didn't bother to check into the 0. concrete facts, either; correct? 3 4 I didn't investigate it at that time, no. Α. Okay. And I -- I would assume that that 5 0. 6 would be because of your busy practice. 7 Well, first of all, it wasn't required. Α. It was an option. Number two, it really would not 8 affect my practice one way or another with regard to 9 10 credentialing or quality of care. My training was all there. And I had been doing the procedure. 11 So it was -- it was nice if I had the time. And if I 12 13 was too busy, I could do it at some point. Maybe 14 I'll do it when I might slow down in my practice some day and then I'll do it. But it's not 15 16 required. And I saw no reason to cut down on 17 teaching or taking care of patients to go away and 18 take a test. 19 0. Okav. Have you -- have you ever bothered to figure out what the qualifications are for taking 20 21 the subboard certification exam in interventional cardiology, Doctor? 22 I have bothered, yes. I've asked one of my 23 Α. 24 colleagues. 25 Q. Okay. Have you -- have you checked with

76	
1	the subspecialty board itself to confirm what the
2	actual qualifications would be to take the exam?
3	A. Have I called them? No. I checked with
4	one of my colleagues and found that I'm qualified to
5	take it if I want to.
6	Q. Okay. Doctor, you haven't had the time to
7	check into the qualifications specifically for the
8	exam or to take the exam, yet you do have a
9	substantial amount of your time spent involved in
10	these types of cases; correct?
11	A. Excuse me. I I don't know what these
12	kinds of cases
13	Q. These of medical malpractice cases in which
14	you've been asked to review them as a potential
15	expert witness in the case.
16	A. Yes, that is correct.
17	Q. Okay. And, in fact, you review on average
18	one or two of these cases a month?
19	A. That's correct.
20	Q. So in a year, you're averaging out probably
21	at about 18 cases a year; correct?
22	A. Roughly, yes.
23	Q. Okay. And there's a substantial amount of
24	records for this case, and I'm sure you have cases
25	that have more records and less records, but you've

 $\nabla^{i}_{i} e^{i \phi} = e^{i \phi e i \phi}$

77 1 probably put in a fair amount of time to familiarize 2 yourself with these cases; correct? 3 Α. Yes, sir. And you're charging \$350 an hour that you 4 0. do that; correct? 5 6 Α. Yes. 🐖 7 You also do depositions. That is, you give ο. 8 testimony to the attorneys who are involved in 9 investigating what your opinions might be and you do that about once or twice a month; correct? 10 11 Α. Yes. And for that service, you charge \$600 an 12 0. hour; right? 13 14 Α. Correct. 15 Q. So you're doing that about 18 times a year 16 on average. 17 Α. Yes. And to testify at trial, if you were to 18 Ο. 19 come to Cleveland, that's \$5,000 for a half day. ľ 20 know you've said that before; correct? For every 21 half day that you're away from California, you would 22 charge \$5,000; right? Actually, I wouldn't be coming to Cleveland 23 Α. for this trial, Mr. Jones. My clinical practice is 24 25 I have to be in the cath lab today and too intense.

78	
1	tomorrow and Thursday so I was unable to come to
2	Cleveland
3	Q. Okay.
4	A for the trial. So in order for me to
5	stay home and take care of my patients, which is my
6	priority, you all were nice enough to come from
7	Cleveland here to Los Angeles.
8	Q. Okay. Doctor, do you have any idea how
9	much time you have spent involved in being an expert
10	witness or reviewing medical-legal cases in a year?
11	A. I can give you a rough idea, yes.
12	Q. Why don't you give me a rough idea.
13	A. I think it's less than 5 percent of my
14	total professional time.
15	Q. But if you're reviewing 18 cases a year
16	giving depositions 18 times a year, testifying
17	occasionally like you are today for trial either at
18	a trial or by videotape, I would assume that you
19	would have been able to find the time to become
20	board certified in interventional cardiology if you
21	don't have this sidelight; correct?
22	MR. MARGOLIS: Objection. It's an
23	argumentative question. It's been asked and
24	answered.
25	MR. JONES: No, it has not.

		79
	1	Q. My question is, Doctor, let me put it this
	2	way: Is your involvement and the income that you
	3	earn from being an expert witness in medical-legal
	4	cases a priority over your becoming board certified
	5	in interventional cardiology?
	6	A. Not at all.
	7	Q. Doctor, you've never been sought out as an
	8	expert in a case that involves these same issues;
	9	correct?
	10	A. Not that I recall, no.
	11	Q. Doctor, Mr. Margolis was going through your
	12	CV, and one of the things he was talking about is
	13	what you've got listed as editorial consultant to
	14	several journals and publishing houses. I just want
	15	to briefly go through those because he didn't really
	16	ask specifically about your experience with them. I
	17	see he's giving you a copy of your CV.
	18	The CV that you've provided to me has you
	19	as a consultant for "The American Journal of
	20	Cardiology," but, in fact, Doctor, you haven't been
	21	asked by that journal to review any articles for the
	22	past three or four years; correct?
	23	A. Correct.
	24	Q. You also have listed the journal "Chest,"
	25	but, again, it's been two or three years before that
11		

journal or since that journal has approached you
about reviewing an article; correct?
A. Yes.
Q. You also have down "The Archives of
Internal Medicine," but it's been about eight to ten
years since that journal has approached you about
reviewing an article; correct?
A. Correct.
Q. You have two publishing houses Williams
& Wilkins and University Park Press but neither
of those have asked you to review books or chapters
or articles for the last five years; correct?
A. That's correct.
Q. Doctor, you have never been involved in any
study of the use of heparin and ReoPro in
angioplasty, have you?
A. Do you mean a formal investigation, sir?
Or is that what you mean, a formal investigation
protocol study?
Q. Correct.
A. That's correct.
Q. And you've never reviewed any of the
studies that have been published on the subject, the
use of ReoPro and heparin in angioplasty, for any
journal; correct? As an editorial consultant.

1 A. That's correct.

2 Doctor, you spoke some about the use of 0. heparin and ReoPro in angioplasty. The -- the whole 3 idea of the use of heparin and ReoPro in heart 4 catheterization angioplasty procedures was to 5 determine how well it would avoid the relatively 6 7 common complication of reocclusion of the coronary arteries after angioplasty; correct? 8 Yes, sir. 9 Α. And -- and that complication for patients 10 Q. was the source of a very significant mortality for 11 patients undergoing angioplasty and other 12 complications, including myocardial infarctions and 13 other injuries; correct? 14 Yes. 15 Ά. So the studies that were begun in the early 16 0. 1990s to try to determine how these drugs might be 17 18 used in tandem in order to reduce the incidence of reocclusion of coronary arteries after angioplasty 19 were first designed to determine whether the drugs 20 21 together were efficacious in -- in taking care of that complication; correct? 22 That was -- the studies had many in points. 23 Α. 24 That was certainly one of the important in points in addition to the others, like safety features. 25

82	
1	Q. Well, you lead right into my next question.
2	You have referred to the EPIC study
3	A. Yes, sir.
4	Q which was published in 1994 and as you
5	said was the sentinel publication on the use of
6	these drugs in angioplasty.
7	And it is true, is it not, Doctor, that the
8	EPIC study was a study on efficacy; correct?
9	A. In part, yes, as well as other things.
10	Q. It did not have a design protocol, Doctor,
11	to determine the safety of these two drugs, did it?
12	A. No, sir, I don't agree with that. I think
13	that the EPIC study was designed to look at many
14	features of the use of these drugs in tandem, as you
15	put it, and that these features are discussed in the
16	EPIC study. Both efficacious features how well
17	they work as well as safety features and where
18	problems arose.
19	Q. Doctor, I think Mr. Margolis has the EPIC
20	study. It's one of the exhibits in this case. He's
21	not provided me a copy of his exhibits yet so I
22	don't know the number of it. Would you please find
23	it.
24	A. Yes, sir.
25	MR. JONES: We'll go off the record for a

Charles a

Jay N. Schapira, MD

```
83
 1
     second while you find it.
 2
              THE WITNESS: Thanks.
                                      I'm sorry.
              THE VIDEOGRAPHER: Going off the record at
 3
     10:22.
 4
 5
              (Discussion held off the record.)
 6
              THE VIDEOGRAPHER: Back on the record at
     10:24.
 7
 8
     BY MR. JONES:
              Doctor, although in your direct testimony
 9
          0.
10
     you describe the EPIC study as the sentinel study in
11
     this area, you've been unable to find a copy of that
12
     in the materials you were provided; correct?
              No, sir. That's not correct.
13
          Α.
14
             Where is it?
          Q.
              It's right here in front of me on my desk,
15
          Α.
16
     sir.
17
             Oh, you just found it.
          Ο.
              I've had it all along. It's been in my
18
          Α.
19
     stack of articles.
              Doctor, just two minutes ago you handed me
20
          Q.
     an article from the journal "Circulation" published
21
    by the primary author Frank Aguirre; did you not?
22
23
              That's correct, because you didn't specify,
          Ά.
     sir, which EPIC article you were speaking of.
24
                                                     The
     "Circulation" or "The New England Journal of" -- or
25
```

84	
1	"The New England Journal of Medicine." So it's my
2	fault for not asking you to be precise in your
3	questions. Maybe you could do that for me.
4	Q. Have you found the
5	A. Could you do that for me?
6	Q EPIC EPIC study, please; Doctor?
7	A. Could you do that for me?
8	Q. The EPIC study.
9	A. It's right here, sir, just
10	Q. Thank you.
11	A as I told you about four questions ago.
12	Q. Doctor, on page 960 of "The New England
13	Journal of Medicine" for the EPIC study in the first
14	column about halfway down or two-thirds of the way
15	down in that it's in the "Discussion" section of
16	the article.
17	It starts with the paragraph, "The relation
18	between treatment benefit and risk of bleeding as a
19	function"
20	A. Just a second. I'm not with you.
21	"Discussion" section?
22	Q. Yes. It's page 960.
23	A. And which paragraph in the "Discussion"
24	section?
25	Q. It would be paragraph 5.

		85
_1	А.	And the first words are?
2	Q.	"The relation between treatment benefit and
3		the risk of bleeding as a function
4		of body weight was more complex than
5		expected."
6		Correct?
7	А.	Got it.
8	Q.	And then further down in that paragraph it
9	says:	
10		"Future studies and clinical
11		practice using potent parenterally
12		administered antithrombotic agents
13		in patients with indwelling tubes or
14		catheters must focus on
15		weight-adjusted dosing with
16		antithrombotic drugs, more detailed
17		evaluation of the mechanisms by
18		which antithrombotic therapy
19		prevents ischemic complications and
20		protocols that define approaches to
21		reduce bleeding that will be applied
22		consistently at all participating
23		centers."
24		Did I read it correctly?
25	Α.	Yes, sir.

86 So that's a paragraph in which the EPIC 1 Q. investigators are essentially saying that the 2 assessment of safety and the way to administer the 3 drugs more safely to reduce bleeding complications 4 is left to future studies; correct? 5 No, sir. It is saying that in part, but 6 Α. 7 that's not the major point of that paragraph. The major point is, Mr. Jones, that the 8 parenterally administered drugs must focus on 9 10 weight-adjusted dosings. And it is even more specific than that in pointing out the problem is in 11 less than equal 75 kilograms, just like Mr. Yurick. 12 13 0. Correct. And there were additional studies that looked into that, didn't they, Doctor? Looked 14 15 into that specific issue; correct? 16 À. Yes. Okay. Doctor, during this procedure, 17 Ο. 18 Dr. Moliterno in his initial bolus of heparin did weight-adjust his bolus, did he not? 19 20Α. Yes and no, Mr. Jones. He said he did in 21 his note that he gave 70 units per kilogram, but in $\mathbf{22}$ point of fact, sir, he gave over a hundred units per 23 kilogram so that there's a discrepancy between what his note says and what he said he did and what 24 25 actually happened.

1	Q. Doctor, the protocols talk about first
2	initial dosing; correct? Initial dose. Initial
3	bolus dose of heparin; correct?
4	A. Well, some protocols do. I mean, if that's
5	what you want me to assume, fine.
s 🏠	Q. Well, I mean, the protocols that talk about
7	initiating heparin therapy for patients undergoing
8	angioplasty when ReoPro is also going to be used
9	start first with the discussion of the initial bolus
10	of heparin; correct?
11	A. Actually, Mr. Jones, they start with doing
12	an ACT for patients who have been on heparin to see
13	what the baseline ACT is.
14	As you recall, Mr. Yurick was on heparin at
15	least until 9:30 a.m. The morning of his cath, he
16	still had some heparin on board. So the protocols
17	talk about assessing where your patient is before
18	you give that bolus in the cath lab. That's where
19	they start.
20	Q. Well, maybe the easiest way to do this
21	might be to do it this way, Doctor.
22	The suggested protocol that you referred to
23	in direct testimony with Mr. Margolis asking
24	questions which was generated at the Cleveland
25	Clinic in October of 1995, several months before

wrick's procedure, do you accept that that ς Ω .ould be an appropriate standard of care for the treatment of Mr. Yurick in January '95 if the 3 protocol were followed? 4 Which part of it in particular? Α. 5 Well, the protocol would address the 0. 6 situation of Mr. Yurick's presentation to the cath 7 lab for his procedure, would it not? 8 I think that that would be an Α. 9 appropriate -- yes. 10 **Q**. Okay. 11 You mean the -- excuse me. The protocol is Α. 12 a big document. You're talking about the one page 13 that we talked about here; is that correct? 14 Correct. Q. 15 I mean, the protocol is this big old A. 16 notebook here with several things in it, so you're 17 talking about the one page we talked about? 18 I think what you're looking at is the -- is ο. 19 the --20Yes. Α. 21 -- binder of exhibits that Mr. Margolis has Q. 22 provided to you. It's not the protocol. 23 The suggested protocol that you were 24 talking to Mr. Margolis about is headed "Suggested 25

1	Protocol for ReoPro Administration and heparin
2	Therapy During High Risk Angioplasty." That was
3	generated at the Cleveland Clinic in October 1995.
4	That's what I want you to refer to, Doctor.

Yes, sir. But the original binder was a 5 Α. 6 memo from Kelly Brezina at the Cleveland Clinic that 7 contained all of the different papers and articles 8 that they were submitting as abstracts and studies 9 they had done which pointed to this as being the right thing to do, that this heparin had better be 10 weight-adjusted. That's how they came up with this. 11 That's what -- but we're talking about one piece of 12 paper. Go ahead, please. 13

Well, no, the -- the -- if you want to do 14 Q. 15 it that way -- what I'll do is very easy. I'll mark as Defendants' Exhibit A here, Doctor, what has been 16 marked, has been provided to the Plaintiff's counsel 17 in this case one, two, three, four pages that 18 con- -- constitute the memo from Dr. Lyncoff and the 19 20 nurses there and the cath lab that go through the 21 memo that talks about the EPIC study and the PROLOG 22 study. We'll talk about that in a minute. 23 Α. Right.

24 Q. And then have a suggested abstract related 25 to that and then finally the suggested protocol for 90 the use of these medications in the heart cath lab. 1 2 That's what I'm referring to. 3 Α. Okay. Do you have those pages as an exhibit that 4 Q. have been provided to you today? 5 6 Α. Yes. Okay. Why don't you give me my exhibit 7 0. back and you can find your copy of that. 8 Do you have it? 9 10 Yes. Α. 11 Okay. I'm looking at the page that is Q. captioned "Suggested Protocol for ReoPro 12Administration and heparin Therapy During High Risk 13 14 Angioplasty." 15 Do you have it now? 16 A. Yes. 17 All right. I'm asking you, Doctor, whether 0. 18 you have an opinion that this suggested protocol would meet the appropriate standard of care for the 19 treatment of patients in a cath lab undergoing 20 angioplasty with the use of heparin and ReoPro? 21 22 Α. Yes. Okay. So if the protocol is fall -- is 23 Q. followed, then the standard of care is met; correct? 24 25 Α. Yes.

Ja. 4.

	91
_1	Q. All right. The first paragraph talks about
2	the ReoPro dosing, and that's not an issue in this
3	case so I'm not going to to go into that.
4	The second is a paragraph that talks about
5	the aim the range of ACT that you want to try to
6	obtain when your are using heparin in the procedure.
7	And it says just over 300 seconds; correct?
8	A. Yes.
9	Q. All right. And you had said before that
10	the EPIC study was talking 300 to 350 so there's
11	really not that much of a difference there; correct?
12	A. Correct. And this and this protocol
13	addresses some of the issues involved, yes. That's
14	one of them it doesn't directly address. I mean,
15	this is a brief protocol.
16	Q. Okay.
17	A. Go ahead.
18	Q. The next is that the initial heparin bolus
19	would be 100 units per kilogram; correct?
20	A. Correct.
21	Q. Okay. And, in fact, it says nothing in
22	that initial heparin bolus of weight-adjusting that
23	heparin bolus; correct?
24	I mean, it's a I mean, I shouldn't say
25	it is it is weight-adjusted in that it says a

92 1 hundred units per kilogram; correct? It's not a straight 10,000 units or 12,000 units; correct? 2 I'm sorry. I'm confused on your question. 3 Α. All right. I'm sorry. That was probably 4 Ο. my fault. 5 6 The EPIC study. Let's go back one step. The EPIC study. In that situation, in that 7 protocol, 10- to 12,000 unit were used in heparin 8 9 bolus for the initial bolus. That's correct. 10 Α. 11 Ο. In every patient. That was their standard. 12 A. Okay. So by the time we get to the 13 Q. suggested protocol in October of 1995, the protocol 14 suggests a weight-adjusting of that initial heparin 15 bolus. Instead of the 10- to 12,000 units of 16 heparin just given to every patient, that the 17 patient should get a hundred units per kilogram of 18 weight; correct? 19 20 Α. Yes. 21 Q. All right. 22 Α. That's what it says. So -- all right. So if Dr. Moliterno in 23 Q. Mr. Yurick's case had attempted to calculate 24 25 pursuant to this protocol what the initial bolus

would be, he could have given the patient 6,500 1 2 units of heparin; correct? That's correct. 3 Α. All right. And we'll get to the other 4 Q. 5 problems you have with it in just a second. 6 In fact, Dr. Heparin -- or Dr. Moliterno in-7 his initial bolus gave only 70 units per kilogram; 8 correct? 9 A little bit over that but about 73 or Α. 10 74 units per kilogram. 11 Ο. Okav. But certainly it was less than this protocol's hundred units per kilogram. It was in 12 the range of 70 units per kilogram; correct? 13 That is correct. 14 Α. So Dr. Moliterno in this procedure gave 15 0. 16 less heparin as an initial bolus to Mr. Yurick than this protocol would have permitted; correct? 17 Doctor, it's a simple question. Did he 18 19 give less heparin to Mr. Yurick than this protocol would have permitted? 20 You know, Mr. Jones, I can't answer the 21 А. 22 question as stated, sir, because you have now individualized this protocol to Mr. Yurick, which 23 it's not a hypothetical question or it is. If it's 24 25 not a hypothetical question, then it's unanswerable

Rennillo Reporting Services

94 because of the fact it does not take into account 1 that Mr. Yurick had been on heparin at least until 2 3 9:30 and still had heparin in his bloodstream which is not even addressed in this protocol. 4 Q. Well, actually it is addressed in the 5 6 protocol; isn't it?" It's addressed in paragraph 7 number 3. Α. Well, we're not there yet. 8 9 ο. Yes. But you're asking me about the appropriate 10 Α. 11 initial dose --12Q. Okay. -- without even considering that factor. 13 Α. Well, then let's skip to paragraph 3, 14 Q. Doctor. Okay? For a second here. 15 16 It says: "If the patient enters the 17 laboratory on preprocedural heparin 18 19 infusion, modify the initial bolus as below." 20 Isn't that what it says? 21 22 Α. Yes, sir. And there is no dispute that Mr. Yurick did 23 ο. not, quote, enter the laboratory on preproced- --24 preprocedural heparin infusion; correct? 25

1He was not on a heparin infusion when he2came to the cath lab, Doctor. It's a simple3question. You're well aware of that, aren't you?4MR. MARGOLIS: Would you allow him the5opportunity to listen to your question and give an6answer?7THE WITNESS: The heparin he was on8preprocedural heparin.9BY MR. JONES:
3 question. You're well aware of that, aren't you? 4 MR. MARGOLIS: Would you allow him the 5 opportunity to listen to your question and give an 6 answer? 7 THE WITNESS: The heparin he was on 8 preprocedural heparin.
4 MR. MARGOLIS: Would you allow him the 5 opportunity to listen to your question and give an 6 answer? 7 THE WITNESS: The heparin he was on 8 preprocedural heparin.
5 opportunity to listen to your question and give an 6 answer? 7 THE WITNESS: The heparin he was on 8 preprocedural heparin.
 6 answer? 7 THE WITNESS: The heparin he was on 8 preprocedural heparin.
7 THE WITNESS: The heparin he was on 8 preprocedural heparin.
8 preprocedural heparin.
9 BY MR. JONES:
10 Q. Doctor, the paragraph says
11 A. I I I wanted to finish my answer and
12 then
13 Q. Okay.
14 A then you can go ahead.
15 Q. Go ahead. I'm sorry.
16 A. He was on preprocedural heparin. The char
17 is silent on exactly when it was stopped. There ar
18 no nurse's notes to document that. Dr. Moliterno
19 doesn't know exactly when it was stopped. The char
20 doesn't reflect exactly when it was stopped. It wa
21 not on apparently at the moment they started the
22 cath. But it was stopped sometime before. Whether
23 it was at 9:30, we don't know. Whether it was at
24 10:00, we don't know for sure. So the only way to
25 tell how much was on board was to assess with the

96 ACT before it's given and that does qualify as a 1 preprocedural heparin infusion. 2 Doctor, this protocol says very clearly: 3 0. "If the patient enters the 4 laboratory on preprocedural heparin 5 infusion, modify the initial bolus 6 as below." 7 Mr. Yurick did not enter the laboratory 8 9 with a heparin infusion, did he? Mr. Jones, it may have been stopped 10 Α. 10 minutes before, sir. We all have to use common 11 12 sense and some practicality we read these protocols. 13 Doctor --0. If it was stopped 10 minutes before, sir --14 Α. we talked about the half-life of heparin being about 15 90 minutes -- 10 minutes before still allows for 16 plenty of heparin to be in Mr. Yurick's body, and 17 that's a very important fact that I can't ignore now 18 19 because it may have been ignored here and that's why Mr. Yurick got into trouble. 20Okay. Doctor, have you looked at the 21 Q . precardiac catheterization checklist that is part of 22 the Cleveland Clinic Foundation chart for 23 24 Mr. Yurick's admission in January 1996? Yes, sir, I have. 25 Α.

MR. MARGOLIS: And I would request that 1 whatever records Mr. Jones is referring to that he 2 gives the witness the opportunity to review them. 3 MR. JONES: Absolutely. I'm -- I'm asking 4 5 him to find it. THE WITNESS: 6 Okay. 7 MR. MARGOLIS: Want to go off the record 8 while he looks for it, Mark. What are you making reference to so I can go ahead and try to find it? 9 THE VIDEOGRAPHER: I'm going to change 10 This marks end of tape number 1, Volume 1, 11 tapes. 12in the deposition of Jay N. Schapira. The time is 13 10:40. 14 (Discussion held off the record.) THE VIDEOGRAPHER: Back on the record. 15 16 This marks the beginning of tape number 2, Volume 1, in the deposition of Dr. Jay N. Schapira. The time 17 18 is 10:44. 19 BY MR. JONES: Doctor, have you found the cardiac 20 Q. catheretization lab checklist? 21 Yes, sir. 22 A. And do you see down on the lower right-hand 23 0. 24 corner the date 1/15/95 such as it is? 25 Α. In the upper right-hand corner I see a

Rennillo Reporting Services

98 1 date. Lower right-hand corner. 2 0. Lower right-hand corner. Yes. A. 3 Q. Okay. 4 And in very interesting handwriting. 5 Α. Yeah, it's -- I have -- I have to agree. 6 Ο. But there's no reason to disagree that that's 7 8 1/15/95; correct? 9 Α. Well --Do you have some reason to question that as 10 Q. the date? 11 12 Α. No, sir. 13 **Q**. Okay. I think it is. That -- that's the date of 14 Α. Mr. Yurick's -- this is the sheet, yes. 15 Okav. And the time is 0830 or 8:30 in the 16 ο. morning; correct? 17 Well, let me clarify something, please, 18 Α. Mr. Jones. The date in the upper right-hand corner 19 says January the 16th, 1996. The date in the lower 20right-hand corner says January the 15th, 1995. So 21 both dates are inaccurate. It's recorded twice on 22 here and they're both wrong. One's got the wrong 23 24 year, one's got the wrong day. 25 Q. Correct.

	99
1	A. But is this Mr. Yurick's sheet? I think
2	so, yes. That's it's got his name on it,
3	actually.
4	Q. Right. So there there was a problem in
5	the upper part of this writing in the appropriate
6	date, but
7	A. I would say both, really, if you look at
8	it.
9	MR. MARGOLIS: The procedure was '96.
10	BY MR. JONES:
11	Q. Well, it's after the new year. That's not
12	an unusual occurrence, is it, Doctor?
13	A. We all do that sort of thing, don't we?
14	Q. Right. That's that's not something that
15	we're going to spend time on.
16	Would you agree with me, Doctor, that from
17	looking at this, that we can safely say that this
18	was a document that was signed and dated should
19	have been dated 1/15/96 at 8:30 in the morning;
20	correct?
21	A. It looks like it.
22	Q. Okay.
23	A. It is timed 8:30. Is that the question?
24	Q. Yes. 8:30 in the morning; correct?
25	A. 0830 hours, yes.

100 Q. Correct. 1 That usually refers to a.m., yes. Α. 2 And there is -- there is a place in there 3 Q. for the nurse that has filled out this form to 4 5 indicate pre-op meds given; correct? الم علم علم 6 Α. Yes. 7 Okay. And it says on call hold hep; ο. 8 correct? 9 Α. Yes. 10 Q. Okay. O, slash, C, on call. 11 Α. 12 ο. On call, correct. And then it also has a 13 section under "Comments." Do you see that? 14 Α. Yes. Okay. And it says I.V. NS which stands for 15 Ο. 16 intravenous normal saline; correct? 17 Α. Yes. At 75 started at 0600; correct? 18 ο. 19 A. Yes. And there's no indication under I.V. --20Ο. under the I.V. notation there that there's any 21heparin going at 8:30 in the morning; correct? 22 That's correct. 23 A. 24 Q. Okay. The I.V. -- just so the jury is clear, Doctor, the I.V. heparin that Mr. Yurick 25

101 would be getting on the nursing floor would be 1 2 through an intravenous line; correct? 3 Α. Yes. All right. So the last notation we have of 4 Q. heparin actually being given prior to the procedure 5 6 is the nurse's notes at 0800. Are you aware of that nurse's note that 7 indicates that the heparin is actually infusing at 8 9 that time, 0800? 10 I am. Α. 11 Okay. So at 0830 there's no indication 0. that heparin's going; correct? 12 Well, I'm sorry. Perhaps I'm -- are we 13 Α. referring to the nursing notes now, sir? Because 14 nursing notes, the way they're charted is, if 15 there's no change in the condition of the heparin 16 infusion, then there would be no charting of it 17 being discontinued. So if it's charted at 0800 that 18 it's still infusing, then it's still infusing. It's 19 not been stopped. If it were stopped, it would be 20 noted so in the nursing notes. 21 22 I agree. At 0800 -- at 8:00 in the morning Ο. heparin was being infused at that time on the floor. 23 There's -- there's no issue about that. That's --24 25 but that is the last documentation that we have that

102 it was infusing; correct? 1 Yes. But you would expect for no 2 Α. documentation to be there if it was truly stopped. 3 I understand. Well, there -- there's no 4 Q. issue at all but that the heparin was stopped before 5 the patient got to the cath lab; correct? 6 I would agree with that. 7 Α. 0. All right. And so the issue is, the nurse 8 on the floor didn't write the time that this was 9 10 stopped in the nurse's notes; correct? That's correct. 11 Α. Okay. However, we have the precardiac 12 Q. catheterization lab checklist which is timed at 8:30 13 in the morning which indicates that the heparin is 14 on hold on call and that under the I.V. fluids being 15 16 given under "Comments," there's no mention of heparin being infusing at that time; correct? 17 I'm confused by your question. Can you 18 Α. 19 restate that, please. Sure. The precatheterization lab 20Q. 21 checklist. 22 Α. Okay. The nurse there obviously put down under 23 0. 24 "Comments" what was infusing at that time, I.V. normal saline at 75 started at 0600; correct? 25

	100
1	A. Right.
2	Q. Okay. And there's no notation there that
3	the heparin was infusing at that time; correct?
4	A. I I would not expect it to see there
5	see it there, but true, I don't see it there.
6	Q. Well, Doctor, if if there was an I.V.
7	infusion of heparin, can you have any reason why in
8	the precardiac catheterization lab checklist under
9	"Comments" where the nurse is talking about the
10	I.V.s she would not have included the I.V. for
11	heparin?
12	MR. MARGOLIS: Objection.
13	THE WITNESS: Yes, sir. Because she had
14	just noted it 30 minutes before in the nursing
15	notes.
16	BY MR. JONES:
17	Q. Doctor, were you ever given Nurse Holly
18	Serfillipi's deposition?
19	A. I don't believe I was. No, sir.
20	Q. Have Mr. Margolis or Mr. Finelli discussed
21	with you Holly Serfillipi's testimony in this case?
22	A. How do you spell her last name, please?
23	Q. S-e-r-f-i-l-l-i-p-i.
24	A. No.
25	Q. We were talking about the suggested

104	
1	protocol, Doctor. And if we accept that there was
2	no infusion of heparin when Mr. Yurick came to the
3	catheterization lab, you were talking about the
4	initial bolus of heparin and the protocol has
5	initial bolus of 100 units per kilogram as being the
6	recommended initial bolus; correct? It's in
7	paragraph 2 of that protocol, Doctor.
8	A. In a patient unlike Mr. Yurick, yes.
9	Q. Okay. So we know, first of all, that the
10	amount of heparin in the initial bolus in
11	Mr. Yurick's case was 70 units per kilogram. Less
12	than the suggested protocol; correct?
13	A. Yes, sir.
14	Q. All right. And the patient then would have
15	an ACT check done at that time, and in this case, we
16	have one. It's at 286; correct?
17	A. No, sir. You know, I I'm answering your
18	questions, Mr. Jones, but, you know, sir, this
19	doesn't apply to Mr. Yurick as you're asking. He's
20	not under part 2. He's under part 3 because he had
21	preprocedural heparin and
22	Q. Okay. Well, let's assume that he that
23	he's on preprocedural heparin. Okay? Let's have
24	your assumption as being correct. Let's say he's
25	infusing up until the second he shows up at the cath

	105
1	lab, Doctor. We'll make that assumption for you for
2	the time being. Okay? All right?
3	A. So you want me to assume as a hypothetical
4	that he's on preprocedural heparin?
5	Q. Yeah, that's what I think you're saying,
6	that we don't have any evidence of anything else so
7	I'm going to accept that for the moment. Okay?
8	A. Well, I think we just talked about at
9	8:00 he's receiving an infusion and here he is in
10	the cath lab now about two hours later, he's at the
11	cath lab desk. So he's on preprocedural heparin.
12	My point being that unless I mean, so you want me
13	to assume that, that what we just said is is a
14	fact?
15	Q. Yeah, let's assume that your interpretation
16	that he was on heparin right up until before he came
17	to the cath lab is an accurate one. I'm going to
18	accept that for the next couple of questions. Okay?
19	A. Well, I'm just saying he's on preprocedural
20	heparin and that and that that's provided for
21	under part 3 of this protocol.
22	Q. And and that's where we're going,
23	Doctor. So I'm saying
24	A. Okay.
25	Q we're going to accept that for the next

106	
1	few questions. Believe me, I'm not fighting with
2	you about it.
3	A. Okay.
4	Q. Okay? So we're going to accept that he's
5	on preprocedural heparin infusion as he enters the
~ ઈ	laboratory as is in this protocol. Okay?
7	A. Yes, sir.
8	Q. Well, in this case, he would get an ACT and
9	we have an ACT, don't we, in this case?
10	A. No, sir. Not prior to heparin.
11	Q. No, but we have one at 11:51 that is drawn
12	and is reported as 286; correct?
13	A. Well, sir, but 3(a) says check ACT but
14	before heparin bolus.
15	Q. You know, Doctor, I'm not really trying to
16	fight you about this. All I'm saying is in this
17	case we have a first ACT at 11:51. It's 286;
18	correct?
19	A. Yes.
20	Q. Okay. So the ACT drawn at 11:51 would
21	accurately reflect the effect of all heparin that is
22	on board for Mr. Yurick at that time; correct?
23	A. Okay.
24	Q. I'm not asking you to assume that. I'm
25	saying that's correct; isn't it, Doctor?

107 1 Α. Okay. Yes. So regardless of how much 2 Okay. ο. preprocedural heparin he ever received prior to 3 coming to the cath lab, Doctor, he then got a 4 5 5,000-unit heparin bolus and then an ACT was checked, and he was still subtherapeutic, wasn't he? 6 7 By the ACT of 286, yes. A. 8 Q. Okay. At that time. 9 Α. 10 So regardless of how much heparin he got, 0. 11 how long he got it or anything else, we know that 12 after he gets his initial bolus, his ACT is still subtherapeutic; correct? 13 14 Correct. By the -- by the criteria, yes. Α. All right. So he is going to get an 15 0. 16 additional bolus of heparin pursuant to this protocol; isn't he, doctor? Under number 3, 17 assuming he came in with a -- a heparin infusion. 18 19 Ά. Yes. Okay. And according to the protocol, which 20 0. you're accepting as the standard of care, how much 21 22 would he have gotten? He would get 50 units per kilogram. 23 Ά. So if he is 69 kilos and he gets 50, the 24 0. 25 total number that he could have gotten --

108	
1	MR. MARGOLIS: 65.
2	MR. JONES: I'm terrible without my
3	calculator.
4	MR. MARGOLIS: I have one if you'd like it.
5	MR. JONES: That's okay. I'm I'm
6	long-hand mathematics is not my strong suit anymore.
7	MR. MARGOLIS: Doctor, do you want a
8	calculator?
9	THE WITNESS: That's okay. 3,500 units.
10	MR. MARGOLIS: And I'll object 'cause he's
11	not 69 kilograms. He's 65.
12	MR. JONES: I'm sorry. That's right. He's
13	65 kilograms. So I got my calculation wrong here
14	anyway.
15	THE WITNESS: It comes to 3,250 units
16	approximately.
17	BY MR. JONES:
18	Q. Okay. And, Doctor, what was the second
19	bolus of heparin given in Mr. Yurick's case?
20	A. 2,000.
21	Q. Okay. So that is more than a thousand
22	units less than this protocol would have allowed;
23	correct?
24	A. That's correct.
1127 A/222

	109
1	feel was required to meet the standard of care for
2	preprocedure ACTs and bolusing of of heparin for
3	this patient, in the end, under the suggested
4	protocol in effect at the Cleveland Clinic in
5	January of 1995, Mr. Yurick would have gotten
6	actually would have gotten more heparin than he got
7	in this procedure; correct?
8	MR. MARGOLIS: I would at what point in
9	time? You say "this procedure." It starts and
10	ends. Would you please specify the point in time.
11	MR. JONES: I guess that's an objection
12	from Mr. Margolis.
13	MR. MARGOLIS: Yes, objection.
14	BY MR. JONES:
15	Q. The heparin given preprocedurally is, in
16	your estimation, all the heparin he's ever received
17	in his life, I guess, up until that last 2,000 units
18	of heparin that were given at 11:56 a.m. on
19	January 15th; correct?
20	A. No. Mr. Jones, it's what heparin he's
21	received, sir, before entering the laboratory. So
22	where you can see where this patient is with
23	regard to the heparin that he's received in the past
24	several hours plus you're going to add more heparin
25	plus you're going to add ReoPro plus he's on

Rennillo Reporting Services

110	
1	aspirin. So you're going to add a lot to this.
2	Q. You know, you brought up aspirin several
3	times. Let's let's get rid of this right away.
4	On every single protocol for every single
5	patient whose ever had angioplasty and had heparin
6	and ReoPro given, they all receive aspirin; don't
7	they, Doctor?
8	A. Yes.
9	Q. Okay. But my point, Doctor, that I've
10	I've I've tried to make, and I'm trying to work
11	my way through this as quickly as I can, but you
12	have accepted the the suggested protocol that
13	we've been going over from the Cleveland Clinic that
14	was generated in October '95 as an accepted standard
15	of care.
16	And my my point is that, even making
17	your assumptions from the facts we have in this
18	case, we know that Mr. Yurick under this protocol
19	would have received more heparin than he got from
20	Dr. Moliterno; correct?
21	A. If he had followed this protocol at that
22	point in time, yes.
23	Q. Okay. So, in fact, Dr. Heparin or
24	Dr. Moliterno is out in front of the protocol in his
25	treatment of Mr. Yurick. In other words, he's

 $\lesssim 3,$

giving less heparin to Mr. Yurick than the protocol 1 would have allowed; correct? 2 MR. MARGOLIS: Objection. Point of time. 3 BY MR. JONES: 4 5 Q. At any time. You're right, Mr. Jones, in the sense, sir, б Α. 7 that Dr. Moliterno is out in front of this protocol. 8 Dr. Moliterno is, in fact, right in there for EPILOG. And if he is right in there for EPILOG, 9 then he knows by EPILOG or by the package insert or 10 by the target of 300 to 350, any of those criteria, 11 12 that 374 where he gets to with all the heparin that he's received with the ReoPro is over the target. 13 And independent of how you want to do the 14 calculations, whether it's from the suggested 15 16 protocol, whether it's by doing the package insert, whether it's by measuring all your ACTs, you end 17 up -- by whatever mistakes or nonmistakes or smart 18 19 things you do to get there, you end up in the wrong 20 place. 21 Ω. Okay. And the wrong place is overanticoagulated 22 Α. 23 which means now you have to back off. But now that's fine, and we'll deal 24 Okay. ο. 25 with that issue now. Okay? I just want to make

111

112	
1	sure this jury is clear that under the protocol you
2	accept as a standard of care for Mr. Yurick's
3	procedure on January 15th, 1996, Mr. Yurick would
4	have received more heparin than Dr. Moliterno gave
5	him during the procedure; correct?
6	A. Well well, I don't think that's entirely
7	true, Mr. Jones, because of the fact, sir, that he
8	didn't really follow this protocol per se. He
9	didn't allow for the fact, sir he did not allow
10	for the fact that the that the ACT of 286 was
11	still had some time to respond to the ReoPro bolus
12	in terms of augmenting the ACT and moving it up into
13	that 300 range.
14	Q. But, Doctor, the protocol talks about
15	checking the ACT. And you'd agree with checking the
16	ACT five minutes after the medications are given is
17	appropriate standard of care; correct?
18	A. That is appropriate.
19	Q. Okay. And that is what all of these
20	protocols essentially used at at the most, five
21	minutes; correct?
22	A. Correct.
23	Q. All right. So
24	A. At the least five minutes as well. I mean,
25	five minutes is the right time.

	113
1	Q. Five minutes is the accepted time.
2	A. Right.
3	Q. Correct. So my point is simply this,
4	Doctor. That your criticism of Dr. Moliterno, as I
5	understand it, is that he used too much heparin in
6	this procedure and overanticoagulated Mr. Yurick;
7	correct?
8	A. Let me be clear on that, Mr. Jones. My
9	criticism of Dr. Moliterno in this procedure and
10	if I can just point it out on the exhibit, please
11	is 374.
12	Q. Okay. Well, then fine.
13	A. And and my
14	Q. Let's just stop right there.
15	A. And my answer to
16	Q. Then you have no criticism of 374
17	MR. MARGOLIS: Let him finish his answer,
18	Mr. Jones
19	BY MR. JONES:
20	Q. Doctor, if you're going to start at 374,
21	then can we accept that you're not critical of
22	anything before that ACT of 374 is arrived at in the
23	cath lab?
24	MR. MARGOLIS: Were you done with your
25	answer to Mr. Jones's question before he interrupted

114 1 VOU? THE WITNESS: No. 2 MR. MARGOLIS: All right. I'm going ask 3 you the opportunity to allow the witness to finish 4 5 his answer to your questions. BY MR. JONES: 6 Go ahead, Doctor. Finish the answer to 7 0. 8 that question. The problem is the ACT of 374. 9 We can Α. examine how Dr. Moliterno got there. That he did 10 follow protocol at times. He did not follow 11 protocol at times. He went in. 12 He went out. He exceeded this protocol at times, regardless of how 13 he got there. And he can tell you better how he got 14 there then I could. I only have the medical records 15 16 and the depositions. He ended up in a danger zone at 12:10 p.m. with a patient still getting ReoPro. 17 Well, Doctor --18 ο. And having received as much heparin known 19 Α. that he is a low body weight patient and with 20results warning about low body pa- -- low body 21 weight patients well in mind indicating that this 22 was the danger zone. Independent of how you got 23 24 there, that's where you were. And that's where you needed to rescue yourself from. 25

115 All right. Doctor --1 Ο. 2 Α. And go forward from that time. Okav. And -- and that's fine. I don't 3 ο. 4 mind starting and picking up this conversation I'm having with you at the ACT of 374 which was drawn at 5 6 12:10 p.m. on January 15th as long as we could clear 7 up the issues for the jury that prior to that time, 8 Dr. Moliterno exceeded the protocol here in the amount of heparin that Mr. Yurick received during 9 the procedure. 10 11 Some aspects, he did. And in some, he Α. didn't. 12 Well, Doctor, would you accept that ending 13 0. 14 up with a ACT that is beyond the target range is not 15 an indication that you've deviated from the standard of care in giving heparin? 16 17 Not necessarily a deviation. I would agree Α. with that, Mr. Jones. And that's why, sir, we 18 measure the ACT because then we have the opportunity 19 now to crank it down as we need to to adjust that 20 ACT and -- within our means which we have. 21 22 All right. And -- and so, Doctor, Ο. that's -- I just want to make sure we're clear. 23 The fact that there's an ACT of 374 in and of itself 24 25 does not speak to any negligence in the giving of

116	
1	heparin during the procedure; correct?
2	A. That's exactly right. You find yourself
3	going 95 down the freeway, you take your foot off
4	the gas, you apply a little brake, and soon you're
5	at 70.
6	Q. All right. Now, Doctor, you said that
7	Dr. Moliterno appears in the way he was
8	administering heparin to Mr. Yurick really fell more
9	in line with a subsequent study called EPILOG.
10	Are you familiar with that study?
11	A. Yes.
12	Q. And EPILOG was a study that was not
13	reported until 1997; correct?
14	A. That is correct.
15	Q. All right. And the the study patients
16	had been enrolled and studied up until January or
17	excuse me, December of 1995; correct?
18	A. Right.
19	Q. Okay. Now, but none of the data was
20	available to any of the physicians about the study
21	results for a number of months at the earliest after
22	Mr. Yurick's procedure; correct?
23	A. I can't speak to that, no. I mean,
24	normally data is preliminary data is discussed on
25	how things are coming out. And the fact is that

- 	117
1	that 70 units per kilogram that's in Dr. Moliterno's
2	note is exactly what's suggested, exactly what's
3	suggested by EPILOG.
4	Q. Yes. And, Doctor, if Dr. Moliterno and
5	others in this case who will testify say that the
6	first time any of the EPILOG EPILOG data was
7	available for discussion and disclosed to treating
8	physicians was in March of 1996, would you have any
9	reason to disagree with that at all?
10	A. I would.
11	Q. Why would you disagree with that, Doctor?
12	You just said you didn't know.
13	A. No, I I can tell you that the folks who
14	work for now Centocor, then Eli Lilly at the time,
15	were coming into our cath lab at the time and saying
16	hasn't been released yet, but these are some data
17	that are going to be released in a few months, and
18	that what this data says is, you need to reduce your
19	weight-adjusted dosing of heparin in the patient
20	you're using ReoPro in in these interventional
21	cases. We can't show you the data yet, but you guys
22	should do this. This is what the reps were saying.
23	They were telling us. We're way out here Los
24	Angeles, a long way from the Cleveland Clinic. But
25	they were telling us this.

118	
1	Q. So what you're saying, though, is
2	essentially, you know, if if some reps from
3	Centocor were out telling you that this data was
4	going to show something before any of the analysis
5	was done, you were changing the the use of the
6	medications in the treatment of your patients?
7	A. This was not some reps. These are the
8	people that work for Ely Lilly at the time before it
9	became Centocor.
10	Q. Well, Doctor
11	A. And they were telling us to weight-adjust
12	it down. They were telling us use 70 units per
13	kilogram. That was the thing to do. And and
14	this as it turned out, they were right on
15	because that's exactly what EPILOG suggested. Now,
16	we didn't have privy to the EPILOG study.
17	Q. Doctor, actually, the EPILOG study, the
18	results for the EPILOG study, have you have you
19	got a copy of that study available before you,
20	Doctor?
21	A. Somewhere in this stack here.
22	Q. Why don't you take a minute and we'll look
23	for that.
24	MR. MARGOLIS: Go off the record.
25	THE VIDEOGRAPHER: Going off the record at

1 11:08. 2 (Off the record.) THE VIDEOGRAPHER: Back on the record at 3 4 11:15. BY MR. JONES: 5 Okay, Doctor. I want to -- now, I think 6 Q. 7 we're starting at this ACT of 374 and that your criticisms had started there. You've mentioned the 8 EPILOG study, and I -- I -- actually, I only want --9 10 I'm going to limit myself, actually, to only one point out of the EPILOG study with you, Doctor. 11 12 There is a table 1 in the EPILOG study. Do 13 you have that? It's on page 1691. Table 1, yes, sir. 14 Α. 15 Q. Okay. Doctor, this is demographic information, clinical information, procedural 16 characteristics of the study patients in EPILOG. 17 And down at the bottom they talk about the 18 preintervention activated clotting time. 19 20 Do you see that? That's the -- the -- the 21 bottom three lines. 22 Α. Yes. 23 0. See it there? 24 And it talks about the interquartile range 25 of ACT. Do you see that?

120	
1	A. Yes.
2	Q. Okay. And so the jury understands what the
3	interquartile is, the interquartile is essentially
4	that 50 percent of the patients that are in the
5	middle; correct?
6	A. Okay.
7	Q. I mean, am I am I correct there?
8	A. Yes.
9	Q. All right. So
10	A. It's the middle 50 percent. The middle
11	half, so to speak.
12	Q. Right. So there's 25 percent of the
13	patients on one or other of that 50 percent to come
14	up to 100 percent of the patients; correct?
15	A. Correct. Correct.
16	Q. And in each of the procedure arms, the
17	protocol arms of the study that one's placebo plus
18	standard heparin. The other's ReoPro plus low-dose
19	heparin. The other's ReoPro and standard-dose
20	heparin. They give the interquartile range for the
21	ACTs; correct?
22	A. Yes.
23	Q. All right. And if we talk about ReoPro and
24	low-dose heparin, they have an interquartile range
25	of 247 to 324; correct? Do you see that?

247 to 324, correct. Α. 1 Correct. So that would mean that 2 0. 3 25 percent of the patients in that particular part of the study would have had ACTs in excess of 324; 4 5 correct? 6 That's correct. Α. All right. Doctor, is there anywhere in 7 Ο. 8 the EPILOG study where there is any mention, 9 suggestion, recommendation that patients who are outside the interquartile range in excess of that 10 interguartile range should receive Protamine to 11 12 reduce their heparin or to reduce their ACTs? 13 I don't recall where that was discussed Α. 14 except in one study where Protamine was suggested 15 for patients who are excessively anticoagulated but 16 it was not in the EPILOG study. Well, that wasn't in EPIC. It wasn't in 17 Ο. Dr. Aquirre's article, which we're going to get to 18 19 in a minute. That wasn't in EPILOG. Those -- those are the major studies; correct, Doctor? 2021 Α. Well, those are some of the major studies. I mean, there's a number of people who published on 22 this. Not just that one study. And it has been 23 24 suggested when patients are excessively 25 anticoagulated, because excessive anticoagulation

122	
1	leads to excessive bleeding, that it be reversed
2	with Protamine.
3	Q. But in this particular in EPIC which
4	we've been talking about, PROLOG which we haven't
5	really talked about much and I'm not going to really
6	go into it, but you've mentioned. EPILOG, and the
7	Dr. Aguirre's article, there's no discussion of
8	using Protamine to reduce ACTs that are out
9	beyond the target range; is there?
10	A. They may have referenced the article. I
11	would have to go back and check all your references
12	in the back of this one, but I don't believe they
13	discuss that. They did not discuss the therapy of
14	overanticoagulation in the study. They merely
15	address the up-front portion of how to get there.
16	Q. Okay.
17	A. Not the back end of how to adjust it.
18	Q. Doctor, with an ACT of 374, there is still
19	a risk of the patient during the procedure having a
20	thrombus, a clot form in the coronary arteries;
21	correct?
22	A. That is correct at any level.
23	Q. Correct. And and a patient may during
24	the procedure have chest pain which would be a
25	manifestation or at least raise the concern of a

1 possible clotting in a coronary artery causing that 2 chest pain; correct? 3 Ά. That's correct. That's quickly, you know, 4 processed by, you know, looking at your angiogram 5 and see where you are. 6 0. Okay. But that is -- that is part of the 7 thinking that goes on during the -- the process of 8 doing angiography and doing angioplasty; correct? 9 Α. That's correct. 10 Okay. Because you constantly have to be Q. 11 concerned of the primary complication of angioplasty, which is thrombus formation or clot 12 formation in a coronary artery or reocclusion of 13 that coronary artery; correct? 14 15 A. That is a major complication. 16 Okay. Q. 17 Α. Yes. And one of the risks of Protamine, Doctor, 18 0. 19 is just as you can give too much heparin and maybe overshoot your target range some, if you give 20 Protamine, the effect is sort of unpredictable and 21 22 you can end up below the therapeutic level; correct? 23 Α. Only briefly and then you would check again. Again, the secret here is to check frequent 24 25 You can adjust just as you want it in. ACTs. You

ູເບົ an dial it in by basically checking your ACT and giving either Protamine or heparin. 2 So you can on a cycle of every 10 minutes 3 0. or so or 15 minutes or so get ACTs is what you're 4 saying. 5 15 minutes, yes. 10 minutes if you wish, 6 Α. 7 yes. So do you see any risk factor to patients 8 0. in taking a patient with an ACT of 374 and giving 9 Protamine? 10 Do you mean in addition to the risk of this 11 Α. procedure in general? No. 12 So you don't see an increased risk of a 13 Q. patient getting a clot formation of the coronary 14 15 artery if you give Protamine under those circumstances? 16 17 Reducing someone's ACT from 374 to, say, Α. 18 300 or 310 or 325 with some Protamine is not going to make a clot more likely in a coronary artery. 19 And so does it add excessively to that risk over 20 what's already their baseline? 21 No. Doctor, if you have an ACT of 374 in a 22 0. patient who is having chest pain during your 23 procedure, not during a balloon inflation, which is 24 an artificial way of occluding the coronary artery 25

1 but before balloon inflation, is it appropriate to 2 give additional heparin?

A. What's appropriate to do is to image the artery and see if there's clot. If there's not clot and there's good flow, then the problem is not clot. I'm not going to give more heparin to someone who is already at 374. That's really correcting the wrong factor. You're going down the wrong avenue there.

But if -- but if you feel that the cause of 9 Q. 10 the chest pain might be as a result of a clot 11 formation or occlusion of the vessel, you can give additional heparin even with an ACT of 374; correct? 12 That's probably -- well, it's unlikely that 13 Ά. that is the problem. I think that -- I think that 14 that is not likely, and I -- I don't think that's 15 the right thing to do, Mr. Jones. That's not likely 16 17 to help.

18 The last thing I think I want to discuss 0. with you, Doctor, is this issue of low weight 19 patients and their risk for bleeding complications. 2021Doctor, is there any suggestion in any of the studies that you've read that low weight 22 patients have an increased risk of intracranial 23 24 hemorrhage than nonlow-weight patients? 25 There is an increased risk, but it's not Α.

126	
1	statistically significant in the EPIC study.
2	Q. Okay. And so low weight patients have an
3	increased risk of a major bleeding complication
4	primarily at the access for the sheath in the groin;
5	correct?
6	A. Yes, sir.
7	Q. And they don't they don't because
8	they're lighter-weight patients, they don't have as
9	much tissue and so forth in that area to to give
10	support to the femoral artery, and that's one of the
11	things that contributes to their increased risk?
12	A. No, sir. It is what it is is it's
13	excessive anticoagulation that causes the excessive
14	bleeding complications and whether it's in the brain
15	or vascular access in the femoral region or venous
16	access or wherever, what it really boils down to is,
17	you have to have a certain number of intracranial
18	hemorrhages to reach statistical significance. You
19	just simply don't have enough of that occurrence in
20	those studies to reach a statistical bar that's been
21	set. Doesn't mean it doesn't occur but, you know,
22	as it's stated in here clearly, as Dr. Moliterno
23	says in his articles, excessive anticoagulation
24	leads to excessive bleeding.
25	Q. I'm not contesting that, Doctor. I'm

I'm just trying to be clear that there's no 1 2 indication from any of the studies up until today that you can reference that indicate that lower 3 weight patients have an increased risk of 4 intracranial hemorrhage during this procedure with 5 the administration of these drugs. 6 7 I think that they do have an increased Α. 8 risk. 9 And that's because, if I would understand 0. 10 you correctly, you believe that their total dose of heparin per body weight tends to be higher; correct? 11 A. No, sir. I think that with higher 12 13 out-of-range ACTs like 374 at 12:10 p.m., that 14 excessive anticoagulation leads to excessive bleeding. 15 16 Q. Well, you're saying that in a -- in a 17 thinner patient an ACT of 374 is more dangerous than 18 for a regular weight patient? That seems to be the case, yes, sir. 19 A. 20Q. Okay. 21 As a heavier patient, that does seem to be A. 22 the case, yes. Did Dr. Aguirre in his article that you've 23 0. 24 mentioned before attempt to look into that particular issue, Doctor? 25

Rennillo Reporting Services

127

128	
1	A. Now, let's be sure we're talking about the
2	same article.
3	Q. Yes. This was the one that was actually in
4	circulation which is an analysis of the EPIC data
5	which I think we were sort of at cross-purposes on
6	earlier. "Bleeding Complications" is the beginning
7	of the article. It's in December 1994.
8	A. Okay.
9	MR. MARGOLIS: Can we go off the record
10	while you locate it so the jury isn't
11	THE VIDEOGRAPHER: Going off the record at
12	11:26.
13	(Discussion held off the record.)
14	THE VIDEOGRAPHER: Back on the record at
15	11:27.
16	BY MR. JONES:
17	Q. Doctor, Dr. Aguirre was looking at the EPIC
18	data in attempting to draw conclusions regarding
19	complication rates; correct?
20	A. Yes, sir.
21	Q. Okay. And could you refer to table 6 in
22	Dr. Aguirre's article, please.
23	A. Yes, sir.
24	Q. And that table is headed "Major Bleeding
25	Among Patient Subgroups"; correct?

Α. Yes, sir. 1 2 And Dr. Aguirre did an analysis where the 0. 3 heparin dose -- the total heparin dose per kilogram was analyzed in three different weight groupings; 4 5 correct? Yes. That's one of the analyses he did, 6 Α. 7 yes. Okay. And the first weight grouping is 8 Q. 9 those patients who are 70 kilos or less in weight; 10 correct? 75, sir. Or less in weight. 11 Α. The heparin dose units per kilogram, 12 0. 13 Doctor. 14 A. Yes, sir. You were talking about -- you asked -- your question was about weight, though, not 15 about dose. 16 Q. Well, they're talking about -- Dr. Aguirre 17 18 attempted to look at heparin dosing and its relation to weight; correct? It's units of heparin per 19 kilogram of weight; correct? $\mathbf{20}$ 21 So you're asking about dosage, not about Α. the weight of the patient; correct? 22 23 Correct. Ο. 24 A. Yes, sir, he did. 25 Because the weight of the patient would Q.

130	
1	determine where he falls within this dosing regimen
2	under the heparin dose units per kilogram; correct?
3	A. Yes.
4	Q. Okay. Put more simply, if you give a
5	hundred units to a patient who weighs a hundred
6	kilos, you're going to get one number. You give a
7	hundred units to a patient who weighs 75 kilos, the
8	number will be larger; correct?
9	A. Yes.
10	Q. Okay.
11	A. In dose per kilogram, yes.
12	Q. Exactly. So the first subgroup are those
13	patients who are 70 kilos or less in weight;
14	correct?
15	A. Yes.
16	Q. All right.
17	A. Well, no, sir. It's it's the heparin
18	dose
19	Q. Oh, I'm sorry.
20	A. Not 70 kilograms.
21	Q. I'm sorry. I'm sorry.
22	A. You see the problem I've been having with
23	the questions.
24	Q. That's why I see you're confused. I
25	apologize, Doctor, because this does get confusing

131 1 for everyone. 2 The doses -- those patients who receive 3 less than or equal to 70 kilos; correct? Or units. Per kilo. 4 Α. 5 Q. Per kilo; correct? 6 A. Okay. You're looking at the last section 7 of the graph. 8 0. Correct. 9 A. It's a four-part chart. 10 Q. Correct. 11 The last section is "heparin dose," comma, Α. 12 "units per kilogram." Q. Okay. 13 14 Α. Okay. And the -- and the incidence of major 15 Q. 16 bleeding for the patients who were getting ReoPro plus the infusion was 7.2; correct? 17 Yes, sir. 18 Α. 19 That's the percent of patients who had Q. major bleeding complications. 20 Yes, sir. 21 Α. 22 Okay. Patients who received 70 to Ο. 120 units per kilogram. 23 Yes, sir. 24 Α. 25 That's the second grouping; correct? Q.

132 Yes, sir. 1 Α. And those patients had a major compli- --2 Q. major bleeding complication in 7.7 percent of the 3 cases; correct? 4 5 Α. Yes, sir. So essentially those two groups are 6 0. 7 statistically about the same. 7.2 or 7.7 percent; 8 correct? 9 A. Correct. All right. And the third group are those 10 Q. patients who receive 120 units or more per kilogram; 11 12 correct? A. Yes, sir. 13 14 Q. That's the third grouping. Yes, sir. 15 Α. 16 Q. And they had a significantly increased risk 17 of bleeding. That is, 11.8 percent; correct? 18 Yes, sir. Α. Okay. Now, in Mr. Yurick's case, Doctor, 19 **Q**. and I'm not going to have you write out the 20calculation, but am I correct that Mr. Yurick in the 21total dose that he received was approximately 22 105 units per kilogram? 23 24 Α. No, sir. I think he received more than 25 that because, sir, we have to count the amount of

133 heparin that he had on board. And if you assume by 1 2 the half-life of heparin that he had his heparin stopped at 9:30 -- in fact, just to show you this, 3 4 if it was stopped at 9:30 --5 I'm going to object. I'm going to object. 0. 6 Ά. -- that --7 I'm going to object. Now, wait a second. Q. 8 Doctor --9 A. -- at -- I'm answering your question, 10 Mr. Jones. 11 Ο. No. 12 And when I'm done, you can object. Okay? Α. 13 Let it get on the tape. 14 Q. Go ahead. Go ahead. 15 You may be overruled, Mr. Jones. Α. 16 Q. You never know. 17 You never know. Α. 18 I can always make my objection and then you Q. 19 can answer --20 Right. A. 21 -- if you let me make my objection, Doctor, Q . 22 so --23 You made it. Ä. 24 MR. MARGOLIS: Let him object. I've done that. 25 THE WITNESS:

134 1	MR. MARGOLIS: Say whatever he wants.
2	THE WITNESS: Done?
3	BY MR. JONES:
4	Q. Go, Doctor.
5	A. Thanks. If you look at the amount of
6	heparin he had on board, assuming it was stopped at
7	9:30, he had over 120 units per kilogram. So if you
8	look at total procedural heparin that this gentleman
9	had, and assuming a half-life of 90 minutes, he's at
10	the greater than or equal to 120 units per kilogram.
11	He does in the total procedural dose of heparin dose
12	fit into greater than or equal to 120 units per
13	kilogram. He does get up to the 11.8 percent
14	incidence of major bleeding among patient subgroups.
15	If you look at him just from the heparin dose point
16	of view, he is significantly higher.
17	Q. Doctor, did the EPIC study include in their
18	calculation of the total heparin dose heparin
19	infusions prior to the procedure?
20	A. May I have the question again, please.
21	Q. Yes. In in the EPIC study, was there
22	any calculation or inclusion of preprocedural
23	heparin? That is, heparin before the patient comes
24	and gets a bolus in the cath lab. Was there any
25	inclusion in the calculations for total heparin dose

for that preprocedure heparin? 1 I don't think I understand your question. 2 Α. Okay. Doctor, you want -- you want to 3 0. 4 include some calculation for the heparin that Mr. Yurick was getting prior to his coming to the 5 6 cath lab; correct? Yes, because it is a fact that he was. 7 Ä. Okay. And -- and, you know, this is why I 8 Q. went through this whole 286 ACT and so forth. 9 But my point being, there was no inclusion of that type 10 11 of heparin being included within the heparin doses calculated in EPIC or PROLOG or in EPILOG or in any 12 of these studies, did it? 13 That should be taken into account 14 Α. because --15 But, Doctor, should -- should -- it wasn't 16 ο. 17 taken into account. The doctors know that in fact the ACT 18 Α. should be measured to see how much is on board. Τf 19 it was zero -- you know, if it was stopped at 6:00 20 as you would have me believe, counterfactual to the 21 records, and if there was no heparin on board at the 22 time the procedure began in the cath lab, which is 23 counterfactual, if you would have everybody believe 24 25 that, fine. Then there's no preprocedural heparin.

136	
1	So how in the world would with 7,000 of
2	heparin and ReoPro you get to 374 and the man having
3	have an intracranial bleed? How is that going to
4	happen? It shouldn't happen by your logic, but it
5	did happen. As a matter of fact, it did happen.
6	And that's because this patient had all of that
7	anticoagulation on board.
8	Q. But, Doctor, I have a very simple question.
9	And you refuse to answer it.
10	A. No, I didn't.
11	Q. It is this: Is there any
12	A. I didn't.
13	Q study is there any study that you've
14	been referring to in relying on and giving your
15	opinions in this case in which heparin being given
16	to the patient for the time period before they come
17	to the cath lab is included within the total heparin
18	received by the patient in these calculations? The
19	answer is "yes" or "no."
20	A. In the studies that we have discussed, I
21	don't recall. I would have to go back and review
22	each study to see what it says about preprocedural
23	heparin in the methods. I'd have to go back and
24	review all the studies.
25	Q. Doctor, you see in table 6 of the Aguirre

137 article right at the bottom. It says, "total 1 2 procedural heparin dose"; correct? I do see that. 3 Α. Okay. It says nothing about including any 4 Ο. 5 preprocedural heparin doses; correct? Α. Correct. 6 7 0. And the fact is that with the total procedural dose that Mr. Yurick received, he would 8 have fallen within the range of 70 to 120 units per 9 kilogram because he was at about 105, and the 10 percentage of bleeding complications in patients in 11 that dose range was essentially the same as lighter 12 weight patient -- or in patients who received less 13 14 than that; correct? You mean the 70 to 120 being comparable 15 Α. 16 than the less than or equal to 70. 17 Correct. Q. 7.2 and 7.7 are comparable, yes. 18 Α. Okay. And the very substantial increase to 19 Ο. 11.2 percent of com- -- major bleeding complications 20 occurs when the total procedure dose was greater 21 than or equal to 120 correct? 22 11.8. And that is correct. 23 Å. 24 Doctor, there's an ACT missing from the Q. time line that you've been referring to. There's 25

Rennillo Reporting Services

138 the ACT at 4:00; correct? 1 It's not there. It's here actually 2 Α. Yes. in -- it's in the records. It's not on this time 3 4 line. It doesn't appear on the time line. And --5 0. 6 and, Doctor, the ACT at that time was 106; correct? Yes. 7 Α. And so at 4:00 we know that Mr. Yurick's 8 0. activated clotting time was within the normal range; 9 10 correct? 11 Α. Yes. So --12 ο. Well, it was within the -- yes. It was 13 Ά. 14 down considerably. Well, the normal range is less than 120, 15 0. isn't it, Doctor? 16 17 Α. Yes. Okay. So that it's down considerably and 18 Q. 19 it's within the normal range. Correct. 20 Α. All right. So at the time the first 21 Ο. 22 evidence of possible bleeding -- that is, complaints of nausea and vomiting -- at -- well, actually, 23 yeah, nausea and vomiting at 3:00, there are a 24 number of reasons a post-angioplasty patient may 25

139 complain of nausea and vomiting and an increase in 1 2 their blood pressure; correct, Doctor? 3 Α. Yes. And one of those can be occlusion of a 4 0. 5 coronary artery from a thrombus; correct? 6 A. Yes. 7 So he may be having the early signs of a 0. myocardial infarction; correct? 8 Likely in the absence of chest pain, in the 9 Α. absence of the nurse or the doctors responding with 10 11 an EKG, I don't think that was high in their 12 differential. 13 But, I mean, that's the kind of thing that Ο. 14 can cause a patient to be nauseous and vomiting, 15 that sort of thing; correct? 16 Ā. We're talking about possibilities or realities? Yes, it's possible. Realities is they 17 didn't respond in that way to diagnosing acute MI. 18 They didn't do an EKG. The doctors didn't rush over 19 to see him at that point. 20 You're not aware of the fact that at 3:00 21 Ο. 22 an EKG had been ordered for this patient? And it didn't show an acute MI. 23 Ä. 24 Well, but, Doctor, my -- you said they Q. 25 didn't react the way that they would be thinking it

Rennillo Reporting Services

140	
1	might be an MI. And they didn't get an EKG is
2	exactly what you said. Of course they got an EKG at
3	that time, didn't they, Doctor?
4	A. Excuse me. I misspoke. It did not show an
5	acute MI at the 3:00 EKG. So sure, it could be, but
6	it's not. They did that.
7	Q. Correct. So they there are a number of
8	other things that can cause that kind of a problem;
9	correct? Those complaints; correct?
10	A. Well, we ruled out the one big one. It's
11	not an acute MI.
12	Q. Which was the first thing to do; correct?
13	A. Okay. Okay.
14	Q. And you act to try to bring down the blood
15	pressure; correct?
16	A. Say again, please.
17	Q. It's appropriate to act to bring down
18	attempt to bring down the blood pressure; correct?
19	A. Yes.
20	Q. Because an increased blood pressure can
21	increase the risk of a bleeding complication, can't
22	it?
23	A. Yes.
24	Q. So if the patient did not yet have a bleed
25	at 3:00 and became nauseous and vomited, that can

141 cause an increase in the blood pressure, just the 1 2 nausea and vomiting; correct? 3 Cause a CNS bleed? Α. 4 0. No. It can cause an increase in the blood 5 pressure. 6 Possibly, yes. Α. 7 Okay. And an increase in the blood Ο. pressure can then result in an intracerebral bleed, 8 couldn't it? 9 10 Or a perpetuation of one that's already Α. there is more likely, of course. 11 Well, but you don't know one which it is at 12 ο. 13 that point; correct? I think it had occurred before 3:00. 14 Α. No. Do you know whether Mr. Yurick had 15 Ο. complained of nausea and vomiting on a number of 16 occasions prior to his catheterization procedure? 17 18 Α. Yes. So his complaints of nausea and vomiting 19 Ο. 20 were not new; correct? 21 A. Correct. Doctor, I think you've given the opinion 22 Q. that the ReoPro infusion which continued after the 23 24 ACT result of 374 in some way maintained the ACT at an inappropriately high level; correct? 25

142	
1	A. Maintained the anticoagulation at a
2	inappropriately high level of anticoagulation.
3	Q. Okay. But you're not saying its effect on
4	ACT would have been significant after 12:10 p.m.
5	when the ACT was 374.
6	A. It does have some effect.
7	Q. A few seconds, I think you said.
8	A. A few seconds. It's 30 to 40 seconds
9	roughly.
10	Q. So the heparin, in your opinion, Doctor, by
11	3:00 may have had no impact on this gentleman's risk
12	for intracerebral hemorrhage, and it may have just
13	been the ReoPro; correct?
14	A. No. It's both. It's the whole
15	anticoagulation picture here.
16	Q. Well, we know by 4:00 the ACT is 106;
17	correct?
18	A. Right.
19	Q. And you're saying that at 3:00 that was
20	still an inaccep unacceptably high level, the
21	ACT?
22	A. 106? At 4:00?
23	Q. No. At 3:00 it would have been an
24	unacceptably high level of ACT.
25	A. There's none checked at 3:00.

Well, I'm saying can you state to a 1 Q. 2 reasonable degree of medical probability that it would have been, if checked at 3:00, unacceptably 3 4 high? You know, Mr. Jones, I can tell you to a 5 Α. reasonable degree of medical probability that it 6 7 should be checked according to the study protocol which is to check it hourly following the procedure. 8 Do you know why --9 0. 10 So if at 3:00 p.m. it would have been Α. checked according to the protocol, you would have 11 The point is, it's an unpredictable number. 12 known. 13 You cannot predict it. You have to check the ACTs. 14 That's why it says to do it hourly in the Cleveland Clinic protocol. 15 16 0. Do you know why that hourly ACT check is 17 within the protocol? 18 Yes, sir. To prevent complications of Α. excessive anticoagulation and excessive bleeding and 19 also to time when the sheath can be removed from the 20groin if that's the protocol strategy for that 21 particular patient. 22 Well, actually, Doctor, that's the reason 23 0. 24 for the --25 MR. MARGOLIS: Objection.

Rennillo Reporting Services

144 BY MR. JONES: 1 Doctor, if I told you that that's the 2 0. reason that the protocol says to check hourly after 3 the procedure to determine the appropriate time to 4 remove the sheath -- that is, to remove it as soon 5 as possible because it is thought that early removal 6 of the sheath reduce the risk of major bleeding 7 complications at the groin -- would you have any 8 reason to doubt that that is the purpose of that 9 10 part of the protocol? 11 Α. If you told me that's the only reason, yes, 12 I would doubt that. Doctor, you say that ReoPro has an impact 13 ο. on the overall anticoagulation status and that it is 14 somehow contributing to the problem with the heparin 15 16 and the aspirin on board. But, Doctor, you're not even sure of the mechanism of how ReoPro affects the 17 bleeding time and so forth, are you? 18 19 Ά. There's speculation how it affects. Τ'm not absolutely clear a hundred percent. I don't 20 think we're going to find any molecular cardiologist 21 or biologist who's absolutely certain of how it 22 I could sit here and speculate and tell you 23 works. 24 how it's said to work, but who knows if I'm right or the article that I read is right. 25
145 MR. JONES: Give me just a second here, 1 2 Doctor. 3 That's all I have, Doctor. 4 THE WITNESS: Okay. 5 MR. MARGOLIS: Okay. THE VIDEOGRAPHER: Off the record? 6 7 MR. MARGOLIS: No. We're on the record. 8 You should be able to hear me. I'm going to go up 9 to this board. If I'm talking at this level, this mike pick me up? 10 Actually, I have the 11 THE VIDEOGRAPHER: 12 table mike. That's fine. 13 MR. MARGOLIS: Yeah, this will do it. 14 Okay. Back on the record. 15 THE VIDEOGRAPHER: Do you want to be 16 videotaped? MR. MARGOLIS: Would you please focus in at 17 18 10:31. Are you there? 19 20 REDIRECT EXAMINATION BY MR. MARGOLIS: 21 Doctor, can we agree at 10:31 where I have 22 Q. marked A is the point where the catheterization 23 24 procedure starts? A. Yes, sir. 25

146 And can we further agree, Doctor, that at 1 Q. 1:05 where I have put a letter B, that is the time 2 that the angioplasty procedure is over? 3 Yes, sir. 4 Α. All right. Doctor, I want you to assume 5 Q. for the sake of this question that Dr. Moliterno 6 7 does nothing wrong in the care and treatment of this patient until point C which is the ACT of 374 at 8 9 12:10. 10 Okay. Α. So I want you to assume that Dr. Moliterno 11 0. does everything correctly and at 12:10 you have an 12 ACT of 374 in this patient who we know, based upon 13 his weight, is in the highest risk of developing 14 major bleeding complications. 15 Is there anything in the questions that 16 Mr. Jones has asked you that would cause you to 17 18 change your opinion that what Dr. Moliterno did or failed to do after this point constituted a breach 19 20 of the standard of care? 21 Α. No. All right. Because the -- the case, like 22 0. this deposition, has a beginning, a middle and an 23 24 end; does it not? 25 Α. Correct.

6						
		147				
	1	Q. Did Dr. Moliterno still owe this patient,				
	2	Marty Yurick and his family, responsibilities to				
	3	properly manage and monitor his anticoagulation				
	4	status after 12:10?				
	5	A. Yes.				
	6	Q. Did he?				
	7	A. No.				
	8	Q. Now, Mr. Jones asked you questions about				
	9	the drug Protamine. And I believe one of the				
	10	questions he asked you is, is there any article that				
	11	you are aware of that talks about Prøtamine being				
	12	used to reverse an anticoagulation status in				
	13	patients being given ReoPro and heparin undergoing				
	14	PTCA.				
	15	Do you remember that?				
	16	A. Yes, sir.				
	17	Q. Would you please identify for the ladies				
	18	and gentlemen of the jury what I've just given you.				
	19	A. Yes, sir. This is an article from the				
	20	literature from the Clinical Cardiovascular Research				
	21	Center of greater Cincinnati, the Ohio Heart Center.				
	22	This article is by Dr. Kariokis and Dr. Broderick,				
	23	Dr. Wang and others. And it talks about hemorrhagic				
	24	complication in ReoPro-treated patients being				
	25	associated with an elevated in-laboratory ACT and				
II						

ſŕ

148	
1	how bleeding risk can be reduced with the
2	intravenous Protamine, which is a readily available
3	heparin antidote to reverse some of the heparin
4	effect.
5	Q. Is that the same Protamine that you
6	indicated in your testimony should have been given
7	to Marty Yurick?
8	A. Yes, sir.
9	Q. All right. Now, we talked about or
10	Mr. Jones talked to you about the Dr. Aguirre
 11	article that was also coauthored by other physicians
12	and about what, if anything, that article said
13	pertaining to the risk of bleeding in patients
14	undergoing treatment with ReoPro and heparin based
15	upon weight.
16	Would you indicate to the ladies and
17	gentlemen of the jury that area that I have marked
18	from that article.
19	A. Yes, sir. This is published in 1994, in
20	circulation. It's by Dr. Frank Aguirre or Aguirre.
21	And it is actually published, excuse me, in 1995.
22	It was accepted in 1994. And it's from a number of
23	institutions, including the Cleveland Clinic. And
24	what it talks about is that major bleeding events
25	were more common in lower weight patients, and major

bleeding complications, major bleeding, was more 1 2 frequent in those that weighed less than or equal to 75 kilograms. 17.8 percent versus 4.1 percent. 3 And 4 those who received higher procedural heparin doses per kilogram body weight had a higher complication 5 6 rate of 11.8 versus 3.3. 7 And what group did Mr. Yurick fit in based Ο. upon his body weight? 8 He fit into the highest risk group because 9 Α. he weighed 65 kilograms and the highest risk group 10 11 is those that weigh less than or equal to 12 75 kilograms. 13 Q. Mr. Jones also talked to you about the 14 effect of turning off the ReoPro earlier as you 15 testified should have been done. And I give you an article of April of '94 and ask you if this article 16 17 talks at all about when does the effect of ReoPro 18 stop. The effect of ReoPro, the blockade on the 19 Α. 20 platelets, will continue throughout the infusion, and the recovery of the suppression of the platelets 21 does not begin to reverse until after the 22 discontinuation of the infusion. 23 What is the significance of that fact set 24 0. 25 forth in that article based upon the facts of this

Rennillo Reporting Services

Jay N. Schapira, MD

1	
150	
1	case?
2	A. The reason that's important is because the
3	ReoPro bolus was given at 11:40. The infusion
4	started at 11:42. And through the time when the
5	bleed occurred, it was continued and not
6	discontinued until after the bleed had occurred and
7	the ReoPro was not stopped until approximately
8	4:00 p.m.
9	Q. Doctor, the protocol paragraph 4 of the
10	Cleveland Clinic that talks about following up with
11	ACTs on an hourly basis, in any part of that
12	protocol paragraph 4, does it say in black and white
13	in writing the reason for doing that such as
14	Mr. Jones suggested?
15	A. It simply says to check the ACTs or aPTTs
16	hourly following the procedure.
17	Q. And as a board certified cardiologist
18	practicing interventional cardiology, why was that
19	what Dr. Moliterno was supposed to do, based upon
20	his own hospital's protocol?
21	A. To assure that, number one, that this
22	patient's anticoagulation status had come back
23	within a reasonable range to be sure that the
24	patient doesn't continue to be overly anticoagulated
25	like we showed on the graph and to as well to
11	

check the ACT with regard to appropriate timing of 1 2 removing the femoral sheath. So it has multipurposes in guarding against 3 overanticoagulation as well as knowing when to 4 5 remove the sheath. And based upon the facts of this case, did 6 Ο. 7 Dr. Moliterno check the ACTs hourly? 8 Α. No. Mr. Jones talked about the 4:00 time line 9 0. and how there was a failure to list an ACT of 106. 10 He is correct. In addition to the ACT at 106 which 11 is normal, what else was documented about Marty's 12 condition at 4:00 which Mr. Jones didn't ask you? 13 That he was disoriented. He was having 14 Α. difficulty following commands. He was speaking in 15 16 foreign languages. 17 All of that in a normal ACT, huh? Ο. Right. 18 Α. Doctor, my last question is, Mr. Jones is 19 Q. discussing with you the -- the likelihood that these 20 drugs could have actually caused an intercerebral 21 You've testified earlier that there was an 22 bleed. insert from Eli Lilly setting forth information that 2324 doctors use about the drugs. And would you please look at Exhibit 24-D which is that insert that would 25

152 have accompanied the drug ReoPro in January of 1996. 1 2 24-D. Α. Yes. 3 Does the insert from Eli Lilly that 4 0. accompanied the drug ReoPro in January of 1996 talk 5 about intercranial bleeds being an adverse 6 consequence or reaction to this drug? 7 8 Α. Yes. Please read it exactly as it appears. 9 0. Yes. It says under "Adverse Reactions, 10 Α. Bleeding": 11 "Major bleeding events were 12 defined as either an intercranial 13 14 hemorrhage or a decrease in hemoglobin greater than 5 grams per 15 deciliter." 16 And lastly, is it your opinion wherein a 17 Q. reasonable degree of medical certainty, based upon 18 the records you reviewed in this case, your skill, 19 your expertise as a board certified cardiologist $\mathbf{20}$ doing interventional procedures, as to whether the 21 intercranial bleed that Marty suffered on 22 January 15th, 1996, was the type of major bleeding 23 24 complication which Eli Lilly warned about in Exhibit 24-D? 25

153 That's correct. 1 Α. It was. 2 MR. MARGOLIS: Nothing further. 3 MR. JONES: Very quickly, Doctor. 4 5 RECROSS EXAMINATION 6 BY MR. JONES: 7 The suggested protocol at the Cleveland Q. Clinic, paragraph number 4, which talks about check 8 9 ACTs or PTTs hourly following the procedure. 10 Paragraph 4. See it? 11 Α. Yes. The rest of that after that sentence 12 Okay. 0. 13 where you stopped, it says: 14 "When ACT is less than 175 15 seconds or PTT is less than 50 16 seconds can remove femoral artery 17 sheath. Do not stop the ReoPro 18 infusion. Sheaths can be safely 19 removed during platelet inhibition. 20Maintain manual or mechanical groin compression for at least 30 minutes. 2122 Strict bed rest with leg immobilized 23 for 4 to 6 hours after the end of the ReoPro infusion or six hours 24 25 after sheath removal, whichever is

154	
1	longer."
2	And that's the end of the paragraph;
3	correct?
4	A. Yes.
5	Q. So each item in that paragraph is dealing
6	with sheath removal, mechanical compression to the
7	groin to avoid hemorrhagic problems, strict bed rest
8	with the leg immobilized so you don't end up with a
9	hemorrhage at the groin, et cetera; correct?
10	A. In not every item in the paragraph but
11	certainly the items that you just read, yes.
12	Q. Well, I don't see anything in paragraph
13	number 4 that says anything about checking ACTs or
14	PTTs to determine that it is below a particular
15	level in case you need to reverse it with Protamine.
16	I didn't see that anywhere, Doctor.
17	A. Well, you know, Mr. Jones, it's not
18	everything is in this one-page protocol. It's not
19	talking about what to do if the ACT is too high. I
20	think cardiologists, we all would know what to do if
21	it's too high.
22	Q. My point is simply, Doctor, that the entire
23	paragraph number 4 which talks about ACTs hourly
24	following the procedure is in the context of
25	removing the sheath, protecting the groin to avoid

the complication -- the common complication of 1 bleeding at the femoral artery site; correct? 2 Mr. Jones, it's not correct. I cannot 3 Α. 4 agree with you. 5 Okay. What part doesn't --Ο. 6 Ά. The following the ACT after a procedure is 7 only for focussing just on the femoral artery 8 sheath, sir, and not considering the entire welfare of the patient where this medication is circulating 9 10 to his brain or other parts of the body that can 11 result in a gastrointestinal or an intracranial 12 bleed, I can't believe that they only want you to 13 focus on the groin and not focus on the rest of the 14 patient. 15 Doctor, all I'm talking about is what the Ο. paragraph and putting it in its proper context is 16 17 and that is, checking the ACTs hourly following the procedure in paragraph 4 of the suggested protocol 18 at the Cleveland Clinic is all within the context of 19 20 removing the femoral artery sheath and taking steps to avoid the common complication of major bleeding 21 22 at the femoral artery site. Isn't that what this 23 says? I don't care what you think it might or 24 should have said. That's what it's in context for; 25 correct?

156							
1	A. I don't agree with that.						
2	Q. All right. The ReoPro package insert that						
3	Mr. Margolis came back to, I didn't even bother to						
4	question you about it initially.						
5	Doctor, when talking about major bleeding						
6	complications from the use of ReoPro, you you						
7	mentioned before the big black letter warning. So						
8	can you pull that out.						
9	A. Okay.						
10	Q. It says:						
11	"Warning. Administration of						
12	Abciximab is associated with an						
13	increased frequency of major						
14	bleeding complications including						
15	retroperitoneal bleed."						
16	Well, Mr. Yurick didn't have any evidence						
17	of that, did he?						
18	A. No.						
19	Q. Okay. Spontaneous gastrointestinal and						
20	genitourinary bleeding. He didn't have any of that						
21	either, did he?						
22	A. Correct.						
23	Q. Bleeding at the arterial access site. He						
24	didn't even have that, did he?						
25	A. Not an untoward amount, correct.						

Q. Right. The risk is further increased in 1 2 patients who weigh less than 75 kilograms. That's what you've been following. And that is the risk of 3 these major bleeding complications; correct? 4 5 Α. Right. Correct. 6 Appropriate management of therapy and Ο. 7 complications is possible only when adequate diagnosis and treatment facilities and qualified 8 physicians are readily available. Well, we're at 9 the Cleveland Clinic. We don't have a problem with 10 that; correct? 11 12 Ά. I -- I -- I think that's true. 13 Okay. Increased risk of bleeding. Ο. TO 14 follow on: "The most common complication 15 16 encountered during Abciximab therapy 17 is bleeding. The types of bleeding 18 associated with Abciximab therapy fall into two broad categories. 19 20 Bleeding observed at the arterial 21 access site for cardiac 22 catheterization, internal bleeding 23involving the gastrointestinal 24 tract, genitourinary tract or 25 retinoperitoneal sites."

158 That's where it stops; correct? There's no 1 mention in any of the warning -- the big black 2 letter warning or increased risk of bleeding warning 3 that says anything about intercerebral hemorrhage; 4 5 does it? I'm sorry. I -- I wasn't with you when you 6 Α. read that last part so where were you reading? 7 Right after the big black letter warning 8 0. that you had read before. 9 Oh, I'm sorry. Okay. So you're reading 10 A. that whole list that says --11 12 0. Correct. A. -- increased risk of bleeding? 13 Right. It doesn't include an increased 14 Q. risk of intercranial hemorrhage; does it? 15 It just refers to it as major bleeding and 16 Α. elsewhere in this insert major bleeding is defined 17 as a drop in hemoglobin by 5 or more and/or 18 intercranial bleeding as we --19 20 Q. Okay. A. -- defined it just a few minutes ago. 21 Q. Right. And you've led right to my next 22 guestion, Doctor, under "Adverse Reactions, 23 24 Bleeding." That part of the Eli Lilly insert for 25 ReoPro?

	159				
1	A. Okay. Now, let me catch you here. Okay.				
2	Q. Okay? You're right. It described major				
3	bleeding as including intercranial bleeding;				
4	correct?				
5	A. Yes, sir.				
6	Q. All right. Quote after the little table 2				
7	there that starts:				
8	"Of the patients with major				
9	bleeding who died, two patients.				
10	One patient in the bolus plus				
11	infusion treatment group" that is				
12	a patient who received the ReoPro				
13	and heparin; correct? "and one				
14	patient in the " "in the placebo				
15	treatment group had deaths				
16	attributable to bleeding."				
17	Correct?				
18	A. That's what it says, yes.				
19	Q. Correct? So we're talking about one				
20	patient who received the medication and one who				
21	received placebo, both had hemorrhagic strokes, and				
22	those are the only two incidents of hemorrhagic				
23	strokes reported at that time; correct?				
24	A. No, sir. Those are only the ones who died.				
25	There is they don't talk about the ones who had				

Rennillo Reporting Services

160 hemorrhagic strokes that didn't die. 1 Is there any mention about hemorrhagic 2 Ο. strokes elsewhere in there? 3 A. It may not be mentioned in here, but, you 4 know, not everybody with a hemorrhagic stroke dies 5 so there may be those that did not. 6 There may be. You don't know. 7 Q. Well, it's simply let's read on. 8 Α. 9 Sure. Go ahead. Q. Actually, I don't think it lists them. So 10 Α. we don't know. 11 12 MR. JONES: Thanks, Doctor. That's all I 13 have. MR. MARGOLIS: Off the record a moment. 14 THE VIDEOGRAPHER: Going off the record at 15 12:04. 16 17 (Discussion held off the record.) THE VIDEOGRAPHER: Back on the record at 18 12:05. 19 2021 **REDIRECT EXAMINATION (FURTHER)** 22 BY MR. MARGOLIS: 23 Doctor, would you agree that heparin, 0. aspirin, and ReoPro in combination are extremely 24 25 potent anticoagulation drugs?

	161
_1	A. Yes.
2	Q. Why is it, sir, that there isn't a higher
3	incidence of patients suffering intercerebral bleeds
4	such as the catastrophic bleed that Mr. Yurick
5	suffered when these drugs are administered?
6	MR. JONES: I'm going to object to this
7	line. This is going beyond my cross.
8	MR. MARGOLIS: No, it's not.
9	MR. JONES: How is it within
10	MR. MARGOLIS: Your objection
11	MR. JONES: How
12	MR. MARGOLIS: Your objection is noted.
13	MR. JONES: Okay. Fine.
14	THE WITNESS: The reason the incidence
15	isn't higher is because we follow the rules of
16	anticoagulation with regard to the recommended
17	therapeutic window, and, in order to do that, we
18	check frequent ACTs to determine where we are in
19	terms of the anticoagulation.
20	MR. MARGOLIS: Thank you, sir. Nothing
21	further.
22	MR. JONES: I don't have anything further.
23	MR. MARGOLIS: Okay.
24	THE VIDEOGRAPHER: This marks the marks
25	the end of Volume 1 in the deposition of Jay

Schapira, M.D. Total number of tapes used today was two. Going off the record at 12:06 p.m. (Whereupon, at 12:06 P.M., the videotaped deposition of JAY N. SCHAPIRA, M.D. was adjourned.)

	163
1	STATE OF CALIFORNIA)
2	COUNTY OF LOS ANGELES) ss.
3	
4	
5	I, JAY N. SCHAPIRA, M.D., hereby
6	certify under penalty of perjury under the laws of
7	the State of California that the foregoing is true
8	and correct.
9	Executed this day of
10	, 2001, at
11	, California.
12	
13	
14	
15	JAY N. SCHAPIRA, M.D.
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

STATE OF CALIFORNIA)					
COUNTY OF LOS ANGELES) ss.					
I, SUSAN NELSON, C.S.R. 3202, in and for					
the State of California, do hereby certify:					
That, prior to being examined, the witness					
named in the foregoing deposition was by me duly					
sworn to testify the truth, the whole truth and					
nothing but the truth;					
That said deposition was taken down by me					
in shorthand at the time and place therein named,					
and thereafter reduced to typewriting under my					
direction, and the same is a true, correct and					
complete transcript of said proceedings;					
I further certify that I am not interested					
in the event of the action.					
Witness my hand this day of					
, 2001.					
Susan Nelson, C.S.R. No. 3202					
Certified Shorthand Reporter					
State of California					

1 STATE OF CALIFORNIA) 2 COUNTY OF LOS ANGELES) ss. 3

4 I, SUSAN NELSON, C.S.R. 3202, in and for 5 the State of California, do hereby certify:

6 That, prior to being examined, the witness 7 named in the foregoing deposition was by me duly 8 sworn to testify the truth, the whole truth and 9 nothing but the truth;

10 That said deposition was taken down by me 11 in shorthand at the time and place therein named, 12 and thereafter reduced to typewriting under my 13 direction, and the same is a true, correct and 14 complete transcript of said proceedings;

15 I further certify that I am not interested 16 in the event of the action. 17 Witness my hand this b day of 18 $\underline{}$ $\underline{}$ \underline

Non

Susan Nelson, C.S.R. No. 3202 Certified Shorthand Reporter State of California

24

19

20

21

22

23

--- - - -

1	SIGNATURE OF WITNESS
2	
3	
4	
5	
6	The deposition of JAY SCHAPIRA, MD,
7	taken in the matter, on the date, and at the
8	time and place set out on the title page
9	hereof.
10	It was requested that the
11	deposition be taken by the reporter and that
12	same be reduced to typewritten form.
13	It was agreed by and between
14	counsel and the parties that the Deponent will
15	read and sign the transcript of said
16	deposition.
17	
18	
19	
20	
21	
22	
23	
24	
25	

RENNILLO REPORTING SERVICES A LEGALINK AFFILIATE COMPANY (216) 523-1313 (888) 391-DEPO

1	AFFIDAVIT					
2	The State of Ohio,)					
3) SS:					
4	County of Cuyahoga)					
5						
6						
7						
8	Before me, a Notary Public in and for					
9	said County and State, personally appeared JAY					
LO	SCHAPIRA, MD, who acknowledged that he/she did					
11	read his/her transcript in the above-captioned					
12	matter, listed any necessary corrections on the					
L 3	accompanying errata sheet, and did sign the					
14	foregoing sworn statement and that the same is					
15	his/her free act and deed.					
L 6	In the TESTIMONY WHEREOF, I have hereunto					
ι7	affixed my name and official seal at this					
18	day of A.D 2001.					
L 9						
2 0						
21						
22	Notary Public					
23						
24						
25	My Commission Expires:					

ENNILLO REPORTING SERVICES A LEGALINK AFFILIATE COMPANY (216) 523-1313 (888) 391-DEPO

1 DEPOSITION ERRATA SHEET 2 3 RE: PATRICIA YURICK, ETC. VS. 4 CLEVELAND CLINIC FOUNDATION, ET AL. RRS File No.: 5 1239 6 Deponent: JAY SCHAPIRA, MD 7 Deposition Date: FEBRUARY 6, 2001 8 9 To the Reporter: 10 I have read the entire transcript of my 11 Deposition taken in the captioned matter or the 12 same has been read to me. I request that the 13 following changes be entered upon the record 14 for the reasons indicated. I have signed my 15 name to the Errata Sheet and the appropriate 16 Certificate and authorize you to attach both to 17 the original transcript. 18 19 20 21 22 23 24 25

RENNILLO REPORTING SERVICES A LEGALINK AFFILIATE COMPANY (216) 523-1313 (888) 391-DEPO

Α	activities 13:19	administering	101:22 102:7	ANDRESS 2:19
Abciximab 44:2	acts 28:19 29:17	116:8	112:15 115:17	and/or 158:18
51:12,18 156:12	61:7,14,18 71:5	administration	145:22 146:1	anesthetic 21:25
157:16,18	71:9 109:2	21:3 44:2,22	155:4 156:1	angeles 2:4 5:1,15
ability 13:19 34:24	111:17 120:21	61:1 89:1 90:13	160:23	7:12 15:2 27:14
able 22:13 24:10	121:4,12 122:8	127:6 156:11	Aguirre 83:22	78:7 117:24
26:24 78:19	123:25 124:4	admission 20:18	127:23 128:17	163:2 164:2
145:8	127:13 143:13	96:24	129:2,17 136:25	angiogram 123:4
abnormalities	150:11,15 151:7	admitted 16:19	148:10,20,20	angiograms 17:4
51:17	153:9 154:13,23	17:16	Aguirre's 122:7	17:10
above 55:17 59:17	155:17 161:18	adverse 152:6,10	128:22	angiography
absence 63:20	actual 42:25 76:2	158:23	ahead 37:8,13	123:8
139:9,10	actually 24:7 25:9	affect 75:9	89:13 91:17	angioplasties
absolutely 72:22	30:8,10 42:19	affected 45:20	95:14,15 97:9	17:7,11 25:1,3
97:4 144:20,22	73:23 74:9,11	affects 144:17,19	114:7 133:14,14	26:11 34:22,25
abstract 89:24	77:23 86:25	affidavit 42:4	160:9	69:9
abstracts 10:22	87:11 94:5 99:3	after 9:23 16:13	aim 91:5	angioplasty 21:4
15:13 89:8	101:5,8 109:6	52:4 58:15,21,23	AL 1:10	22:7,15,16,17
accept 11:6 68:6	118:17 119:9,10	58:24 61:8 62:4	allow 95:4 112:9,9	23:11,20 28:8
88:1 104:1 105:7	128:3 138:2,23	62:15 63:6,17	114:4	34:10 56:22 61:2
105:18,25 106:4	143:23 145:11	64:374:1081:8	allowed 37:5	61:12 80:16,24
112:2 113:21	148:21 151:21	81:19 99:11	108:22 111:2	81:3,5,8,12,19
115:13	160:10	107:12 112:16	allows 96:16	82:6 87:8 89:2
acceptable 63:16	acute 139:18,23	116:21 141:23	almost 31:6 39:14	90:14,21 110:5
accepted 110:12	140:5,11	142:4 144:3	40:12	123:8,12 146:3
110:14 113:1	add 46:5 109:24	146:19 147:4	alone 36:2	another 27:2,2
148:22	109:25 110:1	149:22 150:6	along 35:25 42:4	28:25 50:3 75:9
accepting 107:21	124:20	153:12,23,25	83:18	answer 24:10
access 44:10 67:8	added 34:24	155:6 158:8	aiready 31:19	33:22,23,23
126:4,15,16	addition 23:21	159:6	70:12 124:21	93:21 95:6,11
156:23 157:21	46:1,5 48:5	afterwards 74:23	125:7 141:10	113:15,17,25
accessible 31:20	81:25 124:11	again 36:5 40:23	altering 22:17	114:5,7 133:19
accompanied	151:11	47:16,19,20	although 48:9	136:9,19
44:18 152:1,5	additional 68:9	50:25 61:18	83:9	answered 78:24
accomplish 56:22	86:13 107:16	68:12 79:25	Alto 7:10	answering 60:17
accomplishment	125:2,12	123:24,24	always 14:1 71:6	60:22 104:17
10:3	address 88:6	134:20 140:16	71:8 133:18	133:9
accordance 52:17	91:14 122:15	against 12:16	American 48:22	anticipation 67:12
according 107:20	addressed 94:4,5	19:17 23:15	79:19	anticlotting 24:15
143:7,11	94:6	151:3	among 38:5,16,24	anticoagulant
account 94:1	addresses 91:13	agency 12:8	41:23 128:25	24:18 25:16
135:14,17	adequate 157:7	agent 34:24 35:11	134:14	27:24 28:2,4,10
accumulate 23:6	adhere 29:20 71:2	38:19	amongst 49:5	32:22
accumulates 23:6	71:3,4	agents 66:18	amount 31:22	anticoagulants
accumulation	adjourned 162:5	85:12	35:15 36:3 46:3	26:25 27:21
23:18	adjust 71:7 115:20	aggregation 28:23	76:9,23 77:1	30:15,18 56:10
accurate 51:2	122:17 123:25	29:24	104:10 115:9	61:20
58:16 67:22	adjustments	aggregational	132:25 134:5	anticoagulated
105:17	27:13	29:18	156:25	56:13 121:15,25
accurately 38:4	administer 62:2	ago 14:14 15:15	analyses 129:6	150:24
106:21	86:3	29:14 37:24 73:5	analysis 118:4	anticoagulates
action 19:4 164:16	administered 28:9	83:20 84:11	128:4 129:2	28:18 anticoagulation
activated 27:1	33:20 34:12 36:9	158:21	analyzed 129:4 anatomical 22:3	-
51:20 55:14	38:6 45:15,23	agree 48:10 50:6		24:13,14,21,24
119:19 138:9	51:6 85:12 86:9	51:23,25 82:12	Andrefsky 20:12	25:23 26:13,18
active 17:20	161:5	98:6 99:16	69:1	26:19 52:1 53:22
		1]

Rennillo Reporting Services

55:25 59:23 62:3	33:13	32:15 79:21	atherectomy	50:20 54:3 57:10
64:3 66:18 71:16	approximately	80:12 83:19 89:7	23:22	57:21 58:25
72:3,8 121:25	9:12 16:5,20	126:23	atherosclerosis	59:19 60:13,19
126:13,23	17:6 34:1 39:19	artificial 124:25	22:10	63:11 64:22 69:4
127:14 136:7	108:16 132:22	asked 13:1 18:5	Attached 41:25	71:11 72:15 83:6
142:1,2,15	150:7	18:16 48:19	attack 25:9	90:8 92:6 97:15
143:19 144:14	April 149:16	72:19 75:23	attacks 23:9	111:23 119:3
1	aPTT 61:19 63:20	76:14 78:23	attempt 127:24	122:11,12,17
147:3,12 150:22		79:21 80:11	140:18	128:14 136:21
160:25 161:16	aPTTs 61:18			136:23 145:14
161:19	150:15	129:15 146:17	attempted 92:24	
antidote 148:3	Aquirre's 121:18	147:8,10	129:18	150:22 156:3
antiheparin 51:19	Archives 80:4	asking 50:10 84:2	attempting 128:18	160:18
antithrombin	area 12:21 15:1,13	87:23 90:17	attorney 18:5	bad 13:21:27:20
28:20 29:15	18:25 19:17,21	94:10 97:4	41:22	balloon 23:13
antithrombotic	22:4 23:16,19,25	104:19 106:24	attorneys 19:3,14	124:24 125:1
85:12,16,18	43:14,23 45:16	129:21	19:16 77:8	ballpark 34:1,1
anymore 108:6	83:11 126:9	aspect 13:22	attributable	bar 126:20
anyone 47:22	148:17	aspects 19:9	159:16	bars 39:18
anything 37:1	areas 74:14	26:18,19 42:19	attuned 74:13	based 11:6,7
44:19 51:4 61:7	argumentative	115:11	audio 37:11	16:18 36:5 38:5
74:22 105:6	78:23	aspirin 28:2 30:2	augmentation	39:15,22 40:7,9
107:11 113:22	arises 17:13 25:3	30:17 34:12	45:24	46:1 53:6 56:9
146:16 148:12	arms 120:16,17	56:10,18 110:1,2	augmenting	65:1,2 66:13
154:12,13 158:4	arose 82:18	110:6 144:16	112:12	70:5 146:13
161:22	arrived 113:22	160:24	Austin 7:1,1,2	148:14 149:7,25
anyway 108:14	arriving 32:10	assess 27:4 52:3	Australia 27:15	150:19 151:6
anywhere 121:7	arrow 23:4	95:25	author 48:21	152:18
154:16	art 26:22	assessed 51:20	83:22	baseline 65:9
apologize 130:25	arterial 44:10	assessing 87:17	authored 49:5	87:13 124:21
apparently 67:24	156:23 157:20	assessment 63:21	available 43:2,4	basic 23:20
95:21	arteries 22:3 81:8	63:22 65:20 86:3	52:7 73:23	basically 22:11
appear 138:5	81:19 122:20	assist 14:11	116:20 117:7	33:13 35:22
APPEARANCES	artery 21:25 22:9	assistant 14:7	118:19 148:2	38:19 45:13
2:7 3:1	22:18,19,24 23:3	assistants 14:10	157:9	49:15 56:20
appears 43:1	23:12,14 25:4,6	14:16,21	avenue 2:14 125:8	64:13 124:1
116:7 152:9	28:13 31:4,19	assisting 14:17	average 17:2,9,11	basis 18:22
applied 85:21	123:1,13,14	associate 8:12	34:2 59:21 76:17	150:11
apply 104:19	124:15,19,25	associated 25:20	77:16	Baylor 7:3,7
116:4	125:4 126:10	44:4,22 147:25	averaging 76:20	became 118:9
appointments 9:2	139:5 153:16	156:12 157:18	avoid 35:7 81:6	140:25
approached 18:24	155:2,7,20,22	association 45:21	154:7,25 155:21	become 52:2
19:2 80:1,6	article 11:17,18,19	assume 73:14	aware 69:10 74:5	73:15 78:19
approaches 85:20	11:20 40:1 48:2	74:3 75:5 78:18	74:9 95:3 101:7	becoming 79:4
appropriate 37:15	48:7,20,22,25	87:5 104:22	139:21 147:11	bed 153:22 154:7
40:24 47:23 48:1	49:2,5,12,16	105:3,13,15	away 26:2,3 75:17	beds 9:12
48:8 53:21 57:11	50:8 80:2,7	106:24 133:1	77:21 110:3	before 2:4 25:6
57:17,19,21 62:4	83:21,24 84:16	146:5,11	a.m 1:19 2:3 5:2	51:12 60:17,22
88:2,10 90:19	121:18 122:7,10	assuming 107:18	5:10 87:15 100:2	67:8,25 68:23
94:10 99:5	127:23 128:2,7	134:6,9	109:18	74:3 77:20 79:25
112:17,18 125:1	128:22 137:1	assumption		87:17,25 91:9
125:3 140:17	144:25 147:10	104:24 105:1	В	95:22 96:1,11,14
144:4 151:1	147:19,22	assumptions	B 146:2	96:16 102:5
157:6	148:11,12,18	110:17	back 15:15 21:17	103:14 105:16
appropriately	149:16,16,25	assurance 13:18	23:15 27:7 29:8	106:14 109:21
52:23	articles 10:22 11:2	assure 59:22	37:16 41:11	113:22,25 118:4
approximate	11:12 15:12,15	150:21	48:11,12 50:19	118:8,19 125:1
approximate	11.12 10.12,10	100,21		
1	I	1	L	4

127:24 134:23	43:15,22,23	23:17,19 24:6,7	bothered 75:19,23	calls 42:9
136:16 141:14	150:12 156:7	24:15 25:8 28:11	bottom 119:18,21	came 37:21 73:22
156:7 158:9	158:2,8	28:18 31:15,18	137:1	89:11 95:2 104:2
beforehand 74:15	bleed 25:15 31:2	31:20 33:11	box 42:25,25	105:16 107:18
began 40:8	58:1 62:13,18	56:15 64:23 65:8	BP 65:16 66:8	156:3
135:23	65:13 66:3,6,19	66:11 139:2	brain 30:21 71:21	camera 56:1
begin 6:10 149:22	67:20 68:16,22	140:14,18,20	126:14 155:10	capacity 8:9 10:21
beginning 7:11	69:21 70:2,14,19	141:1,4,7	brake 116:4	11:25
97:16 128:6	72:2,9 136:3	bloodstream 33:8	breach 146:19	captioned 90:12
146:23	140:24 141:3,8	94:3	breaches 12:12	cardiac 97:20
begins 5:4	150:5,6 151:22	blow 23:13	break 21:10	157:21
begun 81:16	152:22 155:12	board 9:21,22	Brezina 89:6	cardiocatheteri
behalf 2:2	156:15 161:4	10:1,4,7,9,11,13	brief 91:15	8:20
behind 9:3	bleeding 25:18	12:3,5,7,18 13:8	briefly 28:6 79:15	cardiological
being 6:21 19:17	26:8 35:15,24	13:10 20:1 53:9	123:23	53:10
29:4 45:15 46:24	36:3,11,17 38:5	70:6 73:10,15,20	bring 59:19	cardiologist 6:21
48:6 51:6 72:3	38:15,18,23,25	74:5,14,19 76:1	140:14,17,18	7:13,14 42:14
78:9 79:3 89:9	39:9,15 40:13	78:20 79:4 87:16	bringing 19:3	53:10 54:21,23
96:15 101:5,18	43:9 44:6,7,9,9	95:25 106:22	brings 19:12	69:7 70:7 144:21
101:23 102:15	44:15,20,23 46:9	133:1 134:6	broad 157:19	150:17 152:20
102:17 104:5,24	46:17 49:22 50:1	135:19,22 136:7	Broderick 147:22	cardiologists 7:17
105:2,12 135:10	55:23,24 56:9,17	144:16 145:9	brought 14:16	7:19 9:23 10:3
135:11 136:15	56:25 57:23 60:7	150:17 152:20	19:17 110:2	11:14 12:25
137:15 147:11	66:14.20,23	body 7:20,21	Building 2:13	25:25 26:21
147:13,24 152:6	71:20 84:18 85:3	30:20,22,22	busy 75:6,13	30:16 154:20
164:6	85:21 86:4 122:1	56:16 60:4 65:22	by-product 46:22	cardiology 6:17
believe 18:4	125:20 126:3,14	85:4 96:17	by product ion	7:9,22,25 8:2,5
103:19 106:1	126:24 127:15	114:20,21,21	С	8:20,21,22,24
122:12 127:10	128:6,24 131:16	127:11 149:5,8	C 100:11 146:8	9:13 10:17 12:22
135:21,24 147:9	131:20 132:3,17	155:10	calculate 92:24	15:1,7,23,24
155:12	134:14 137:11	body's 66:22	calculated 135:12	16:3,6,8,10,13
believes 68:20	137:20 138:22	boils 126:16	calculates 32:1	16:14 17:1,14,14
below 94:20 96:7	140:21 143:19	bold 43:15,22,23	calculation	17:21 18:11,15
123:22 154:14	144:7,18 146:15	bolus 35:25 38:7	108:13 132:21	18:25 44:25 45:2
benefit 35:12	148:1,13,24	38:25 55:8,10	134:18,22 135:4	45:21 46:11 47:5
84:18 85:2	149:1,1 152:11	86:18,19 87:3,9	calculations	48:18,23 52:5,12
best 26:5 52:7	152:12,23 155:2	87:18 91:18,22	111:15 134:25	70:7,23 73:20
better 29:11 89:10	155:21 156:5,14	91:23 92:9,9,16	136:18	74:6,14 75:22
114:14	156:20,23 157:4	92:25 93:7,16	calculator 108:3,8	78:20 79:5,20
between 84:18	157:13,17,17,20	94:19 96:6 104:4	california 2:4 5:1	150:18
85:2 86:23	157:22 158:3,13	104:5,6,10	5:13,15 9:19	cardiovascular
beyond 56:23	158:16,17,19,24	106:14 107:5,12	12:3,6,7,9,18,24	10:8,9 73:11
65:4 66:12	159:3,3,9,16	107:16 108:19	13:10 14:7 15:23	147:20
115:14 122:9	bleeds 70:20	112:11 134:24	15:25 20:2 77:21	care 11:22 12:13
161:7	152:6 161:3	150:3 159:10	163:1,7,11 164:1	16:12 20:8,18
big 43:15,23 55:8	blind 13:22,22	bolusing 109:2	164:5,23	32:3,6,8,11 41:6
88:13,16 140:10	block 30:9 31:8	book 43:4	call 12:21 17:13	52:23 53:11,13
156:7 158:2,8	blockade 149:19	booklet 20:25	22:9,10 25:21,23	53:16,18 54:7,10
bigger 39:4	blockage 22:3,8	books 15:12,16	43:1 100:7,11,12	57:4 58:5 59:6
bind 30:8	22:10,12,17 23:5	80:11	102:15	62:5 63:16 67:19
binder 50:11	23:6,24 25:8	both 7:24 16:21	called 11:19 23:10	70:10 75:10,17
88:22 89:5	blocked 22:19	27:3 43:3 54:25	24:17 26:25 27:2	78:5 81:21 88:2
biologically 64:5	blocker 30:6	55:7,7,9 82:16	28:20 29:15	90:19,24 107:21
biologist 144:22	blocking 23:7	98:22,23 99:7	33:15 35:4 43:24	109:1 110:15
bit 75:1 93:9	28:14 35:2	142:14 159:21	57:13 58:8 76:3	112:2,17 115:16
black 23:5,17	blood 23:4,7,16	bother 75:2 156:3	116:9	146:7,20 155:23
1			1	

Rennillo Reporting Services

		I		
career 15:11,14	17:7 25:1,2	150:17 152:20	circulating 155:9	29:22,25 122:20
case 5:8 17:25	26:10 69:10	164:22	circulation 83:21	123:12 124:14
18:6,23 19:4,10	catheters 31:17	certify 163:6	83:25 128:4	124:19 125:4,4,5
19:21 20:4 21:8	85:14	164:5,15	148:20	125:10
34:7 53:8 68:21	causation 68:15	certifying 74:6	circumstance	clots 25:5,5,7,7
70:1,8 71:12,18	cause 23:8 29:10	cetera 154:9	32:8	clotting 24:6
73:8 76:15,24	67:19 70:13	chance 57:25	circumstances	25:19 27:1 28:12
79:8 82:20 89:18	71:25 108:10	change 28:21	34:5 42:15 45:23	29:15,19,19,25
91:3 92:24	125:9 139:14	97:10 101:16	124:16	30:11,23 31:4
103:21 104:11	140:8 141:1,3,4	146:18	City 9:5	35:1 51:21 55:14
104:15 106:8,9	146:17	changing 118:5	civic 13:16	56:14,15,19
106:17 108:19	caused 151:21	chapters 80:11	clarify 98:18	59:16 61:19 64:6
110:18 117:5	causes 126:13	characteristics	clear 71:18 100:25	119:19 123:1
127:19,22	causing 66:18,23	119:17	112:1 113:8	138:9
132:19 136:15	123:1	charge 43:5 77:12	115:6,23 127:1	CNS 141:3
146:22 150:1	cautious 27:22	77:22	144:20	coagulation 24:5
151:6 152:19	cautiousness	charging 77:4	clearly 45:4 46:12	24:6,15,20,24
154:15	26:23	chart 95:16,19	63:24 96:3	25:13,14,15
cases 12:20 13:1	cc.s 31:22	96:23 131:9	126:22	26:10,13 46:4
14:18 18:20,21	Cedars 8:15,16,16	charted 101:15,18	cleveland 1:9 2:15	51:20 52:4 55:14
19:7,10,16 76:10	Cedars-Sinai 8:18	charting 101:17	2:22,24 5:7,24	62:17 63:10,10
76:12,13,18,21	9:3,10,11 14:15	check 27:11,15	9:7,8 20:9,19,22	64:7 69:12,20
76:24 77:2 78:10	40:4	61:18,20,24	34:8 38:15 53:12	70:11
78:15 79:4	censure 12:16	62:10 71:9,16	54:8,9 57:5 61:3	coagulopathy
117:21 132:4	Center 2:22 9:10	75:2 76:7 104:15	61:13 62:11 70:9	62:16
catalyst 29:14	9:11 147:21,21	106:13 122:11	70:18 73:6 77:19	coauthored
catastrophic	centers 38:14	123:23,24 143:8	77:23 78:2,7	148:11
161:4	85:23	143:13,16 144:3	87:24 89:3,6	colleagues 11:2
catch 159:1	Centocor 117:14	150:15 151:1,7	96:23 109:4	11:18 14:2 75:24
categories 157:19	118:3,9	153:8 161:18	110:13 117:24	76:4
category 55:23	central 62:13,18	checked 58:22	143:14 148:23	college 6:23,25
cath 8:25 14:14,17	65:12 66:3,5	61:8 62:14 71:18	150:10 153:7	7:2,3,7
16:25 17:2 27:1	Century 9:5	75:25 76:3 107:6	155:19 157:10	column 84:14
27:4 40:4 54:24	certain 13:22 26:2	142:25 143:3,7	clinic 1:9 5:7,24	com 137:20
65:9,20,23 69:16	26:3 27:22 30:6	143:11	9:8 15:3,3 20:9	combination
71:1 72:8 77:25	31:5,9 38:16	checking 61:14	20:19,22 34:9	160:24
87:15,18 88:7	40:13 46:3 53:4	63:20 71:17	38:15 45:3 53:12	come 11:12 57:21
89:20 90:1,20	71:3,4 126:17	112:15,15 124:1	54:8,9 57:5 61:3	77:19 78:1,6
95:2,22 102:6	144:22	154:13 155:17	61:13 62:11 70:9	120:13 136:16
104:25 105:10	certainly 17:17	checklist 96:22	70:18 73:6 87:25	150:22
105:11,17 107:4	21:12 48:3,7,8	97:21 102:13,21	89:3,6 96:23	comes 42:25
113:23 117:15	81:24 93:11	103:8	109:4 110:13	108:15 134:23
134:24 135:6,23	154:11	chemical 42:21	117:24 143:15	coming 77:23
136:17	certainty 33:18	44:3 51:13	148:23 150:10	107:4 116:25
catheretization	53:6 57:2 58:4	chest 79:24	153:8 155:19	117:15 135:5
97:21	58:19 59:7 62:1	122:24 123:2	157:10	comma 131:11
catheter 22:1	63:4,14 69:24	124:23 125:10	clinical 8:12 15:18	commands
31:19	70:5 71:24	139:9	15:19 17:20	151:15
catheterization	152:18	chief 7:7	77:24 85:10	commenting 67:7
21:21,23 28:7	certification 9:21	cholesterol 22:13	119:16 147:20	68:17
31:16 34:10 81:5	9:22,22 10:2,5	23:6	clinically 50:5	Comments 100:13
96:22 102:13	75:21	choose 13:9,11	closely 40:7 51:22	102:16,24 103:9
103:8 104:3	certified 9:24 10:7	chose 14:24	59:11,15,18,21	common 1:1 5:7
141:17 145:23	10:9,11,13 14:19	chosen 14:19,24	59:22 71:5	81:7 96:11
157:22	53:9 70:6 73:11	Cincinnati 147:21	closer 29:10	148:25 155:1,21
catheterizations	73:15 78:20 79:4	circulated 61:4	clot 26:6 28:11,14	157:15

F	1	Γ	7	1
community 13:13	complied 72:19	consulting 16:22	65:22 140:2	days 16:24 17:3
34:16,20 45:1,10	comply 59:5	contained 89:7	141:11	deal 16:9 111:24
45:12,19 46:8,14	composed 22:12	contesting 126:25	court 1:1 5:7,25	dealing 20:24
48:16 52:14,18	41:6	context 154:24	37:10,15 48:1	154:5
companies 15:8	compress 23:14	155:16,19,24	cover 68:13	death 25:15 71:22
18:13,16 32:18	compressed	continually 64:7	crank 115:20	72:1,10
43:5	23:18	continue 149:20	credentialing	deaths 159:15
company 41:21	compression	150:24	75:10	decay 33:10
42:18	153:21 154:6	continued 3:1	credentials 8:15	December 116:17
	con 89:19	141:23 150:5	criteria 52:21	128:7
comparable	1	E		decide 11:3
137:15,18	concept 24:5,12	continuing 41:2	107:14 111:11	deciliter 152:16
compare 39:1	32:3,23,25	64:13 65:17	critical 30:25	
competency	concepts 11:19	66:24,25	113:21	decision 22:5
12:20 13:2,5	21:7 24:24	continuous 55:9	criticism 113:4,9	decrease 152:14
complain 139:1	concern 122:25	contract 18:18	113:16	defend 14:3
complained	concerned 123:11	contracted 5:12	criticisms 119:8	defendants 1:11
141:16	concerns 40:11	contributed 68:21	critique 11:3	2:18 89:16
complaining	conclusion 39:12	contributes	13:20	defense 18:5
65:10	72:18	126:11	cross 4:2 73:1	19:14,15
complaint 64:23	conclusions	contributing	161:7	define 22:2,4 32:4
complaints 65:15	35:14 128:18	144:15	cross-examinati	85:20
66:11 138:22	concrete 75:1,3	contribution 11:8	47:22	defined 33:1
140:9 141:19	concretely 74:23	11:21	cross-purposes	152:13 158:17
complete 56:21	condition 101:16	contributions	25:12 128:5	158:21
164:14	151:13	11:15	CT 67:13,21,24	definitions 21:7
completed 8:2	confer 72:20	controlled 25:11	68:2,17	degree 30:24,24
completing 9:24	confines 41:9	conversation	curve 33:9	33:18 46:1,23
complex 24:18	confirm 76:1	115:4	cut 37:11 75:16	57:2 58:3,19
33:22,23 85:4	confused 92:3	copy 41:25 79:17	cuyahoga 1:2 5:8	59:6 62:1 63:4
-	•			
compli 132:2	102:18 130:24	82:21 83:11 90:8	CV 79:12,17,18	63:14 71:24
compli 132:2 complication	102:18 130:24 confusing 130:25	82:21 83:11 90:8 118:19	CV 79:12,17,18 cycle 124:3	63:14 71:24 143:2,6 152:18
compli 132:2 complication 25:18 26:8 55:23	102:18 130:24 confusing 130:25 conjunction 66:10	82:21 83:11 90:8 118:19 corner 97:24,25	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5	63:14 71:24 143:2,6 152:18 demands 11:23
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7	102:18 130:24 confusing 130:25 conjunction 66:10 consequence	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21	63:14 71:24 143:2,6 152:18 demands 11:23 demographic
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D 4:1 daily 69:15	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constituted	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constituted	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constituted 146:19	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18 71:22 81:13	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constituted 146:19 consult 17:14	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25 counterfactual	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20 99:6	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10 described 159:2
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18 71:22 81:13 85:19 86:4	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constitute 89:19 constituted 146:19 consult 17:14 consult 17:14 consultant 10:21 11:25 12:18	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25 counterfactual 135:21,24	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20 99:6 dated 99:18,19	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10 described 159:2 design 82:10
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18 71:22 81:13 85:19 86:4 125:20 126:14 128:6 131:20	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constitute 89:19 constituted 146:19 consult 17:14 consult 17:14 consultant 10:21	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25 counterfactual 135:21,24 counts 51:18	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20 99:6 dated 99:18,19 dates 74:21 98:22	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10 described 159:2 design 82:10 designed 56:16
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18 71:22 81:13 85:19 86:4 125:20 126:14 128:6 131:20 137:11,20	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constituted 146:19 consult 17:14 consult 17:14 consult 10:21 11:25 12:18 13:10 20:1 79:13 79:19 80:25	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25 counterfactual 135:21,24 counts 51:18 county 1:2 5:8 163:2 164:2	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20 99:6 dated 99:18,19 dates 74:21 98:22 david 3:4,5 5:11 48:21	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10 described 159:2 design 82:10 designed 56:16 56:17 81:20 82:13
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18 71:22 81:13 85:19 86:4 125:20 126:14 128:6 131:20 137:11,20 143:18 144:8	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constitute 89:19 constitute 89:19 constitute 89:19 constitute 89:19 constitute 10:21 146:19 consult 17:14 consult 17:14 consult 10:21 11:25 12:18 13:10 20:1 79:13 79:19 80:25 consultation 18:2	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25 counterfactual 135:21,24 counts 51:18 county 1:2 5:8 163:2 164:2 couple 105:18	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20 99:6 dated 99:18,19 dates 74:21 98:22 david 3:4,5 5:11 48:21 day 75:15 77:19	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10 describe 83:10 design 82:10 design 82:10 design 82:10 design 656:16 56:17 81:20 82:13 desk 43:1 55:5
compli 132:2 complication 25:18 26:8 55:23 55:24 56:25 60:7 62:12 64:8 65:12 66:2 81:7,10,22 123:11,15 126:3 128:19 132:3 140:21 147:24 149:5 152:24 155:1,1,21 157:15 complications 35:1,7,8,15,24 36:3,12,16 38:18 39:15 42:16 44:6 44:20,23 46:10 46:17 49:23 50:1 66:15 69:10,18 71:22 81:13 85:19 86:4 125:20 126:14 128:6 131:20 137:11,20	102:18 130:24 confusing 130:25 conjunction 66:10 consequence 152:7 Consequently 71:20 conservative 34:5 consider 39:25 considerably 138:14,18 considering 94:13 155:8 consistently 85:22 constantly 123:10 constituted 146:19 consult 17:14 consult 17:14 consult 10:21 11:25 12:18 13:10 20:1 79:13 79:19 80:25	82:21 83:11 90:8 118:19 corner 97:24,25 98:2,3,19,21 coronary 22:3,8,9 22:18,18,24 23:3 25:4 81:7,19 122:20 123:1,13 123:14 124:14 124:19,25 139:5 corrected 62:18 correcting 125:7 correctly 85:24 127:10 146:12 Cotton 41:22,23 counsel 2:7 5:18 60:17,22 89:17 count 51:14 132:25 counterfactual 135:21,24 counts 51:18 county 1:2 5:8 163:2 164:2	CV 79:12,17,18 cycle 124:3 C.S.R 1:25 2:5 164:4,21 C73 49:18 D D 4:1 daily 69:15 danger 26:7 59:1 63:12,23 65:20 65:21 114:16,23 dangerous 127:17 daniel 2:12 5:21 data 116:19,24,24 117:6,16,18,21 118:3 128:4,18 date 5:9 97:24 98:1,11,14,19,20 99:6 dated 99:18,19 dates 74:21 98:22 david 3:4,5 5:11 48:21	63:14 71:24 143:2,6 152:18 demands 11:23 demographic 119:15 department 9:13 depending 62:23 Depends 33:24 deposition 1:16 2:1 5:5,14 20:11 47:18 48:3 68:12 68:19 73:4 97:12 97:17 103:18 146:23 161:25 162:4 164:7,10 depositions 20:15 77:7 78:16 114:16 describe 83:10 described 159:2 design 82:10 designed 56:16 56:17 81:20 82:13

Rennillo Reporting Services

6

F*****			1	1
detailed 85:16	34:14 45:8,11	131:11 132:22	drew 28:14	81:16 139:7
detectable 33:7	64:15 122:13,13	134:11,11,15,18	drill 23:23	144:6
determine 81:6,17	125:18	134:25 137:2,8	drip 35:25 55:9	earn 79:3
81:20 82:11	discussed 40:3	137:12,21	66:24	easiest 87:20
130:1 144:4	48:3 82:15	doses 131:2	drive 31:7,9	East 2:21
154:14 161:18	103:20 116:24	135:11 137:5	driving 31:6	easy 27:5 31:15
develop 55:23	121:13 136:20	149:4	drop 158:18	89:15
developed 71:20	discussing	dose-dependent	dropped 30:12	ECHOs 15:7
developing	151:20	33:24	drug 18:13,16	editorial 10:21
146:14	discussion 21:16	dosing 85:15 87:2	27:24,25 28:2,2	11:25 79:13
develops 65:24	36:24 40:19	91:2 117:19	28:4,4,17 32:17	80:25
deviated 115:15	41:10 47:14	129:18 130:1	32:18,23,25 33:2	educate 42:13
deviation 63:15	50:15 54:2 67:4	dosings 86:10	33:5,7,14,25	education 6:20
67:19 115:17	69:3 83:5 84:15	double 8:18 33:11	34:21 41:7 42:15	53:8
device 23:11,25	84:21,23 87:9	doubt 144:9,12	42:16 43:7 44:19	effect 27:3 28:12
devices 25:4	97:14 117:7	down 33:10 44:14	44:20 45:10 51:6	28:14 30:14 36:6
devoted 16:3,4	122:7 128:13	71:11 75:14,16	52:11 58:8 59:12	46:19,20,22,24
diagnoses 7:14	160:17	80:4 84:14,15	62:21 71:3 147:9	60:2 61:20 64:2
diagnosing	disease 7:15 22:9	85:8 97:23	152:1,5,7	64:5 106:21
139:18	disoriented	102:23 115:20	drugs 32:21 33:20	109:4 123:21
diagnosis 157:8	151:14	116:3 118:12	34:11,16 45:14	142:3,6 148:4
diagnostic 7:21	dispute 94:23	119:18 125:8	48:17 52:2 69:8	149:14,17,19
17:4	doctors 11:14	126:16 138:14	70:22 71:1,3	effective 33:4
dial 124:1	12:14,25 19:8,16	138:18 140:14	81:17,20 82:6,11	34:25
die 160:1	24:25 135:18	140:17,18	82:14 85:16 86:4	effectively 35:6
died 159:9,24	139:10,19	164:10	86:9 127:6	effectiveness
dies 160:5	151:24	Dr 5:5 6:15 7:23	151:21,24	33:5,6,14 35:8
difference 91:11	doctor's 40:24	14:6 15:20 19:20	160:25 161:5	effects 42:22
different 22:11	document 88:13	20:12,15 34:9	due 55:24	62:22 64:12,14
24:20,21,22	95:18 99:18	45:3 47:22 48:4	duly 6:5 164:7	efficacious 81:21
28:22 33:12	documentation	48:21 49:6,11,15	during 21:3 26:10	82:16
61:19 89:7 129:4	101:25 102:3	50:7 53:5 54:6	27:11 28:7,12	efficacy 82:8
differential 139:12	documented	57:1 59:3 60:16	29:25 31:16	effort 73:15
difficulty 151:15	64:18 151:12	60:21 61:22,23	34:16,21 35:17	eight 80:5
direct 4:2 6:8 37:5	documents 64:21	62:2 63:16 65:1	35:18 36:5 40:25	either 62:23 68:5
40:22 41:1 47:20	66:8	65:2,15,23 67:14	45:11,20 46:11	75:3 78:17 124:2
47:23 48:8 72:18	doing 7:20 16:23	67:18 72:18,21	47:4 48:3,8 50:2	152:13 156:21
83:9 87:23	17:3 19:24 27:12	73:3 86:18 89:19	51:5,17 52:4	EKG 139:11,19,22
directed 50:4	34:25 75:11	92:23 93:6,6,15	61:2,12 69:9	140:1,2,5
direction 164:13	77:15 87:11	95:18 97:17	70:23 71:9 86:17	EKGs 15:7
directly 37:2	111:16 123:8,8	110:20,23,24	89:2 90:13 112:5	elements 29:19
40:25 62:12	150:13 152:21	111:7,8 112:4	115:9 116:1	elevated 65:8 66:8
70:19 91:14	donate 15:6	113:4,9 114:10	122:19,23 123:7	66:8 147:25
disagree 98:7	done 11:9 25:25	115:8 116:7	124:23,24 127:5	Eli 40:23 41:20,22
117:9,11	38:14 63:5 89:9	117:1,4 121:18	153:19 157:16	42:11,18 43:8
discharge 20:1	104:15 113:24	122:7 126:22	duties 14:18	45:5 51:1 117:14
discipline 12:15	118:5 133:12,25	127:23 128:17		151:23 152:4,24
12:15 13:6	134:2 149:15	128:22 129:2,17	E	158:24
disclosed 117:7	dosage 129:21	146:6,11,18	E 4:1	elsewhere 158:17
discontinuation	dosages 42:21	147:1,22,22,23	each 42:24 120:16	160:3
149:23	71:3	148:10,20	136:22 154:5	Ely 118:8
discontinued	dose 57:19 62:24	150:19 151:7	earlier 50:24	emergency 17:13
101:18 150:6	71:11 87:2,3	draw 22:20 28:25	128:6 149:14	17:16
discrepancy	94:11 127:10	31:18,21 128:18	151:22	emphasize 13:24
40:11 86:23	129:3,3,12,16	drawn 23:3 29:4	earliest 116:21	emphasized 15:18
discuss 21:6 32:2	130:2,11,18	106:11,20 115:5	early 15:14 58:24	enable 26:12
				1

Cleveland (216) 523-1313

Rennillo Reporting Services

	******		+	y
Encino 5:12	112:20 118:2	excessive 36:16	86:22 91:21 93:6	find 25:5 41:25
encountered	120:3 132:6	55:24 56:9	94:1 96:18	74:22 78:19
157:16	137:12	121:25 122:1	105:14 110:23	82:22 83:1,11
encouraging 14:1	estate 1:5 5:21	126:13,13,23,24	111:8 112:7,9,10	90:8 97:5,9
end 16:12 27:17	estimation 109:16	127:14,14	115:24 116:25	116:2 144:21
97:11 109:3	et 1:10 154:9	143:19,19	133:3 135:7,18	fine 26:22 47:23
111:17,19	evaluating 52:22	excessively 56:13	136:5 137:7	57:18 69:2 87:5
122:17 123:22	evaluation 85:17	121:15,24	139:21 149:24	111:24 113:12
146:24 153:23	even 16:13 25:5	124:20	factor 60:1 94:13	115:3 135:25
154:2.8 161:25	30:3 59:15 74:24	exclusivity 18:19	124:8 125:8	145:12 161:13
ended 114:16	86:10 94:4,13	excuse 30:12 65:1	factors 29:15,18	finelli 2:10,12 5:16
ending 27:18	110:16 125:12	76:11 88:12	44:14 56:19	5:21 19:5 20:4
115:13	144:17 156:3,24	116:17 140:4	65:11	103:20
ends 109:10	event 164:16	148:21	facts 75:1,3	finish 95:11
England 83:25	events 148:24	Executed 163:9	110:17 149:25	113:17 114:4,7
84:1,12	152:12	EXECUTRIX 1:4	151:6	finished 8:5
enough 25:22	ever 10:20 74:4	exhibit 41:15,18	failed 146:19	finishing 7:11
26:6 27:9 71:14	75:19 103:17	42:8,9 43:7	failure 62:2,9 70:9	first 6:5 12:5 18:1
71:15 74:13 78:6	107:3 109:16	47:17 49:9 50:11	151:10	18:3,5,8 30:2
126:19	110:5	50:23 60:24	fair 18:22 77:1	37:21 47:17
enrolled 116:16	every 27:15 30:21	89:16 90:4,7	fall 71:7 90:23	48:20 73:7 74:1
enter 94:24 96:8	30:22 42:24 43:5	113:10 151:25	157:19	74:4,8,11 75:7
entering 109:21	56:14 74:25,25	152:25	fallen 137:9	81:20 84:13 85:1
enters 94:17 96:4	77:20 92:11,17	exhibits 41:19	falls 130:1	87:1,9 91:1
106:5	110:4,4 124:3	82:20,21 88:22	familiar 116:10	104:9 106:17
entire 40:6 64:14	154:10	exist 30:9	familiarize 77:1	117:6 129:8
154:22 155:8	everybody 135:24	expand 23:16,25	families 19:8	130:12 138:21
entirely 112:6	160:5	expanded 23:18	family 147:2	140:12
entitled 51:10	everyone 131:1	expect 11:13,14	far 16:2 33:10	fit 11:5 39:17,20
enzyme 28:20	everything 146:12	13:17 102:2	fault 84:2 92:5	134:12 149:7,9
enzymes 29:14	154:18	103:4	features 81:25	five 8:7 17:10
EPIC 35:4,14 36:6	evidence 105:6	expected 85:5	82:14,15,16,17	58:24 80:12
37:2,4,20 38:7	138:22 156:16	experience 53:9	february 1:18 2:3	112:16,20,24,25
38:13 39:23,25	exactly 38:11	79:16	5:1,9	113:1
40:3,7 45:6 64:9	66:23 95:17,19	experimentally	feel 13:12 109:1	floor 2:23 64:22
82:2,8,13,16,19	95:20 116:2	14:16	125:9	101:1,23 102:9
83:10,24 84:6,6	117:2,2 118:15	expert 17:24 18:1	feeling 13:5	flow 23:4,7,17,19
84:8,13 86:1	130:12 140:2	18:3,24 19:25	feels 68:21	25:9 31:8 125:5
89:21 91:10 92:6	152:9	67:13 73:8,9	fell 24:9 116:8	flows 23:16
92:7 121:17	exam 74:4,7,19	76:15 78:9 79:3	fellows 8:22,25	fluids 102:15
122:3 126:1	75:21 76:2,8,8	79:8	20:24	flying 27:14
128:4,17 134:17	examination 6:8	expertise 70:6	fellowship 7:10	focus 43:16,18
134:21 135:12	9:25 10:1 13:3	152:20	8:3,7	54:13 64:17
EPILOG 111:9,9	37:5 41:1 47:20	explain 24:4 26:15	felt 68:11	85:14 86:9
111:10 116:9,12	73:1 145:20	28:6 38:10	femoral 126:10,15	145:17 155:13
117:3,6,6 118:15	153:5 160:21	explained 24:25	151:2 153:16	155:13
118:16,17,18	examinations	31:12	155:2,7,20,22	focused 22:22,25
119:9,11,12,17	12:20 13:2	extent 51:19	few 16:12 27:16	34:17
121:8,16,19	examine 114:10	extremely 160:24	46:5 47:1 106:1	focussing 155:7
122:6 135:12	examined 6:6 40:5	E.P.I.C 35:4	117:17 142:7,8	folks 39:5 59:12
equal 86:12 131:3	40:6 55:20 164:6	F	158:21	117:13
134:10,12	exams 73:24		fight 106:16	follow 11:18 41:8
137:16,22 149:2	exceeded 114:13	facilities 157:8	fighting 106:1	71:5 112:8
149:11	115:8	facility 13:4	figure 75:20	114:11,11
ESQ 2:11,12,20	except 121:14	fact 25:13 65:3	filled 100:4	157:14 161:15
essentially 86:2	excess 121:4,10	74:5 76:17 79:20	finally 89:25	followed 88:4
			1	

8

P				
90:24 110:21	56:17 62:11	148:17	133:14,14 134:4	134:10,12
following 7:1,6,9	63:15 67:9,14,18	gets 107:12,24	136:21,23 145:8	137:21 147:21
51:17 61:17,21	68:7 69:19 77:21	111:12 134:24	160:9	152:15
143:8 150:10,16	78:6 79:3 83:21	getting 27:18	goes 24:7 44:14	groin 126:4
151:15 153:9	89:6,19 99:16	31:14 101:1	123:7	143:21 144:8
154:24 155:6,17	109:12 110:13	114:17 124:14	going 10:15 21:14	153:20 154:7,9
157:3	110:17,19	131:16 135:5	24:16 27:18 29:5	154:25 155:13
follows 6:6 42:9	111:15 114:25	give 12:20,23 13:2	30:22 31:2,3,8	gross 12:13
follow-ups 17:5	115:2,15 117:24	15:10 22:11 30:2	36:22 37:1,8,9	group 14:22 36:14
foot 116:3	118:2 124:17	30:3,16,17,18	40:17,21 41:1	36:15 38:24 39:1
foregoing 163:7	127:2 134:15	33:25 46:2 48:6	42:12 45:16	39:8,12,16,17,21
164:7	137:24 139:5	55:2 57:19 62:24	47:12,16 50:13	40:12,13 46:16
foreign 151:16	143:20 147:19	64:13 68:10	53:2,25 58:1	49:24 132:10
form 15:5 16:25	147:20 148:18	70:25 71:8,10,13	60:10 66:21 67:2	149:7,9,10
25:5 29:22 100:4	148:22 151:23	77:7 78:11,12	67:6,10,12,15,25	159:11,15
122:20	152:4 156:6	87:18 90:7 93:19	68:4,10,25 69:1	grouping 129:8
formal 80:17,18	front 83:15 110:24	95:5 120:20	72:12 74:5,13,20	131:25 132:14
formation 29:25	111:7	123:19,20	74:20,24 79:11	groupings 129:4
123:12,13	full 6:12	124:15 125:2,6	83:3 87:8 91:3	groups 38:16,17
124:14 125:11	function 84:19	125:11 126:9	97:10 99:15	132:6
forth 38:4,7 73:17	85:3	130:4,6 145:1	100:22 101:12	grown 11:24
126:9 135:9	further 25:8,8	149:15	105:7,17,22,25	guarding 151:3
144:18 149:25	44:11 60:17,22	given 9:25 30:13	106:4 107:15	guess 24:9 109:11
151:23	64:6,6 66:22	34:21 35:16,18	109:24,25 110:1	109:17
forward 115:2	85:8 146:1 153:2	45:20 46:3 47:17	110:13 113:20	guide 11:11
found 38:20 74:10	157:1 160:21	57:13,15 58:7	114:3 116:3	guidelines 71:2
76:4 83:17 84:4	161:21,22	59:25 62:21 63:5	117:17 118:4,25	guidennes / 1.2. guys 117:21
97:20	164:15	68:22 74:4,20,21	119:10 121:18	guya i r.z i
foundation 1:9 5:7	future 85:10 86:5	74:24 92:17 93:1	122:5 124:18	H
5:24 9:9 20:19	Tuture 65. 10 60.5	96:1 100:5 101:5	125:6,8 128:11	half 17:10 33:5,7
20:22 34:9 53:12	G	102:16 103:17	130:6 132:20	33:14 39:3 77:19
61:4 70:10 96:23	gas 116:4	108:19 109:15	133:5,5,7 136:3	77:21 120:11
four 7:4 8:14 17:9	gastrointestinal	109:18 110:6	144:21 145:8	halfway 84:14
79:22 84:11	30:20 44:8	112:16 136:15	160:15 161:6,7	half-life 32:23,25
89:18	155:11 156:19	141:22 147:13	162:2	33:2,3,4,6,8,13
	157:23	147:18 148:6	gone 15:16 33:5	33:16,19 34:2
four-part 131:9 Frank 83:22	gave 67:8,23	150:3	33:15 52:11	96:15 133:2
148:20		gives 97:3	good 11:20 13:20	134:9
free 15:3,10 43:4	86:21,22 93:7,15 112:4	giving 54:17 57:11	27:5,19 43:17,20	1
	general 11:13	68:15 71:17	64:20 73:16	hand 25:12 31:23
freeway 31:6 116:3	13:12 37:3 48:15	73:24 78:16	125:5	164:17
1	124:12	79:17 111:1	gotten 15:16	handed 83:20
frequency 44:5,23		115:16,25 124:2	55:11 107:22,25	handwriting 98:5
58:18 61:7	generally 53:18	124:9 136:14	109:5,6	Hang 43:16
156:13	generated 87:24	1		
frequent 123:24	89:3 110:14	go 18:6 29:3 36:20	grade 11:3,20	hanley 3:5 5:11
149:2 161:18	genitourinary	37:8,13 40:15 47:10 48:11	graded 11:6,7	happen 17:17
Frequently 33:9	44:9 156:20	1	graduated 8:1,4	136:4,4,5,5
from 7:2,5 8:1,4,4	157:24	50:12,19 53:19	graduating 7:2,5	happened 57:10
11:19 12:19 15:8	gentleman 63:22	53:23 54:8 60:8	grams 152:15	86:25
17:17 20:9,18,22	134:8	67:1 72:11 75:17	grants 12:9	happens 23:7
24:1,7,16,16	gentleman's	79:15 82:25	graph 38:1,3,10	hard 16:11 33:1
26:2,3 27:14	142:11	89:13,20 91:3,17	38:11 64:10	harm 71:15
28:14,19 30:1,4	gentlemen 6:13	92:6 95:14,15	131:7 150:25	having 6:5 46:14
30:10 31:15 37:6	6:22 10:25 21:21	97:7,9 114:7	graphs 39:18	56:24 114:19
40:22 41:20,21	28:7 32:5 38:11	115:2 118:24	Great 29:1	115:5 122:19
42:11 43:5 45:5	41:18 147:18	122:6,11 128:9	greater 39:2	124:23 130:22
	1	I	1	1

Rennillo Reporting Services

21 ∶
r		·······		
136:2 139:7	127:12 134:16	93:24,25 105:3	increased 36:2	103:7 104:2
151:14	149:4,5 161:2,15		44:5,11,15,22	105:9 106:5
hazards 35:5	highest 36:11,16		49:24 65:16	107:18 131:17
headed 88:25	66:14 146:14	idea 71:13 73:16	66:11 124:13	141:23 149:20
128:24	149:9,10	78:8,11,12 81:4	125:23,25 126:3	149:23 150:3
health 12:9,11	highlighting 43:22	identified 50:23	126:11 127:4,7	153:18,24
hear 145:8	high-speed 23:23	identify 5:18	132:16 140:20	159:11
heard 74:18,18,19	him 18:6 54:11	51:16 147:17	156:13 157:1,13	infusions 134:19
74:24	56:20,22 59:19	ignore 96:18	158:3,13,14	inhibit 29:17,24
heart 7:14 21:21	63:20 67:25	ignored 96:19	independent	64:6
21:23 22:1,12	68:15,16 95:4	lib/illa 50:3	19:11 111:14	inhibited 29:23,24
23:9 25:1,9	97:5 112:5	III 28:20	114:23	56:18
26:10 28:7 30:16	113:1 7 133:24	image 125:3	independently	inhibiting 30:11
30:19 34:10 66:9	134:15 139:20	immediately 9:3	8:17	56:19,19 66:22
69:9 81:4 90:1	HMOs 18:25 19:9	52:4	indicate 37:14	inhibition 153:19
147:21	hold 12:2 100:7	immobilized	43:12 48:2 49:11	inhibits 28:22
heavier 39:10	102:15	153:22 154:8	51:8 61:6 100:5	initial 86:18 87:2,2
127:21	Holly 103:17,21	impact 142:11	127:3 148:16	87:2,9 91:18,22
held 21:16 36:24	home 78:5	144:13	indicated 148:6	92:9,15,25 93:7
40:19 41:10	hoops 53:4	impacted 45:14	indicates 49:9	93:16 94:11,19
47:14 50:15 54:2	hospital 8:16 9:5	impairment 25:8	51:9 101:8	96:6 104:4,5,6
67:4 69:3 83:5	9:6,8,12 16:18	important 11:8,10	102:14	104:10 107:12
97:14 128:13	16:19,22,23,23	11:11 14:1 40:10	indicating 58:3	initially 156:4
160:17	20:7	50:5 52:2 81:24	114:22	initiating 87:7
help 11:16,22	hospitals 7:8 9:1	96:18 150:2	indication 100:20	injection 55:8
14:12,13 28:13	9:5,7 18:9 19:9	inaccep 142:20	101:11 115:15	57:14
29:22 54:16	hospital's 150:20	inaccurate 98:22	127:2	injuries 81.14
71:14 125:17	hospital-based	inactivate 57:15	indigent 15:4	insert 25:4 42:2,8
helpful 11:22	16:21	inappropriate	individualized	42:10,11,17,23
hemoglobin	hour 31:7,9 62:15	47:21	93:23	43:7,14 44:18
152:15 158:18	77:4,13	inappropriately	indwelling 31:17	45:5 50:18,25
hemorrhage	hourly 61:21	141:25 142:2	31:17 85:13	51:4 111:10,16
125:24 127:5	62:10,10,14	incidence 35:23	inextricably 16:11	151:23,25 152:4
142:12 152:14	143:8,14,16	36:11,15,16	infarction 139:8	156:2 158:17,24
154:9 158:4,15	144:3 150:11,16	38:15,23,25 39:3	infarctions 81:13	inserting 23:11
hemorrhages	151:7 153:9	39:6,9,14 40:13	inflation 124:24 125:1	inserts 21:24
126:18	154:23 155:17	43:9 64:11 81:18	information 35:21	32:17 41:7 inside 31:19 42:25
hemorrhagic	hours 16:21 61:24 99:25 105:10	131:15 134:14 161:3,14	39:22 40:22	Instead 92:16
147:23 154:7		incidents 159:22	44:24 46:7,13	institutions
159:21,22 160:1	109:24 153:23 153:24	include 134:17	52:10,13,18	148:23
160:2,5 hemostatic 51:16	hour-and-a-half	135:4 158:14	66:10 119:16,16	intense 77:25
hep 100:7	54:25	included 42:7,24	151:23	interactions 61:11
	houses 79:14	103:10 135:11	informational	intercerebral
heparin's 57:15 101:12	80:9	136:17	44:17	67:20 68:16,22
her 103:22	Houston 7:3,4,8	including 12:10	infused 101:23	69:21 70:2
high 21:3 36:15	huge 40:11	22:14 38:14 44:6	infusing 101:8,19	151:21 158:4
39:16 55:22 56:8	huh 151:17	81:13 137:4	101:19 102:1,17	161:3
61:2 66:4 71:4	humans 25:14	148:23 156:14	102:24 103:3	intercranial 70:19
89:2 90:13	hump 33:11	159:3	104:25	70:20 152:6,13
139:11 141:25	hundred 9:4 71:6	inclusion 134:22	infusion 38:6,25	152:22 158:15
142:2,20,24		134:25 135:10	51:12 55:9,10	158:19 159:3
176	86.22 92.1 18			
	86:22 92:1,18 93:12 130:5 5 7			
143:4 154:19,21	93:12 130:5,5,7	income 79:2	57:20 58:12	interested 164:15
143:4 154:19,21 higher 35:23 46:9	93:12 130:5,5,7 144:20	income 79:2 increase 137:19	57:20 58:12 63:17 64:4 94:19	interested 164:15 interesting 34:24
143:4 154:19,21	93:12 130:5,5,7	income 79:2	57:20 58:12	interested 164:15

9

	F			r
intermediate	involve 14:9 32:14	86:20 87:11	127:1 133:3	135:20 138:8
39:11	32:17	93:21 95:9 96:10	134:15 141:1	141:12,15
internal 6:17 8:23	involved 8:8 18:14	97:2,4,19 98:19	142:12 145:1	142:16 143:5,9
8:24 10:11,13,17	18:17 76:9 77:8	99:10 103:16	147:18 154:11	143:16 146:13
16:4,7,9,10,12	78:9 80:14 91:13	104:18 108:2,5	155:7 158:16,21	154:17,20 160:5
16:15 17:21	involvement 79:2	108:12,17		160:7,11
73:11 80:5	involves 10:25	109:11,14,20	<u> </u>	knowing 151:4
157:22	11:1 34:7 79:8	111:4,6 112:7	Kariokis 147:22	knowledge 34:15
Internet 43:3	involving 18:10,14	113:8,18,19	keep 24:1 56:15	36:4 37:4 45:9
interns 8:23	45:10 48:16	114:6 115:18	56:17 60:18	45:12,18 48:16
internship 7:6	52:11 157:23	119:5 125:16	63:17 64:4	53:8
interpret 67:21	in-laboratory	128:16 133:10	Kelly 89:6	known 32:12 36:5
interpretation	147:25	133:15 134:3	key 29:18,19	39:23 44:25
105:15	ischemic 85:19	143:5 144:1	kilo 131:4,5	45:24 46:7,12,13
interpreting 68:17	issue 86:15 91:2	145:1 146:17	kilogram 86:21,23	46:18 47:2,7
interquartile	101:24 102:5,8	147:8 148:10	91:19 92:1,18	52:14,18 65:21
	111:25 125:19	149:13 150:14	93:7,10,12,13	65:22 74:15
119:24 120:3,3	127:25		104:5,11 107:23	114:19 143:12
120:20,24		151:9,13,19	1 .	
121:10,11	issues 16:9,14,21 18:10,14,18	153:3,6 154:17 155:3 160:12	117:1 118:13 129:3,12,20	knows 111:10 144:24
interrupted				144.24
113:25	20:24 79:8 91:13	161:6,9,11,13,22	130:2,11 131:12 131:23 132:11	L
interrupting 41:3	115:7	Jones's 48:9	1	
interventional	item 13:22 154:5	113:25	132:23 134:7,10	lab 8:25 14:14,17
8:21 16:25 17:3	154:10	journal 48:23	134:13 137:10	16:25 17:2 27:1
17:14 20:23	items 154:11	79:19,21,24 80:1	149:5	27:4 65:9,20,23
22:14 42:14 45:1	I.V 100:15,20,21	80:1,6,25 83:21	kilograms 36:8,13	69:16 71:1 72:8
45:21 46:11 47:5	100:24,25	83:25 84:1,13	36:19 38:21 39:3	77:25 87:18 88:8
48:18 52:5,12	102:15,24 103:6	journals 11:2	39:4,8,13,20,21	89:20 90:1,20
53:10 54:21,22	103:10	79:14	43:10 44:13,16	95:2 97:21 102:6
69:7 70:7,23	I.V.s 103:10	jump 53:3	55:21 56:4 60:1	102:13,20 103:8
73:20 74:6 75:21	J	jury 6:13,22 10:25	65:16 86:12	104:3 105:1,10
78:20 79:5	J 3:4 48:21	21:8,21 28:7	108:11,13	105:11,17 107:4 113:23 117:15
117:20 150:18		32:5 38:11 41:18	130:20 149:3,10 149:12 157:2	1
152:21	January 34:11,17	54:17 100:24		134:24 135:6,23 136:17
intracerebral	36:5 39:23 44:19	112:1 115:7	kilos 107:24 129:9	labeling 8:18
70:14 72:2 141:8	45:1,13 47:2	120:2 128:10	130:6,7,13 131:3 kind 45:15 139:13	
142:12	52:8,14 53:12	147:18 148:17	140:8	laboratory 28:16
intracranial 72:9	54:8 61:9 72:1	just 14:21 22:20	kinds 76:12	51:10 94:18,24
125:23 126:17	88:3 96:24 98:20	27:9 30:18 33:2		96:5,8 106:6
127:5 136:3	98:21 109:5,19	33:12,13 36:2	knew 34:20,23 74:25	109:21 labs 27:1 40:4
155:11	112:3 115:6	39:15 40:2 41:1		
intravenous	116:16 152:1,5	41:4 43:14,21,25	know 11:3 25:25	ladies 6:13,22
100:16 101:2	152:23	45:6 46:21 48:1	26:1,21 27:7,8,9	10:24 21:20 28:6
148:2	jay 1:17 2:1 4:3	50:17 55:5 57:14	27:10 30:15	32:4 38:10 41:17
intravenously	5:56:4,1497:12	60:20 61:19	34:20 46:23 48:7	147:17 148:16
57:14 62:22	97:17 161:25	67:16,20 73:22	64:11 68:1,1,12	languages 151:16
invading 7:20,21	162:4 163:5,15	73:22 79:14	69:1 74:14,21	large 9:10,11,13
invasive 7:16,19	job 21:9	83:17,20 84:9,20	76:11 77:20	38:13
7:19,24 12:22,25	jones 2:20 5:23,23	86:12 91:7 92:17	82:22 93:21	largely 22:13
17:5 73:20	19:15,15 37:1	93:5 100:24	95:19,23,24	larger 130:8
investigate 75:4	40:21 47:16 48:5	103:14 105:8,13	104:9,17,18	laser 64:16
investigating	50:17 60:15 67:6	105:19 111:25	106:15 107:11	last 24:10 49:15
12:12 77:9	67:23 68:9,18	113:10,14	110:2,18 117:12	63:22 65:19
investigation	72:19,22 73:2,5	115:23 117:12	118:2 123:3,4	80:12 101:4,25
80:17,18	77:24 78:25	121:23 123:19	126:21 133:16	103:22 109:17
investigators 86:2	82:25 83:8 86:8	123:25 126:19	133:17 135:8,18	125:18 131:6,11
L	1	<u> </u>	Į	L

Cleveland (216) 523-1313

			** ***	
151:19 158:7	license 9:20 14:20	57:14 74:25 93:9	38:5,15,17,23	68:8,14,24 69:6
lastly 152:17	licensed 9:14,17	116:4 159:6	39:14 40:13 44:5	72:11,17 78:22
later 105:10	9:19,19 14:6	live 25:14	44:23 55:24	79:11 82:19
laws 163:6	licenses 12:9,14	local 21:25 67:11	56:14,24 58:1	87:23 88:22,25
lawsuits 18:10	licensing 12:8	68:3	60:6 62:12 66:14	95:4 97:1,7 99:9
lead 23:9 25:9	life 109:17	locate 128:10	86:7,8 121:20,21	103:12,20 108:1
82:1	light 54:13,19	logic 136:4	123:15 126:3	108:4,7,10 109:8
Leader 2:13	lighter 137:12	long 15:22 33:24	128:24 131:15	109:12,13 111:3
leading 66:19	lighter-weight	107:11 115:6	131:20 132:2,3	113:17,24 114:3
leads 122:1	126:8	117:24	134:14 137:20	118:24 128:9
126:24 127:14	lightest 39:7,12	longer 33:7 34:4	144:7 146:15	133:24 134:1
learn 11:10 21:8	like 6:19 15:20	46:1 154:1	148:24,25 149:1	143:25 145:5,7
38:18	22:15 23:4 25:6	long-hand 108:6	152:12,23	145:13,17,21
learned 35:3	26:4 27:14 31:6	look 13:13 18:5,20	155:21 156:5,13	153:2 156:3
learning 35:2	35:1 38:24 53:1	18:21 19:21 56:1	157:4 158:16,17	160:14,22 161:8
least 62:10 68:13	57:14 59:15 71:4	82:13 99:7	159:2,8	161:10,12,20,23
87:15 94:2	71:13 78:17	118:22 127:24	make 11:4,5 22:4	mark 2:20 5:23
112:24 122:25	81:25 86:12	129:18 134:5,8	22:7,21 27:13	67:16 73:5 89:15
153:21	99:21 108:4	134:15 151:25	38:9 42:12 43:8	97:8
led 71:22 158:22	127:13 146:22	looked 38:16	48:20 50:10 64:7	marked 89:17
left 86:5	150:25	86:14,14 96:21	71:15 105:1	145:23 148:17
leg 153:22 154:8	likelihood 46:16	looking 12:13	110:10 111:25	marks 97:11,16
legally 53:4	151:20	41:14 54:19	115:23 124:19	161:24,24
length 46:4	likely 49:22,25	88:19 90:11	133:18,21	martin 1:5 5:22
less 11:24 15:16	64:8 124:19	99:17 123:4	makes 31:20	53:11
27:12 36:8,12	125:15,16 139:9	128:17 131:6	makeup 16:1	Marty 147:2 148:7
38:21,22 39:8,13	141:11	looks 97:8 99:21	making 16:22 97:8	152:22
39:21 43:10	Lilly 40:23 41:20	los 2:4 5:1,15 7:12	110:16	Marty's 151:12
44:12,16 76:25	41:22 42:7,11,18	15:2 27:14 78:7	malpractice 19:4	material 23:15
78:13 86:12	43:8 45:5 51:1	117:23 163:2	76:13	37:6 70:8
93:11,16,19	117:14 118:8	164:2	man 136:2	materials 53:7
104:11 108:22	151:23 152:4,24	lot 110:1	manage 147:3	83:12
111:1 129:9,11	158:24	low 55:20 56:3	management	mathematics
130:13 131:3	limit 119:10	60:3 65:22 71:5	70:11 157:6	108:6
137:13,16	limits 26:2,3	114:20,21,21	maneuvers 58:23	matter 5:6 136:5
138:15 149:2,11	line 54:15 101:2	125:19,22 126:2	58:24	maximal 49:19
153:14,15 157:2	116:9 137:25	lower 26:3 36:7,12	manifestation	may 23:6 33:11
let 55:2,5 68:1,1	138:4,5 151:9	97:23 98:2,3,20	122:25	71:7 96:10,19
72:17 79:1 98:18	161:7	127:3 148:25	manual 153:20	122:10,23
113:8,17 133:13	lines 31:17 119:21	low-dose 120:18	manufacture	133:15 134:20
133:21,24 159:1	linked 16:11	120:24	59:12	138:25 139:7
letter 41:20 146:2	liquid 24:7,16	Lyncoff 89:19	many 8:3 12:22	142:11,12 160:4
156:7 158:3,8	list 151:10 158:11		16:24 17:6 25:23	160:6,7
let's 22:23 28:21	listed 44:15 79:13	M	33:1 81:23 82:13	maybe 28:25
28:21 64:19 92:6	79:24	M 2:12	March 48:22 50:7	75:13 84:3 87:20
94:14 104:22,23	listen 95:5	machine 31:23,24	117:8	123:19
104:24 105:15	listing 44:14	31:25	margolis 2:10,11	mean 32:24 37:3,7
110:3,3 113:14	lists 160:10	made 22:2 50:7	5:16,17,20,20	40:12 80:17,18
128:1 160:8	literature 11:8,9	133:23	6:11 21:19 29:3	87:4,6 88:12,16
	11:13 32:12,14	Maine 9:20	29:10 36:20	91:14,24,24
level 26:10,12				
	37:7 40:23 41:7	mainly 8:19.24	37:14,18 40:15	105:12 112:24
level 26:10,12 33:7 57:21 58:8 122:22 123:22		mainly 8:19,24 15:19	37:14,18 40:15 41:4,13,21 43:20	105:12 112:24 116:23 120:7
33:7 57:21 58:8 122:22 123:22	37:7 40:23 41:7	-		{
33:7 57:21 58:8 122:22 123:22 141:25 142:2,20	37:7 40:23 41:7 45:6 47:20 59:13 147:20	15:19	41:4,13,21 43:20	116:23 120:7
33:7 57:21 58:8 122:22 123:22	37:7 40:23 41:7 45:6 47:20 59:13	15:19 Maintain 153:20	41:4,13,21 43:20 46:18 47:10,25	116:23 120:7 121:2,22 124:11
33:7 57:21 58:8 122:22 123:22 141:25 142:2,20 142:24 145:9	37:7 40:23 41:7 45:6 47:20 59:13 147:20 litigation 18:14	15:19 Maintain 153:20 maintained	41:4,13,21 43:20 46:18 47:10,25 48:14 50:19,22	116:23 120:7 121:2,22 124:11 126:21 137:15

			··········	
55:8,22 111:23	11:16 13:6,13,13	96:11,14,16,16	39:4 49:21,25	nature 15:21
115:21	13:14,14 16:4,7	103:14 112:16	59:15,17,18,22	nausea 64:23
measure 26:24	16:9,10,13,15	112:21,24,25	64:8 66:20 70:22	65:10,15,25 66:8
27:3,21 64:14	17:21 32:3 73:11	113:1 124:3,4,6	71:8 76:25 85:4	66:11 138:23,24
115:19	73:12 80:5 84:1	124:6 134:9	85:16 86:4,10	139:1 141:2,16
measured 22:2	84:13	153:21 158:21	108:21 109:6,24	141:19
28:15 29:16	medicines 24:22	mismanaged	110:19 112:4	nauseous 139:14
46:24 51:15	Medicine-affiliat	69:21 72:4	116:8 124:19	140:25
55:15 64:12	7:8	mismanagement	125:6 127:17	near 15:3
135:19	meds 100:5	53:22 69:12 72:7	130:4 132:11,24	necessarily 74:24
measurement	meet 53:16,18,21	Miss 41:23	141:11 148:25	115:17
50:2 51:5	70:10 90:19	missing 137:24	149:1 158:18	necessary 25:14
measuring 111:17	109:1	misspoke 140:4	morning 87:15	68:11
mechanical	meeting 54:10	mistakes 111:18	98:17 99:19,24	need 13:8 17:13
153:20 154:6	members 10:16	modification 40:8	100:22 101:22	25:10,16 53:23
mechanism 28:18	memo 20:23 89:6	modify 94:19 96:6	102:14	56:21 73:7
28:22 30:23	89:19,21	molecular 144:21	mortality 81:11	115:20 117:18
56:14,16 64:6,7	memorandum	moliterno 3:4	most 13:24 36:15	154:15
144:17	61:5	20:15 34:9 45:3	38:17 112:20	needed 114:25
mechanisms	mention 102:16	47:22 48:4,21	157:15	needs 17:15 21:8
24:20 33:12	121:8 158:2	49:6,11 50:7	moving 112:12	22:5 59:10 60:20
66:22 85:17	160:2	59:3 61:22,23	much 14:11 16:2,3	negative 19:22
median 49:25	mentioned 73:10	62:2 63:16 65:1	16:17 25:16 26:7	negligence 12:13
medical 6:20,23	119:8 122:6	65:23 72:21	27:4,10 31:1	115:25
7:5,5 8:1,4 9:10	127:24 156:7	86:18 92:23 93:6	36:18 52:3 71:16	neither 80:10
9:11 10:22 12:3	160:4	93:15 95:18	78:9 91:11 95:25	nelson 1:24 2:5
12:5,7,18 13:8	merely 122:14	110:20,24 111:7	107:2,10,21	6:1 164:4,21
13:10 15:13,21	merit 19:11	111:8 112:4	113:5 114:19	nervous 62:13,18
16:17 19:4,11	met 52:23 53:13	113:4,9 114:10	122:5 123:19	65:12 66:3,6
20:1,8,17 32:12	57:4 58:5 62:4	115:8 116:7	126:9 135:19	neurologist 67:14
32:14,15 33:18	73:3 90:24	117:4 126:22	multipurposes	neurosurgeon
34:15,20 37:6	metallic 23:25	146:6,11,18	151:3	67:15
40:1,23 41:6	method 40:6	147:1 150:19	must 85:14 86:9	neutralize 62:22
45:10,12,18 46:8	methods 136:23	151:7	myocardial 81:13	never 67:8,9 68:1
46:14 48:16 49:3	MI 139:18,23	Moliterno's 49:15	139:8	68:1 79:7 80:14
52:14,17,18 53:6	140:1,5,11	117:1	myself 5:21 19:5	80:22 133:16,17
53:13 57:2 58:3	microphone 24:9	moment 36:20	119:10	new 11:21 15:19
58:19 59:7 62:1	30:12	40:16 47:11 60:9	M.D 1:17 2:1 3:4	52:1 74:19 83:25
62:15 63:4,14	middle 120:5,10	95:21 105:7	4:3 6:4 162:1,5	84:1,12 99:11
69:24 70:5 71:24	120:10 146:23	160:14	163:5,15	141:20
76:13 114:15	Midway 9:6	monitor 5:10	NI	news 27:19,20
143:2,6 152:18	might 11:5 75:14	26:12,17,18	N 1.17 0.1 1.1 0	next 82:1 91:18
medical-legal	77:9 81:17 87:21	59:14,18,20	N 1:17 2:1 4:1,3	105:18,25
78:10 79:3	125:10 140:1	147:3	5:5 6:4 97:12,17	158:22
Medicare 15:5	155:23	monitored 51:22	162:4 163:5,15	nice 75:12 78:6
medication 22:6	mike 60:19 145:10	59:11	name 5:20 6:13	Ninth 2:21
24:17 57:12,13	145:12	Monitoring 51:10	14:11 44:4 50:3	nobody 18:20
62:3 64:13 71:14	miles 8:14 31:7,9	month 76:18	51:13 99:2	none 116:19
155:9 159:20	mind 114:22 115:4	77:10	103:22	142:25
medications 15:9	mine 43:23	months 87:25	named 164:7,11	nonetheless 18:7
90:1 112:16	minute 29:13 67:1	116:21 117:17	names 22:11	noninvasive 7:16
118:6	89:22 118:22	month-and-a-half	narrowing 22:4,5	7:18,20,24
medicine 6:15,18	121:19	73:5	national 10:1,2	noninvasively
7:3 8:13,13,23	minutes 27:16	more 11:5 15:18	13:13 32:6	8:22
8:24 9:15,18	34:1,6 58:23,24	17:19 23:17	nationally 10:1	noniow-weight
10:8,10,12,14,17	61:24 83:20	27:11 30:3 34:25	naturally 59:14	125:24
1			1	1

nonmistakes	108:10 133:5,5,7	officially 14:20	68:15,22 69:23	140:10 156:8
111:18	133:12,24 161:6	often 70:22	70:4,15,16,17	outlined 64:9
non-ReoPro 46:15	objecting 68:14	Oh 83:17 130:19	71:23 72:5,6,7	outside 121:10
normal 17:8	68:16	158:10	90:18 141:22	out-of-range
100:16 102:25	objection 37:10	ohio 1:2 2:15,24	142:10 146:18	127:13
138:9,15,19	37:13,15 41:2	5:8 53:4 147:21	152:17	over 30:19 39:5,9
151:12,17	48:9 50:18 67:17	old 88:16	opinions 19:22	52:11 64:24 65:8
normally 24:17	68:18,23 78:22	once 50:24 77:10	67:10,23 68:4,10	65:9 73:4 79:4
68:6 116:24	103:12 109:11	one 2:22 13:1,15	77:9 136:15	86:22 91:7 93:9
notary 5:11	109:13 111:3	14:23 18:18	opportunity 15:12	110:13 111:13
notation 100:21	133:18,21	23:13 25:3 26:24	37:19,25 48:24	124:20 134:7
101:4 103:2	143:25 161:10	27:2 29:14,18,19	60:16 68:11	139:19 146:3
note 64:18,21 66:7	161:12	30:14 31:13	72:20 74;8 95:5	overall 144:14
86:21,24 101:7	observed 157:20	47:18 52:21 58:7	97:3 114:4	overanticoagula
117:2	obtain 26:9 91:6	62:15 66:18	115:19	25:17
notebook 88:17	obtained 31:14	69:18 74:9,11	opposed 35:17	overanticoagula
noted 101:21	obviously 37:7	75:9,23 76:4,18	36:1 45:22	66:4 71:19
103:14 161:12	102:23	79:12 81:24	option 75:8	111:22 113:6
notes 95:18 101:6	occasionally	82:20 88:13,18	oral 13:3	overanticoagula
101:14,15,21	78:17	89:12,18 91:14	order 23:16 26:9	68:20 70:17
102:10 103:15	occasions 141:17	92:6 104:16	30:1 32:10 58:4	122:14 151:4
nothing 91:21	occluding 124:25	105:17 106:11	59:22 78:4 81:18	overcoagulation
137:4 146:7	occlusion 125:11	108:4 119:10	161:17	62:17
153:2 161:20	139:4	120:13 121:14	ordered 59:3	overly 150:24
164:9	occur 35:7,16	121:23 122:12	139:22	overruled 133:15
noticed 5:16	64:9 69:11,19	123:18 126:10	original 42:1 89:5	overshoot 71:10
notification 67:9	70:21 126:21	128:3 129:6	originality 11:6	71:12 123:20
NS 100:15	occurred 57:3	130:6 139:4	other 11:13 12:25	owe 147:1
number 5:5,8	58:7 141:14	140:10,10	14:18 15:7 23:21	own 8:17 13:18
22:11 34:6 38:14	150:5,6	141:10,12 147:9	25:12 26:6 27:21	150:20
47:18,19 58:7,11	occurrence 65:7	150:21 159:10	29:23 30:7 33:4	
58:14 71:9 75:8	99:12 126:19	159:13,19,20	35:10 39:4 41:23	P
82:22 94:7 97:11	occurs 16:8	ones 14:24 26:19	45:25 46:2 56:14	pa 114:21
97:16 107:17,25	137:21	159:24,25	63:1,21 71:21	package 42:2,8,10
116:21 121:22	October 20:18,23	one's 98:23,24	74:25 81:12,14	42:11,17,23
126:17 130:6,8	61:5 87:25 89:3	120:17	82:9 93:4 110:25	43:14 45:4 50:18
138:25 140:7	92:14 110:14	one-page 154:18	120:13 140:8	111:10,16 156:2
141:16 143:12	off 21:14,16 24:9	one-third 16:6	148:11 155:10	packages 42:6
148:22 150:21	27:16 29:3,5,7	online 27:12 43:3	others 49:6 81:25	page 84:12,22
153:8 154:13,23	36:20,22,24,25	only 12:24 18:20	117:5 147:23	88:13,18 90:11
162:1	40:15,17,19,20	37:11 59:21	other's 120:18,19	119:13
nurse 31:23,23	41:10 47:10,12	66:17 93:7 95:24	ourselves 13:16	pages 89:18 90:4
100:4 102:8,23	47:14,15 50:12	114:15 119:9,10	13:20	pain 122:24 123:2
103:9,17 139:10	50:13,15,16	123:23 144:11	out 11:12 14:17	124:23 125:10
nurses 89:20	53:23,25 54:2	155:7,12 157:7	15:17 16:12,18	139:9
nurse's 64:18,21	60:8,10,12 63:18	159:22,24	27:18 31:21	Palo 7:10
66:7 95:18 101:6	67:1,2,4,5 69:3	open 24:1	35:22 37:2,11,22	paper 35:3,10
101:7 102:10	72:11,12 82:25	operator 5:11	43:17 59:1,16	89:13
nursing 101:1,14	83:3,5 97:7,14	opinion 33:17	63:12 74:10,22	papers 89:7
101:15,21	111:23 116:3	38:3 49:2 53:5	75:20 76:20 79:7	paragraph 49:15
103:14	118:24,25 119:2	53:14,15,16 54:9	86:11 100:4	84:17,23,25 85:8
	128:9,11,13	56:5 57:1,8,9	110:24 111:7	86:1,7 91:1,4
0	145:6 149:14	58:18 59:5,25	113:10 114:12	94:6,14 95:10
O 100:11	160:14,15,17	61:25 62:6,7,9	116:25 117:23	104:7 150:9,12
object 37:1 40:21	162:2	63:3,9,13 67:9	118:3,14 119:11	153:8,10 154:2,5
47:16,25 67:6,15	official 12:8	67:13,17,18 68:2	122:8 132:20	154:10,12,23

155:16,18	136:16,18	132:11,23 134:7	picture 22:20 29:2	145:23 146:8,19
paralyzed 30:23	137:13 138:25	134:10,12 137:9	29:4 142:15	154:22
parameters 27:23	139:14,22	149:5 152:15	pictures 22:2	pointed 35:22
31:5 57:17	140:24 143:22	percent 16:20	piece 89:12	89:9
parenterally 85:11	146:8,13 147:1	17:19 39:1,6,14	pilot 14:14 27:14	pointer 64:16
86:9	150:24 155:9,14	39:14 40:12	place 5:14 24:19	pointing 86:11
Park 80:10	159:10,12,14,20	64:11 71:6 78:13	27:19 100:3	points 48:19
part 21:1 30:21,22	patients 11:12	120:4,10,12,13	111:20,22	81:23,24
42:5 57:12,15	13:17 15:4,9,10	120:14 121:3	164:11	police 13:16
62:23 82:9 86:6	16:5,6,6,7,8,13	131:19 132:3,7	placebo 49:21	policing 12:11
88:5 96:22 99:5	16:18 17:1 19:8	132:17 134:13	120:17 159:14	portant 11:10
	19:8 36:6,7,12	137:20 144:20	159:21	portion 49:9
104:20,20		149:3,3	plaintiff 2:2,9 19:2	122:15
105:21 121:3	36:14 38:5,16,17	-	PLAINTIFFS 1:7	position 10:25
123:6 144:10	38:20 39:8,10,11	percentage		
150:11 155:5	39:12,16 40:12	137:11	Plaintiff's 60:17	12:17,19 17:24
158:7,24	40:14 43:9 44:12	perfectly 31:20	60:21 89:17	positions 12:2
partially 46:19	44:16 45:20,22	33:10	plaque 23:18	possibilities
participate 13:9	46:9,10,14,15	perform 17:7	plastic 21:24	139:16
participated 10:4	49:17,20,23	performed 17:15	platelet 51:14,18	possible 42:16
participating	61:15 69:9,19	45:3 58:23,25	153:19	52:3 66:5 123:1
85:22	70:22 73:17	performing 16:25	platelets 28:23,24	138:22 139:17
particular 12:21	75:17 78:5 81:10	17:25 25:1 53:10	29:18,20,22 30:4	144:6 157:7
18:18 28:19 88:5	81:12 85:13 87:7	Perhaps 101:13	30:7,8,10,10	Possibly 141:6
121:3 122:3	87:12 90:20	period 34:16	56:20 149:20,21	post-angioplasty
127:25 143:22	114:22 116:15	45:11 57:4	pleas 1:1 5:8	138:25
154:14	118:6 119:17	136:16	please 5:18 6:2,10	potent 30:3 85:11
particularly 36:14	120:4,13,14	perjury 163:6	6:12,21 8:11	160:25
63:19	121:3,9,15,24	permitted 93:17	10:24 21:11,20	potential 76:14
parts 155:10	124:8 125:20,23	93:20	24:4 26:15 32:4	pounds 38:22,23
passed 8:3 74:11	125:24 126:2,8	perpetuating	34:19 36:21 38:9	39:5
passing 9:25	127:4 129:9	66:20	41:17,25 48:11	powerful 52:1
past 56:21 73:24	130:13 131:2,16	perpetuation	49:8 50:10,19	practicality 96:12
79:22 109:23	131:19,22 132:2	141:10	53:24 54:12 56:1	practice 6:16,17
patient 11:22	132:11 137:11	person 19:20	62:7 64:16,17	7:12,22,24 9:14
17:15 22:8 23:8	137:13 147:13	25:17,19	82:22 84:6 89:13	9:17 11:16,23
26:5,7 28:9	147:24 148:13	pertaining 148:13	98:18 102:19	13:5 15:18,19,21
30:17 31:15 32:9	148:25 157:2	pertains 24:25	103:22 109:10	16:2,15,17 17:21
33:24 35:13,16	159:8,9 161:3	pharmacological	113:10 128:22	69:15 73:16 75:6
35:17 47:4,4	patient's 26:13	33:3	134:20 140:16	75:9,14 77:24
52:17,24 57:24	52:3 69:12	pharmacology	145:17 147:17	85:11
59:10,15,18,20	150:22	42:21	151:24 152:9	practiced 40:9
59:22 64:1 65:3	patrick 1:4 5:6	phase 24:7,8,16	plenty 96:17	practicing 12:16
65:7,19 66:4,13	PDR 43:2	phone 73:4	plus 13:3 15:6	15:22,24 70:7
71:4,15 87:17	peer 11:1	physically 31:13	38:6,25 109:24	150:18
92:11,17,18 93:1	penalty 163:6	physician 13:3,4	109:25,25	precardiac 96:22
94:17 96:4 102:6	people 39:2 74:7	14:6 32:7 52:16	120:17,18	102:12 103:8
104:8,14 109:3	118:8 121:22	52:22	131:17 159:10	precatheterizati
109:22 110:5	per 86:21,22 91:19	physicians 12:10	point 33:4 48:2	102:20
114:17,20	92:1,18 93:7,10	12:16,23 14:10	54:23 68:13	precise 84:2
117:19 122:19	93:12,13 104:5	14:12,12,13,15	75:13 86:7,8,22	predict 71:6
122:23 124:9,14	104:11 107:23	14:21 32:11 43:1	105:12 109:8,10	143:13
124:23 127:17	112:8 117:1	43:3 61:14	110:9,16,22	preintervention
127:18,21	118:12 127:11	116:20 117:8	111:3 113:3,10	119:19
128:25 129:22	129:3,12,19	148:11 157:9	119:11 134:15	prejudge 18:23
129:25 130:5,7	130:2,11 131:4,5	pick 24:10 145:10	135:10 139:20	preliminary
134:14,23 136:6	131:12,23	picking 115:4	141:13 143:12	116:24
104.14,20 100.0	101.12,20	Proteing 110.7	17110 170.12	110.47
	L		1	t

prepare 6:20	probably 74:4	professionals	20:7,11,14,17,21	157:8
preproced 94:24	76:20 77:1 92:4	12:10,11	21:2 34:9 43:8	qualify 96:1
preprocedural	125:13	professor 8:12	47:5 51:1 53:11	quality 13:18
94:18,25 95:8,16	problem 22:9	program 8:17,19	61:3 79:18 82:21	75:10
96:2,5 104:21,23	25:10,20 37:4	8:20 9:24 14:14	83:12 88:23	question 19:11
105:4,11,19	66:19,24 86:11	PROLOG 89:21	89:17 90:5	53:1 78:23 79:1
106:5 107:3	99:4 114:9 125:5	122:4 135:12	105:20	82:1 92:3 93:18
134:22 135:25	125:14 130:22	prolong 46:25	provides 61:10	93:22,24,25 95:3
136:22 137:5	140:8 144:15	prop 24:1	providing 18:1,3	95:5 98:10 99:23
preprocedurally	157:10	proper 11:4 25:13	proximate 70:13	102:18 113:25
34:12 109:15	problematic 40:14	155:16	prudent 32:7	114:8 129:15
preprocedure	problems 16:13	properly 52:3	63:25	133:9 134:20
109:2 135:1	23:9 25:3 71:4	147:3	PTCA 147:14	135:2 136:8
present 3:3 16:1,2	82:18 93:5 154:7	Protamine 57:13	PTT 27:2 51:15,21	146:6 151:19
19:4 68:21	procedural 49:20	58:8 62:20,21	153:15	156:4 158:23
presentation 88:7	119:16 134:8,11	63:5 71:11	PTTs 153:9	questions 60:18
presently 8:8 38:1	137:2,8 149:4	121:11,14 122:2	154:14	60:22 74:17 84:3
41:14	procedure 17:15	122:8 123:18,21	public 5:11	84:11 87:24
Press 80:10	25:20 27:11,12	124:2,10,15,18	publication 11:4,5	104:18 105:18
pressure 64:24	28:13 29:25	147:9,11 148:2,5	82:5	106:1 114:5
65:8 66:12 139:2	35:17,18 45:2	154:15	publications 45:5	130:23 146:16
140:15,18,20	47:5 56:22 57:25	protecting 154:25	public's 13:23	147:8,10
141:1,5,8	61:8,15,17,21	Prothrombin	publish 15:12	quick 27:6
pressures 22:1	71:10 75:11	51:14	published 15:15	quickly 110:11
pretty 14:10	86:17 88:1,8	protocol 21:2 61:1	35:3 39:24 48:22	123:3 153:3
prevent 25:7 26:6	91:6 93:15 99:9	61:6,10 62:11	80:23 82:4 83:21	quote 41:24 94:24
28:12,13 30:10	101:5 109:7,9	63:25 80:19	121:22 148:19	159:6
35:1 69:15	112:3,5 113:6,9	82:10 87:22 88:4	148:21	quoted 37:3
143:18	115:10 116:1,22	88:6,12,16,23,24	publishing 15:17	
prevented 24:15	120:16 122:19	89:1,25 90:12,18	79:14 80:9	R
62:19	122:24 124:12	90:23 91:12,15	pull 156:8	R 2:20
prevention 24:14	124:24 127:5	92:8,14,14,25	purpose 12:23	raise 122:25
prevents 85:19	134:19 135:23	93:17,19,23 94:4	28:9 52:8 144:9	range 25:22,22
previously 41:5	137:21 141:17	94:6 96:3 104:1	pursuant 42:2	26:4,5 31:10
pre-existing 51:16	143:8 144:4	104:4,7,12	92:25 107:16	47:3,8 55:16,18
pre-op 100:5	145:24 146:3	105:21 106:6	put 26:7 31:22,24	57:11,22 59:1,1
primarily 34:7	150:16 153:9	107:17,20	56:22 58:25 77:1	59:16,17,17,19
126:4	154:24 155:6,18	108:22 109:4	79:1 82:15	59:23 63:11 65:4
primary 83:22	procedures 16:23	110:4,12,18,21	102:23 130:4	66:13 91:5 93:13
123:11	17:4,5 22:14,15	110:24 111:1,7	146:2	112:13 115:14
principle 23:20	45:21 46:11 52:5	111:16 112:1,8	puts 31:23	119:24 120:20
prior 47:2,18	52:12 53:11	112:14 114:11	putting 37:9 60:19	120:24 121:10
62:15 67:21	70:24 81:5	114:12,13 115:8	155:16	121:11 122:9
101:5 106:10	152:21	120:17 143:7,11	P.L.L 2:10	123:20 137:9,12
107:3 115:7	proceed 23:1	143:15,17,21	p.m 54:20 55:13	138:9,15,19
134:19 135:5	proceedings	144:3,10 150:9	59:4 63:18 65:7	150:23
141:17 164:6	164:14	150:12,20 153:7	66:6,16 114:17	rate 66:9 149:6
priority 15:15 78:6	process 10:5	154:18 155:18	115:6 127:13	rates 128:19
79:4	24:18 30:12	protocols 85:20	142:4 143:10	rather 53:3
	123:7	87:1,4,6,16	150:8 162:2,3	reach 126:18,20
privileges 13:14	processed 123:4	96:12 112:20	100.0 102.2,0	react 139:25
privy 118:16	processed 123:4 produce 46:3	protocol's 93:12	Q	reaction 66:1
probability 46:9	s •	proven 26:5	qualifications	152:7
53:6 57:3 58:4	products 43:6	provide 25:7	73:8 75:20 76:2	Reactions 152:10
58:20 62:16	profession 13:21	•	76:7	158:23
63:15 70:5 71:25	professional	32:18	qualified 76:4	read 11:14,17,18
143:2,6	17:20 78:14	provided 19:20	guanneu / 0.4	10au 11.14,17,10
1	I	1	1	I

96:12 125:22 144:25 152:9	recess 72:14,20	reeducation 13:7	147:15	
144:25 152:9 I	$\mathbf{x} = \mathbf{x} + \mathbf{x} = \mathbf{x} + $		removal 144:6	responsible 12:11 14:23
	recheck 71:8	refer 69:1 89:4		
	rechecked 58:15	128:21	153:25 154:6	rest 153:12,22
154:11 158:7,9	58:21 59:4	reference 38:10	remove 23:23	154:7 155:13
	reclosing 24:2	40:22 42:12 43:2	144:5,5 151:5	restate 102:19
	recommend 13:8	43:8 48:20 50:11	153:16	result 69:11 72:1
1	recommendation	97:9 127:3	removed 143:20	72:3 125:10
reading 158:7,10	121:9	referenced 122:10	153:19	141:8,24 155:11
	recommendatio	references 122:11	removing 151:2	resulted 62:12
realities 139:17,17	22:7	referred 24:17	154:25 155:20	70:19 72:9,9
realize 66:17	recommended	82:2 87:22	rendered 34:8	results 114:21
really 15:18 19:9	59:11,13 62:10	referring 7:20	renew 50:17	116:21 118:18
37:5 57:22 74:23	63:11 104:6	40:25 50:25	reocclusion 81:7	retained 18:9,13
75:8 79:15 91:11	161:16	60:24 90:2 97:2	81:19 123:13	19:14,21
99:7 106:15	record 21:14,16	101:14 136:14	ReoPro-treated	retinoperitoneal
112:8 116:8	21:17 29:3,6,7,8	137:25	147:24	157:25
122:5,5 125:7	36:20,22,24,25	refers 22:17 100:2	report 68:6	retroperitoneal
126:16	37:16 40:15,17	158:16	reported 1:23	44:7 156:15
reason 13:11	40:19,20 41:10	reflect 60:15,20	106:12 116:13	return 73:7
27:10,23 53:20	41:11 47:11,12	72:17 95:20	159:23	returned 59:23
70:25 75:16 98:7	47:14,15 48:11	106:21	reporter 5:25 6:2	63:9
98:10 103:7	48:12 50:12,13	reflected 46:19,21	164:22	reverse 57:12
117:9 143:23	50:15,16,20	refuse 136:9	represent 5:19,21	58:8 62:3 63:1
144:3,9,11 150:2	53:23,25 54:2,3	refused 18:17	5:24 56:4 59:2	147:12 148:3
150:13 161:14	60:8,10,12,13,15	regard 19:13	60:25 65:12 73:6	149:22 154:15
reasonable 33:18	60:20 67:1,2,4,5	34:19 35:9 57:24	representing 19:3	reversed 122:1
53:6 57:2 58:3	69:3,4 72:11,13	71:2 75:9 109:23	19:16	review 6:19 12:20
58:19 59:6 62:1	72:15,17 82:25	151:1 161:16	represents 28:17	12:25 13:1 19:6
63:4,11,14,25	83:3,5,6 97:7,14	regarding 50:18	reps 117:22 118:2	19:25 20:5,12,15
69:23 70:5 71:24	97:15 118:24,25	67:24 128:18	118:7	32:11 37:20,25
143:2,6 150:23	119:2,3 128:9,11	regardless 107:2	request 42:3 97:1	48:24 76:14,17
152:18	128:13,14 145:6	107:10 114:13	requested 19:5	79:21 80:11 97:3
reasonably 32:7	145:7,14 160:14	regimen 46:2	60:16,21	136:21,24
reasons 12:13	160:15,17,18	130:1	required 67:10	reviewed 19:7
138:25	162:2	region 126:15	68:3 75:7,16	37:21 48:19 53:7
	recorded 98:22	regular 127:18	109:1	70:8 80:22
1	records 20:5,8,17	regularly 69:8	requirement	152:19
4 E		related 18:18	73:18	reviewing 11:1
receive 9:23 13:6	20:21 76:24,25	89:24	rescue 114:25	19:10 78:10,15
46:10 68:5 110:6	76:25 97:2		Research 147:20	
121:11 131:2	114:15 135:22	relation 84:17		80:2,7 rid 110:3
132:11	138:3 152:19	85:2 129:18	residency 7:7,7	right 14:3 23:5
	recovery 149:21	relative 12:2 33:19	8:6	27:9 30:25 34:3
	RECROSS 4:2	38:4 49:24 61:14	residents 8:23,23	
109:16,21,23	153:5	68:2	resolved 16:14	37:23 38:9 49:8
	red 23:4 54:13,19	relatively 81:6	respect 48:9	64:20 68:24
	REDIRECT 4:2	released 117:16	respond 112:11	73:14 77:13,22
115:9 131:22	145:20 160:21	117:17	139:18	82:1 83:15 84:9
,	reduce 35:12	reliable 27:8 40:1	responding	89:10,23 90:17
136:18 137:8,13	57:22,25 81:18	48:6 49:2	139:10	91:1,9 92:4,21
149:4 159:12,20	85:21 86:4	relieve 22:8	response 41:4	92:23 93:4 99:4
159:21	117:18 121:12	reluctantly 18:7	48:1	99:14 101:4
receiving 49:17	121:12 122:8	relying 136:14	responsibilities	102:8 103:1
49:21 55:9 69:19	144:7	remeasure 57:16	13:15,15 147:2	104:14 105:2,16
	reduced 148:1	remedial 13:7	responsibility	107:15 108:12
receptor 30:6	164:12	remedied 71:20	13:16 32:11	110:3 111:6,8,9
receptors 30:6,9	Reducing 124:17	remember 60:18	52:16	112:23,25 113:2

Cleveland (216) 523-1313

			l	
113:14 114:3	63:17 64:4 66:15	162:1,5 163:5,15	seven 37:24	simply 57:25
115:1,22 116:2,6	66:20	Schapira's 72:18	several 24:19,19	113:3 126:19
116:15,18	rush 139:19	school 6:23 7:6	24:21 48:19	130:4 150:15
118:14 120:9,12		8:2,5,13	74:16 79:14	154:22 160:8
120:23 121:7	S	science 26:22	87:25 88:17	since 15:25 37:9
125:16 130:16	safe 26:5 31:9	screen 38:1	109:24 110:2	80:1,6
132:10 133:20	42:22 59:19,23	se 112:8	share 10:24 35:20	single 33:2 110:4
137:1 138:21	safely 35:6,12	second 43:15	41:17	110:4
142:18 144:24	86:4 99:17	83:1 84:20 91:4	shared 59:25	sit 144:23
144:25 146:5,22	153:18	93:5 94:15	sheath 126:4	site 44:10 155:2
148:9 151:18	safety 38:18,19	104:25 108:18	143:20 144:5,7	155:22 156:23
156:2 157:1,5	81:25 82:11,17	131:25 133:7	151:2,5 153:17	157:21
158:8,14,22,22	86:3	145:1	153:25 154:6,25	sites 157:25
159:2,6	sake 146:6	seconds 46:4,5	155:8,20	situation 14:5
right-hand 97:23	saline 100:16	47:1,9 55:15	Sheaths 153:18	66:16 88:7 92:7
97:25 98:2,3,19	102:25	91:7 142:7,8,8	sheet 98:15 99:1	six 153:24
98:21	same 14:2 32:8	153:15,16	shipped 42:6	skill 53:8 70:6
risk 21:3 31:4	44:17 66:16 79:8	secret 123:24	shorthand 164:11	152:19
35:13 36:15	128:2 132:7	section 51:9 84:15	164:22	skip 94:14
39:16 44:11,14	137:12 148:5	84:21,24 100:13	show 43:14,21	slash 100:11
44:15 55:23 56:4	164:13	131:6,11	117:21 118:4	slipped 74:10
56:7,8,8,9,24	sample 31:14,21	see 11:20 14:16	133:3 139:23	slow 75:14
57:22 60:3,5,6	31:25	29:11 38:17	140:4	slowly 53:2
61:2 66:4,14	saw 75:16	64:19 79:17	showed 35:6	small 21:24 31:14
71:4 84:18 85:3	saying 67:20 86:2	87:12 97:23,25	36:10,13 39:7	31:21,22 71:11
89:2 90:13	86:6 105:5,19,23	100:13 103:4,5,5	64:10 150:25	smaller 9:5
122:19 124:8,11	106:16,25	109:22 119:20	shown 23:4 37:2	smart 111:18
124:13,20	117:15,22 118:1	119:23,25	64:10	societies 10:16,17
125:20,23,25	124:5 127:16	120:25 123:5	shows 67:14	10:18
126:3,11 127:4,8	142:3,19 143:1	124:8,13 125:4	104:25	solid 24:8,16
132:16 140:21	says 41:23 42:4	130:22,24	side 23:15 42:22	some 13:18 14:15
142:11 144:7	43:13 44:1 49:14	135:19 136:22	sidelight 78:21	16:8,9,25 18:17
146:14 148:1,13	49:16 51:11		Sidney 27:15	21:7 25:16 26:18
149:9,10 157:1,3	59:21 61:17 85:9	139:20 153:10	signed 99:18	27:1 34:4,24
157:13 158:3,13	86:24 91:7,21,25	154:12,16	significance	46:1 57:11 58:8 63:1 67:13 75:13
158:15	92:22 94:16,21	seem 127:21	24:23 55:19 59:24 64:25 65:2	75:15 81:2 87:4
risks 123:18	95:10 96:3 98:20	seems 127:19	65:14 66:9	87:16 91:13
risky 59:17	98:21 100:7,15 106:13 117:18	seen 36:17 send 20:4	126:18 149:24	96:12 98:10
ROETZEL 2:19 role 19:24,25	126:23 136:22	sense 13:12 96:12	significant 11:15	112:11 115:11
ronald 2:11 5:16	137:1,4 143:14	111:6	35:24 39:13 60:6	115:11 117:16
5:20	144:3 150:15	sent 18:19	64:8 65:6 81:11	118:2,7 121:21
room 17:16	152:10 153:13	sentence 153:12	126:1 142:4	123:20 124:18
rooms 17:13	154:13 155:23	sentinel 35:3 82:5	significantly	135:4 141:24
rough 78:11,12	156:10 158:4,11	83:10	35:23 36:2 65:8	142:6 148:3
roughly 16:7 17:9	159:18	separate 16:11	132:16 134:16	somehow 144:15
17:10 76:22	scan 67:13,21,24	28:19,19	signs 65:24,25	someone 19:3
142:9	68:17	Serfillipi's 103:18	66:5 139:7	125:6
roundly 40:3	scans 68:2	103:21	sign-up 74:21	someone's
rounds 16:22	schapira 1:17 2:1	serve 11:24 17:12	silent 95:17	124:17
ruled 140:10	4:3 5:6 6:4,14,15	served 10:20	similar 19:25 20:3	something 11:21
rules 67:11 68:3	7:23 14:6 15:20	service 77:12	32:8	42:13 48:7 69:14
161:15	19:20 53:5 54:6	services 15:7,8	Similarly 11:17	98:18 99:14
run 21:25 31:25	57:1 60:16,21	set 38:4,7 71:1	simple 33:23	118:4
65:18 66:25	65:2,15 67:14,18	126:21 149:24	93:18 95:2 136:8	sometime 63:6
running 56:24	73:3 97:12,17	setting 151:23	simplify 28:11	95:22
J	,	~	• •	

		······································		
sometimes 23:10	54:10 57:4 58:5	66:15,20,21	121:14,16,23	supplement 67:10
23:23,24 25:5	59:6 62:5 63:16	87:16 94:3 96:16	122:14 126:1	68:4
somewhat 16:15	67:19 70:10 88:2	101:19,19 107:6	134:17,21	supplemental
somewhere 31:2	90:19,24 92:12	107:12 112:11	136:13,13,22	68:6
118:21	107:21 109:1	114:17 122:18	143:7	support 15:6
soon 116:4 144:5	110:14 112:2,17	142:20 147:1	subboard 75:21	126:10
sorry 60:18 83:2	115:15 120:18	stint 23:24	subgroup 130:12	supposed 150:19
92:3,4 95:15	146:20	stop 30:1,4 57:20	subgroups 38:5	suppression
101:13 108:12	standard-dose	66:22 113:14	128:25 134:14	149:21
130:19,21,21	120:19	149:18 153:17	subject 49:12	sure 22:21,21
158:6,10	stands 100:15	stopped 58:11	80:23	25:10 41:4 57:17
sort 24:1 27:11	Stanford 7:10	66:21 95:17,19	submitting 89:8	76:24 95:24
46:21 67:13	start 18:1 25:6	95:20,22 96:10	subsequent 116:9	102:20 112:1
99:13 123:21	68:12 87:9,11,19	96:14 101:20,20	subspecialty	115:23 128:1
128:5 139:15	113:20	102:3,5,10 133:3	73:19 74:14 76:1	140:5 144:17
sought 79:7	started 18:3 95:21	133:4 134:6	substantial 76:9	150:23 160:9
source 81:11	100:18 102:25	135:20 150:7	76:23 137:19	surgery 22:6
Southern 12:24	119:8 150:4	153:13	substantially	surprise 48:4
spaces 56:16	starting 115:4	stops 158:1	49:19	susan 1:24 2:4 6:1
speak 14:2,4	119:7	straight 33:10	substitute 14:13	164:4,21
15:20 17:23 54:6	starts 84:17 109:9	92:2	subtherapeutic	suspended 12:14
60:16,21 115:25	145:24 159:7	Straighten 43:17	107:6,13	sustained 37:11
116:23 120:11	state 5:19 6:12	strategy 143:21	successfully 9:23	swear 6:2
speaking 29:13	12:8 14:7,19	Street 2:4,21 5:15	56:21	sweating 66:8
49:12 83:24	15:23,25 34:15	strict 153:22	sued 18:10	sworn 6:5 164:8
151:15	44:19 53:4 143:1	154:7	suffer 57:24 70:2	symptoms 23:8
specialist 17:12	163:1,7 164:1,5	strikingly 40:14	suffered 62:14	64:18 65:24,25
specialization	164:23	stroke 160:5	70:21 72:2	66:5
15:1,13 19:18,22	stated 93:22	strokes 159:21,23	152:22 161:5	system 62:13,18
specific 26:11	126:22	160:1,3	suffering 70:13	63:11 65:12 66:3
56:4 86:11,15	statement 51:24	strong 108:6	161:3	66:6
specifically 19:15	68:7	structure 42:21	Suffice 50:24	S-e-r-f-i-l-l-i-p-i
20:22 76:7 79:16	statements 50:6	student 7:5	suggested 21:2	103:23
specifics 53:19	states 9:17 44:21	studied 116:16	60:25 61:6 62:11	100.20
54:7	stating 52:13	studies 25:24	87:22 88:24,25	Τ
specify 83:23	statistical 126:18	80:23 81:16,23	89:24,25 90:12	table 119:12,14
109:10	126:20	85:10 86:5,13	90:18 92:14	128:21,24
speculate 144:23	statistically 126:1	89:8 121:20,21	103:25 104:12	136:25 145:12
speculation	132:7	125:22 126:20	109:3 110:12	159:6
-	statistics 38:4	127:2 135:13	111:15 117:2,3	tad 43:17
144:19 spell 103:22	status 52:4 62:4	136:20,24	118:15 121:14	take 21:10 68:12
•	64:3 69:12 70:11	study 35:4,14 36:6	121:24 150:14	68:20 69:15 74:7
spend 99:15 spent 17:20 76:9	72:3,8 144:14	37:20 38:7,13,14	153:7 155:18	74:8 75:18 76:2
78:9	147:4,12 150:22	38:19 39:23,25	suggestion 121:9	76:5,8 78:5 94:1
	E		125:21	116:3 118:22
spoke 81:2	stay 26:2,3,4	40:1,3,7,9,10	suggestions 11:4	taken 2:2 13:8
spontaneous 44:8	27:22 78:5	45:6 64:9 80:15	suggestive 66:2	56:20 66:10
156:19	stayed 15:17	80:19 82:2,8,8	suggests 14:11	72:14 73:14
ss 163:2 164:2	step 92:6 steps 13:7 69:15	82:13,16,20 83:10,10 84:6,8	92:15	
stack 83:19	f •			135:14,17 164:10
118:21 staff 20:24 61:14	155:20	84:13 89:21,22	suit 108:6	
SIATE ZU: Z4 61.14	stick 29:20,21	91:10 92:6,7 116:9,10,12,15	summary 39:7	takes 21:24 24:19
		E HN 9 10 12.15	49:10,14,17	taking 5:14 16:12
65:23	30:7		01000 0100	76.17 00 01.01
65:23 standard 10:2	sticking 28:23	116:20 118:16	summer 9:20	75:17,20 81:21
65:23 standard 10:2 12:12 32:3,6,6	sticking 28:23 29:23 30:1,4,11	116:20 118:16 118:17,18,19	Superior 2:14	124:9 155:20
65:23 standard 10:2	sticking 28:23	116:20 118:16		

119:18 120:23	term 31:11	41:23 58:6 79:12	times 27:20 39:9	trouble 96:20
152:5 159:25	terms 12:12 21:7	82:9 88:17	63:10 77:15	true 13:21 82:7
talked 35:4 45:7,9	25:15 33:13	111:19 116:25	78:16 110:3	103:5 112:7
73:3 88:14,18	38:22 112:12	126:11 140:8	114:11,12,13	157:12 163:7
96:15 105:8	161:19	think 12:24 13:21	timing 151:1	164:13
122:5 148:9,10	terrible 108:2	13:25 18:22 34:5	tissue 126:9	truly 102:3
149:13 151:9	test 26:25 27:5,6,7	38:22 60:20	tissues 56:18	trust 13:17,23
talking 32:21	27:8 28:15 46:4	73:15,24 74:1,17		truth 164:8,8,9
48:15 79:12	52:8 55:14 75:18	78:13 82:12,19	54:17 67:8,21,25	try 13:4 22:19 25:6
88:13,18,25	testified 6:6 41:5	88:9,19 98:14	67:25 70:12	67:12 81:17 91:5
89:12 91:10	70:12 149:15	99:1 105:5,8	77:25 78:17 90:5	97:9 140:14
103:9,25 104:3	151:22	112:6 119:6	127:2 162:1	trying 106:15
122:4 128:1	testify 77:18 117:5	125:14,14,15,18	Today's 5:9	110:10 127:1
129:14,17	164:8	127:7,12 128:5	together 28:23	tube 21:24
139:16 145:9	testifying 40:24	132:24 135:2	29:20,21,21,23	tubes 85:13
154:19 155:15	78:16	139:11 141:14	30:2,4,8,11	TUESDAY 1:18
156:5 159:19	testimony 48:6	141:22 142:7	65:11 81:21	2:3 5:1
talks 89:21 91:1,4	54:16 58:2 72:19	144:21 154:20	told 32:22 84:11	turn 49:8
112:14 119:24	77:8 83:9 87:23	155:23 157:12	144:2,11	turned 63:18
147:11,23	103:21 148:6	160:10	tomorrow 78:1	118:14
148:24 149:17	tests 61:19	thinking 123:7	toss 55:5	turning 149:14
150:10 153:8	Texas 7:1,1,4,4,8	139:25	total 8:7 55:12	twice 39:10 77:10
154:23	9:20	thinner 127:17	78:14 107:25	98:22
tandem 81:18	Thank 24:4 55:4	thins 28:11,18	127:10 129:3	two 8:6 9:5,7
82:14	56:2 84:10	third 2:4 5:15	132:22 134:8,11	12:24 20:14 40:4
tape 97:11,16	161:20	132:10,14	134:18,25	47:19 58:11
133:13	thanks 25:24 83:2	thoroughly 40:3,5	136:17 137:1,7	61:19 73:25 74:2
tapes 97:11 162:1	134:5 160:12	though 13:12	137:21 162:1	74:17 75:8 76:18
target 111:11,13	their 8:17 12:23	33:25 118:1	toxic 71:15	79:25 80:9 82:11
115:14 122:9	13:4,5 16:14	129:15	tract 30:20,21	83:20 89:18
123:20	21:9 22:8 28:9	thought 144:6	157:24,24	105:10 132:6
teach 8:14,19	29:22,24 43:6	thousand 9:12	traffic 31:8	157:19 159:9,22
teaching 8:9,16	54:10 63:24	108:21	training 6:20,23	162:2
8:20,21,21,22	69:20 92:12	three 8:6 14:18,22	7:2 8:6 9:24	two-thirds 16:5
15:17 75:17	121:12,12	17:3 39:9 58:6	75:10	84:14
technician 31:24	124:21 125:20	58:14 61:24	transcript 164:14	type 6:15 7:22
techniques 23:14	126:11 127:10	65:11 79:22,25	transplant 17:4	22:10 33:8 37:6
23:22 24:2 26:11	134:17 139:2,11	89:18 119:21	treat 22:13 52:17	43:15,22,23 61:8
26:16,17	therapeutic 25:21	129:4	treated 22:5	61:15 70:21
Telephone 2:16	25:22,24 26:1,9	thrombus 122:20	treating 16:18	135:10 152:23
2:25	47:3 55:16,17	123:12 139:5	117:7	types 15:9 24:20
tell 6:21 8:11	57:11 59:1,16,17	through 8:14	treatise 49:3	24:21 31:17
21:20 34:19 40:2	65:4 66:13 71:14	10:15 20:9 23:17 31:18 43:3 45:4	treatment 7:21 11:11 34:8 51:5	76:10 157:17 typewriting
43:5 51:23 61:13	123:22 161:17	45:5,6 53:3	51:18 52:24	164:12
62:7 95:25	therapy 11:12 21:3 50:4 61:2	68:25 71:21	54:10 57:5 58:5	104.12
114:14 117:13	85:18 87:7 89:2	79:11,15 89:20	84:18 85:2 88:3	U
143:5 144:23 telling 32:18 42:18	90:13 122:13	101:2 108:25	90:20 110:25	UCLA 8:13,15,15
42:18,20 54:21	157:6,16,18	110:11 135:9	118:6 146:7	8:16 9:4 40:5
54:22 117:23,25	Theresa 41:22	150:4	148:14 157:8	ultimately 70:1
118:3,11,12	thing 12:5 14:1,2	throughout	159:11,15	71:21 72:10
tells 38:11	27:5 89:10 99:13	149:20	treats 7:14	unable 27:20 78:1
ten 80:5	118:13 125:16	Thursday 78:1	trial 18:6 68:5	83:11
tend 30:7	125:18 139:13	till 22:25 74:23	77:18,24 78:4,17	unacceptably
tends 127:11	139:15 140:12	timed 99:23	78:18	142:20,24 143:3
Tenth 2:23	things 15:9 30:14	102:13	tried 110:10	unanswerable

r				
93:25	109:17 116:13	45:4 65:6,11	50:17 54:6 59:14	146:14 148:15
uncomfortable	116:16 127:2	71:5 81:11 89:15	59:18 64:15 76:5	148:25 149:5,8
13:24	146:8 149:22	96:3,18 98:5	79:14 87:5 89:4	weight-adjust
under 21:25 32:8	150:6,7	136:8 137:19	89:14 91:5 97:7	86:19 118:11
43:23,24 51:9	untoward 156:25	153:3	105:3,12 108:7	weight-adjusted
68:3 100:13,20	unusual 99:12	vessel 23:15	111:14,25	85:15 86:10
100:21 102:15	upper 26:2 97:25	125:11	115:23 119:6,9	89:11 91:25
102:16,23 103:8	98:19 99:5	vessels 35:2	123:25 125:18	117:19
104:20,20	up-front 122:15	vial 42:24,25	135:3,3 145:15	weight-adjusting
105:21 107:17	urinary 30:21	video 5:10,10,14	146:5,11 155:12	91:22 92:15
109:3 110:18	usage 35:9	36:25 37:8,12	wanted 47:3 74:8	welfare 155:8
112:1 124:15	use 23:14,22,23	40:20 41:3 47:15	95:11	well 7:19 8:17
130:2 152:10	23:24 24:3 26:17	50:16 67:5	wants 134:1 warned 152:24	14:10 16:10,16 25:2 35:6 43:3
158:23 163:6,6	27:2,21 35:5,5 35:12 37:6 40:8	videographer 3:5 5:4,25 6:10	warning 114:21	55:10 65:6,11
164:12 underanticoagu	42:14,22 47:19	21:14,17 22:22	156:7,11 158:2,3	74:12,17 75:7
25:19	47:21 61:11 71:2	29:5,8 36:22	158:3,8	81:6 82:1,9,16
undergo 12:14	80:15,24 81:2,4	37:16 40:17	Warnings 43:24	82:17 87:4,6,20
undergoing 81:12	82:5,14 90:1,21	41:11 43:19	43:24	88:6 89:14 94:5
87:7 90:20	96:11 118:5,12	47:12 48:11,12	wasn't 47:17 74:9	94:8,14 95:3
147:13 148:14	151:24 156:6	50:13,20 53:25	75:7 107:6	98:9,18 99:11
undergone 61:15	used 23:25 26:12	54:3,12 60:10,13	121:17,17,19	101:13 102:4
understand 58:2	27:4 31:11 35:25	64:17 67:2 69:4	135:16 158:6	103:6 104:22
67:17 68:8,24	36:1,1 81:18	72:12,15 83:3,6	watch 69:14	105:8,19 106:8
102:4 113:5	87:8 92:8 112:20	97:10,15 118:25	way 18:22 22:21	106:13 112:6,6
127:9 135:2	113:5 147:12	119:3 128:11,14	27:2,18 30:3,5	112:24 113:12
understands	162:1	145:6,11,15	40:8 42:22 56:21	114:18,22
120:2	uses 42:19	160:15,18	75:9 79:2 84:14	115:13 118:10
underwent 61:9	using 32:19 69:8	161:24	86:3 87:20,21	121:17,21
61:16	85:11 91:6	videotape 5:5	89:15 95:24	125:13 127:16
unit 92:8	117:20 122:8	78:18	101:15 108:25	129:17 130:17
units 55:12 86:21	usually 13:2 100:2	videotaped 1:16	110:11 116:7	138:13,15,23
86:22 91:19 92:1	utilize 42:13 52:22	2:1 145:16 162:4	117:23,24	139:24 140:10
92:2,2,16,18	utilized 48:18	view 134:16	124:25 139:18	141:12 142:16
93:2,7,10,12,13	utilizing 40:6	violation 63:24	139:25 141:24	143:1,23 150:25
104:5,11 107:23	U.S 42:1	visit 13:4	ways 33:1	151:4 154:12,17 156:16 157:9
108:9,15,22	V	visual 37:9 Volume 5:4 97:11	week 16:24 17:3,8 weigh 36:18 43:9	160:8
109:17 117:1	valid 11:21	97:16 161:25	44:12,16 149:11	well-informed
129:19 130:2,5,7	validity 11:7 18:23	volunteer 14:25	157:2	26:21
131:3,12,23	value 46:15	vomited 140:25	weighed 36:7	went 6:22,25 7:3
132:11,23 134:7	values 45:19	vomiting 64:23	38:20 39:19	114:12,12 135:9
134:10,12 137:9	variety 17:5 22:14	65:10,16,25	149:2,10	were 14:16,18
University 6:25	23:8 24:2	66:11 138:23,24	weighing 39:2,5	24:10 29:13
7:10 9:8 80:10	various 10:16,16	139:1,14 141:2	weighs 130:5,7	34:11,12 35:2
unless 13:17,19	10:21 15:12 20:5	141:16,19	weight 36:7,12	36:7 38:6 45:19
105:12	20:21 21:7	VS 1:8	38:6 39:11,16	45:20,22 48:15
unlike 104:8	vascular 56:15		55:20 56:4 60:1	49:21,25 58:23
unlikely 125:13	126:15	W	60:4 65:22 66:14	58:24 64:18 74:4
unlimited 71:9	venous 126:15	wait 22:25 43:16	71:5 85:4 92:19	74:5 77:18 78:6
unpredictable	versus 5:6 149:3,6	133:7	114:20,22	81:16,20,21
123:21 143:12	very 11:9,11,15	Wang 147:23	125:19,22 126:2	83:12,24 86:13
until 8:2 57:21	12:22 13:25	want 13:24 17:23	127:4,11,18	88:4,24 89:8
63:18 74:23	24:18 27:22	18:21 21:6 29:3	129:4,8,9,11,15	92:8 101:20
87:15 94:2	31:15 34:5,24	32:2 34:14 43:21	129:19,20,22,25	103:17,25 104:3
104:25 105:16	39:13 40:5,6,10	45:8,11 47:21	130:13 137:13	109:18 113:24
L	1		L	1

F*************************************	1		F	r
117:22,23,25	63:1,21 85:1	59:15 60:1 61:9	1/19/96 20:9	153 4:4
118:3,5,11,12,14	110:25	61:16 62:13 63:6	1:05 146:2	16th 98:20
128:5 129:14	wordy 53:3	64:22 66:1 70:2	10 92:8,16 96:11	160 4:5
131:16 141:20	work 14:21,22	70:13,18,21	96:14,16 124:3,6	165 38:23
148:25 152:12	15:2 17:24 18:25	86:12 87:14 88:3	10.000 92:2	1691 119:13
158:7	30:19 40:4 57:19	93:16,19,23 94:2	10:00 95:24	17-plus 64:11
west 2:3 5:15 8:14	82:17 108:25	94:23 96:8,20	10:10 72:16	17.8 39:1,14 149:3
we'll 40:15 60:8	110:10 117:14	100:25 104:2,8	10:22 83:4	175 153:14
82:25 89:22 93:4	118:8 144:24	104:19 106:22	10:24 83:7	178 64:24
105:1 111:24	worked 14:17	109:5 110:18,25	10:31 145:18,22	18 76:21 77:15
118:22	working 30:16,19	111:1 112:3	10:40 97:13	78:15,16
we're 26:24 27:12	31:5	113:6 115:9	10:44 97:18	19th 72:1
30:15 32:21	works 28:22 30:2	116:8 132:21	100 91:19 104:5	1973 7:6
34:17 37:7,9	30:5 57:18	135:5 137:8	120:14	1976 7:11 15:25
42:12 45:16	144:23	141:15 147:2	105 132:23 137:10	1977 7:11
64:19 69:1 71:17	world 136:1	148:7 149:7	106 138:6 142:16	1979 18:4
72:12 89:12 94:8	worthy 19:10	156:16 161:4	142:22 151:10	198 39:5
99:15 105:22,25	wouldn't 77:23	Yurick's 20:8,18	151:11	1990s 81:17
106:4 115:23	write 102:9 132:20	54:7 55:20 56:3	11.2 137:20	1994 35:4 37:24
117:23 119:7	writing 29:11 99:5	62:3 63:17 64:2	11.8 132:17	39:24 82:4 128:7
121:18 128:1	150:13	70:11 71:18,25	134:13 137:23	148:19,22
139:16 144:21	written 9:25 11:2	88:1,7 92:24	149:6	1995 20:18,23
145:7 157:9	13:3	96:17,24 98:15	11:08 119:1	42:1,7 50:7 61:5
159:19	wrong 14:4 27:19	99:1 104:11	11:15 119:4	87:25 89:3 92:14
we've 45:9,9 73:3	98:23,23,24	108:19 112:2	11:26 128:12	98:21 109:5
110:13 122:4	108:13 111:19	116:22 132:19	11:27 128:15	116:17 148:21
whatsoever 67:23	111:22 125:7,8	138:8	11:40 150:3	1996 34:11,18
whichever 150.05	146:7		11:42 150:4	39:23 42:7 47:3
whichever 153:25	140.7		11.42 100.4	03.2042.141.0
while 29:4 83:1	wrote 15:16	Z	11:51 106:11,17	52:14 53:13 54:8
1	wrote 15:16	Z zero 135:20	1	•
while 29:4 83:1	1		11:51 106:11,17	52:14 53:13 54:8
while 29:4 83:1 97:8 128:10	wrote 15:16	zero 135:20	11:51 106:11,17 106:20	52:14 53:13 54:8 61:9 96:24 98:20
while 29:4 83:1 97:8 128:10 white 150:12	wrote 15:16 X X 4:1	zero 135:20 zone 56:23,23	11:51 106:11,17 106:20 11:56 109:18	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23	wrote 15:16	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9	wrote 15:16 X X 4:1	zero 135:20 zone 56:23,23 63:12,23 65:21	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11	wrote 15:16 X X 4:1 yards 9:4 yeah 98:6 105:5	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ 350 77:4	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8	wrote 15:16 X X 4:1 Y yards 9:4	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9</pre>	wrote 15:16 X X 4:1 yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ 350 77:4	11:51 106:11,17 106:20 11:56 109:18 12:00 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24</pre>	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22 \$600 77:12	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17</pre>	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$5,000 77:19,22 \$600 77:12 0	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 3 1:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6</pre>	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn</pre>	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1</pre>	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2</pre>	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$ \$ \$ \$ \$ \$ \$	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22 \$600 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$ \$ \$ \$ \$ \$ \$	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3</pre>	wrote 15:16 X X 4:1 yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22 \$600 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6</pre>	wrote 15:16 X X 4:1 yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15</pre>	wrote 15:16 X X 4:1 yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yeilow 43:22	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1 1 1 5 :4,5 97:11,11	11:51 106:11,17 106:20 11:56 109:18 12:00 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25</pre>	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1 1 5 :4,5 97:11,11 97:16 119:12,14	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25 134:2 145:4	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22 33:21 34:8 36:1	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1 5:4,5 97:11,11 97:16 119:12,14 161:25	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4 15 58:23 124:4,6	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25 152:2,25
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25 134:2 145:4 161:14 164:6,17	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22 33:21 34:8 36:1 36:18 38:24	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1 5:4,5 97:11,11 97:16 119:12,14 161:25 1/12/96 20:9	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4 15 58:23 124:4,6 15th 34:11,17 36:5	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25 152:2,25 247 120:25 121:1
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25 134:2 145:4 161:14 164:6,17 wonderful 35:11	wrote 15:16 X X 4:1 Yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22 33:21 34:8 36:1 36:18 38:24 39:17,19,20 45:2	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1 1 5 :4,5 97:11,11 97:16 119:12,14 161:25 1/12/96 20:9 1/15 54:14 64:17	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4 15 58:23 124:4,6 15th 34:11,17 36:5 48:22 50:7 53:12	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25 152:2,25 247 120:25 121:1 25 15:15 20:23
while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25 134:2 145:4 161:14 164:6,17 wonderful 35:11 words 26:6 29:23	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22 33:21 34:8 36:1 36:18 38:24 39:17,19,20 45:2 53:11 54:20,23	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$ \$ \$ \$ \$ \$ \$	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4 15 58:23 124:4,6 15th 34:11,17 36:5 48:22 50:7 53:12 54:8 61:9 98:21	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25 152:2,25 247 120:25 121:1 25 15:15 20:23 120:12 121:3
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25 134:2 145:4 161:14 164:6,17 wonderful 35:11 words 26:6 29:23 33:4 35:10 39:4</pre>	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22 33:21 34:8 36:1 36:18 38:24 39:17,19,20 45:2 53:11 54:20,23 55:6,22 56:5	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$350 77:4 \$350 77:4 \$5,000 77:19,22 \$600 77:19,22 \$600 77:12 0 0600 100:18 102:25 0800 101:6,9,18 101:22 0830 98:16 99:25 101:11 1 1 5 :4,5 97:11,11 97:16 119:12,14 161:25 1/12/96 20:9 1/15 54:14 64:17 1/15/95 97:24 98:8 1/15/96 70:12,14	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4 15 58:23 124:4,6 15th 34:11,17 36:5 48:22 50:7 53:12 54:8 61:9 98:21 109:19 112:3	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25 152:2,25 247 120:25 121:1 25 15:15 20:23 120:12 121:3 25th 61:5
<pre>while 29:4 83:1 97:8 128:10 white 150:12 whole 14:22 62:23 81:3 135:9 142:14 158:11 164:8 wider 23:19 Wilkins 80:10 Williams 80:9 window 25:24 26:1 161:17 wish 124:6 Wishnow.Tearn 5:12 6:1 witness 2:2 4:2 6:2 18:2,3,24 19:25 43:21 73:9 76:15 78:10 79:3 83:2 95:7 97:3,6 103:13 108:9,15 114:2,4 133:25 134:2 145:4 161:14 164:6,17 wonderful 35:11 words 26:6 29:23</pre>	wrote 15:16 X X 4:1 Y yards 9:4 yeah 98:6 105:5 105:15 138:24 145:13 year 43:5 74:1,25 74:25 76:20,21 77:15 78:10,15 78:16 98:24 99:11 years 7:5 8:3,6,7,7 14:13 15:15 37:24 73:25 74:2 74:16 79:22,25 80:6,12 yellow 43:22 yurick 1:4,6 5:6,22 33:21 34:8 36:1 36:18 38:24 39:17,19,20 45:2 53:11 54:20,23	zero 135:20 zone 56:23,23 63:12,23 65:21 65:21 114:16,23 \$ \$ \$ \$ \$ \$ \$ \$	11:51 106:11,17 106:20 11:56 109:18 12,000 92:2,8,16 12:04 160:16 12:05 160:19 12:06 162:2,3 12:10 54:20 55:13 55:19 56:3 57:3 57:6 58:6,15,21 62:4 63:6,18,23 64:3 65:4,16,20 66:12 114:17 115:6 127:13 142:4 146:9,12 147:4 120 131:23 132:11 134:7,10,12 137:9,15,22 138:15 1375 2:21 145 4:4 15 58:23 124:4,6 15th 34:11,17 36:5 48:22 50:7 53:12 54:8 61:9 98:21	52:14 53:13 54:8 61:9 96:24 98:20 112:3 117:8 152:1,5,23 1997 116:13 2 2 31:21 49:9 97:16 104:7,20 159:6 2,000 55:12 108:20 109:17 20 31:7 39:14 40:12 2001 1:18 2:3 5:1 5:9 163:10 164:18 216 2:16,25 22-C 60:24 24 41:15 24-C 43:7 50:11 50:23 24-D 44:19 151:25 152:2,25 247 120:25 121:1 25 15:15 20:23 120:12 121:3

				······
106:17 107:7	151:9,13	8:12 1:19 2:3 5:2		
112:10 135:9	40 16:20 142:8	5:10		
	44114 2:15,24	8:30 98:16 99:19		
3		99:23,24 100:22		
3 31:21 94:7,14	5	102:13		
104:20 105:21	5 39:6 42:5 78:13	8:31 21:15		
107:17	84:25 152:15	8:33 21:18		
3(a) 106:13	158:18	8:44 29:6		
3,250 108:15	5,000 55:11	8:45 29:9		
3,500 108:9	5,000-unit 107:5	8:56 36:23		
3.3 149:6	50 17:19 61:24	8:58 37:17		
3:00 64:17,19,21	107:23,24 120:4	8635 2:3 5:15		
65:7,18 66:1,6	120:10,13			
66:10,16 138:24	153:15	9		
139:21 140:5,25	526 2:14	9:02 40:18		
141:14 142:11		9:04 41:12		
142:19,23,25	6	9:12 47:13		
143:3.10	6 1:18 2:3 4:4 5:1	9:15 48:13		
30 16:20 103:14	5:9 128:21	9:18 50:14,21		
142:8 153:21	136:25 153:23	9:22 54:1		
300 47:9 57:18,22	6,500 93:1	9:30 87:15 94:3		
91:7,10 111:11	6:00 135:20	95:23 133:3,4		
112:13 124:18	621-2222 2:16	134:7		
310 124:18	623-0150 2:25	9:32 54:4		
3202 1:25 2:5	65 36:19 39:20	9:40 60:11		
164:4,21	55:21 56:4 60:1	9:42 60:14		
324 120:25 121:1	65:16 108:1,11	9:51 67:3		
121:4	108:13 149:10	9:54 69:5		
325 66:7 124:18	65-kilogram 65:3	9:58 72:13		
326719 1:7 5:8	69 107:24 108:11	90 34:1,6 39:2,4		
350 47:9 57:18,22		96:16 134:9		
91:10 111:11	7	94 149:16		
374 54:20 55:15	7,000 55:12 136:1	95 31:9 48:22 51:1		
55:19 56:3 57:6	7.2 131:17 132:7	88:3 110:14		
58:6,21 62:4	137:18	116:3		
63:6,18 64:3	7.7 132:3,7 137:18	96 36:5 44:19 45:1		
65:5,17 66:12	70 86:21 93:7,13	45:13 51:1 52:8		
111:12 113:11	104:11 116:5	64:24 72:1 99:9		
113:16,20,22	117:1 118:12	960 84:12,22		
114:9 115:5,24	129:9 130:13,20	98 74:1		
119:7 122:18	131:3,22 137:9	99 74:1		
124:9,17,22	137:15,16			
125:7,12 127:13	73 4:4 93:9			
127:17 136:2	730 2:13			
141:24 142:5	74 93:10			
146:8.13	75 36:8,13 38:21			
1 10.0,10	39:2,2,8,13,21			
4	43:10 44:12,16			
4 150:9,12 153:8	86:12 100:18			
153:10,23	102:25 129:11			
154:13,23	130:7 149:3,12			
155:18	157:2			
4.1 149:3	78 7:11,11			
4:00 59:4 63:18	207.11,11			
• •• .000 : 127 44 (1.1 - E/)	[1	1	
	8			
138:1,8 142:16 142:22 150:8	8 8:00 101:22 105:9			