1 your right hand.

2 Whereupon,

3 MICHAEL SENEFF, M.D.

4 a witness produced on call of the Defendants, having

5 first been duly sworn, was examined and testified as

6 follows:

7 THE CLERK: Thank you, sir. You may be seated.

8 I just ask that you please lean forward into the mic and

9 keep your voice up for the record. Can you state your

10 name?

11 THE WITNESS: Michael Garron Seneff.

12 THE CLERK: And would you spell your last name

13 for me, please?

14 THE WITNESS: S-E-N-E-F-F.

15 THE CLERK: And your business address, please.

16 THE CLERK: 900 23rd Street, N.W., Washington,

17 D.C. 20037.

18 THE CLERK: Thank you.

19 MR. SHAW: Thank you, Your Honor.

20 DIRECT EXAMINATION

21 BY MR. SHAW:

22 Q. Good morning, Dr. Seneff.

23 A. Good morning.

24 (Defense Exhibit Number 73

25 was marked for identification.)

1 MR. SHAW: May I approach the witness, Your
2 Honor?
3 THE COURT: Yes, you may. Thank you for
4 asking.
5 BY MR. SHAW:
6 Q. I'm going to show you what's been marked as
7 Defense Exhibit No. 73 and ask you to confirm that that's
8 a current and accurate copy of your curriculum vitae?
9 A. It's dated June 2016. I have updated it. I
10 believe there's a September 2016 edition but it would not
11 be any different than this one.
12 Q. Okay.
13 MR. SHAW: Your Honor, at this time I would
14 move into evidence Defense Exhibit Number 73.
15 THE COURT: Any objection?
16 MS. ZOIS: Can I just see it for a second, Your
17 Honor?
18 THE COURT: Certainly.
19 MS. ZOIS: No objection, Your Honor.
20 THE COURT: Very good. So admitted. Defense
21 73.
22 (Defense Exhibit Number 73
23 was admitted into evidence.)
24 BY MR. SHAW:
25 Q. So if you don't mind, I'm going to try to move

1 that lamp a little bit --

2 THE COURT: That's fine.

3 MR. SHAW: -- because it's right between --

4 THE COURT: Yes. It has a way of getting in

5 the way.

6 MR. SHAW: I'm going to set it up -- but I

7 don't want to put it -- maybe put it over that way a

8 little bit.

9 THE COURT: If you would like the cord can

10 reach to the floor if you prefer to 86 it altogether.

11 BY MR. SHAW:

12 Q. Dr. Seneff, you practice in Washington, D.C. at

13 what hospital?

14 A. George Washington University Hospital.

15 Q. And how long have you been there?

16 A. Since -- I've been on staff since 1992.

17 Q. So that's if my math is correct, that's 24

18 years?

19 A. That's correct.

20 Q. And what type of speciality of medicine do you

21 practice?

22 A. I'm board certified in critical care medicine

23 which is -- I'm the director of the Intensive Care Unit.

24 We take care of critically ill patients, post-trauma

25 surgery, patients with infection, cirrhosis of the liver,

1 things like that.
2 Q. So what is critical care medicine?
3 A. It's a term given to physicians that work
4 within a hospital in the Intensive Care Unit meaning,
5 that we're able to manage and take care of, make
6 decisions for patients who are pretty ill.
7 Q. And in your capacity as a critical care
8 physician have you had occasion to care for patients with
9 end stage liver disease and cirrhosis of the liver?
10 A. That would be a daily event.
11 Q. And have you had occasion to care for patients
12 with end stage kidney disease who require dialysis?
13 A. And likewise, it's very common.
14 Q. And have you had occasion to care for patients
15 with rhabdomyolysis?
16 A. Yes, it's less frequent than the cirrhosis and
17 the end stage renal disease, but it's not uncommon
18 either.
19 Q. And have you had occasion to care for patients
20 who are morbidly obese?
21 A. Yes, very often.
22 Q. And have you had occasion to care for patients
23 who experience sleep apnea as a result of their other
24 medical conditions?
25 A. Again, a very common condition these days.

1 Q. So you are the director of the Intensive Care
2 Unit. What does that involve?
3 A. Well, in addition to full-time clinical
4 activities it means that I do administrative work in
5 terms of protocol decisions, purchasing of technology,
6 personnel decisions, educational decisions, running --
7 it's a University Hospital so we have residents and
8 fellows and I make decisions regarding that. So it's
9 pretty much, you know, a full-time job in terms of both
10 administrative, clinical and research.
11 Q. And in your capacity as a critical care
12 physician at George Washington University have you had
13 occasion to care for patients who experience acute
14 hyperkalemia?
15 A. Very common, yes.
16 Q. And have you had experience to care for
17 patients who experience life-threatening hyperkalemia?
18 A. Yes.
19 Q. And are you familiar with the standards of care
20 as far as the management of hyperkalemia?
21 A. I am.
22 Q. Are you familiar with the medication
23 kayexalate?
24 A. I am.
25 Q. Have you prescribed kayexalate in situations

1 similar to what Mr. Allen was experiencing on March 18,
2 2013?
3 A. More times that I could count.
4 Q. And so you also are an associate professor at
5 G.W.?
6 A. Yes, sir.
7 Q. Can you tell us what that involves?
8 A. Well, that's a University appointment separate
9 from what I do for the hospital and I'm in the department
10 of anesthesiology and critical care medicine and that's
11 where I previously mentioned educational endeavors would
12 come into play. I have a fellowship. We have fellows
13 who are training in critical care medicine. We have
14 residents in multiple medical specialities that go
15 through the ICU, so I am a teacher of young physicians.
16 Q. And have you in that capacity had occasion to
17 teach physicians in training as far as the management of
18 hyperkalemia including the administration of kayexalate?
19 A. Again, that would be a weekly, if not more
20 often.
21 Q. What specialities are you board certified in?
22 A. Internal medicine and critical care medicine.
23 Q. Where are you licensed to practice?
24 A. In the District of Columbia.
25 Q. Can you tell us where you went to college and

1 medical school and trace your training from the time you
2 graduated medical school up until the time you joined the
3 faculty and clinical practice at G.W.?
4 A. Sure. I'm a Midwest boy. I grew up in St.
5 Louis. I went to the University of Missouri at Columbia
6 for medical school. I went to the University of
7 Massachusetts Medical Center for my training in internal
8 medicine. That would take us up to 1984. I was in the
9 Navy, so from 1984 to 1986 I was the staff internist at
10 San Diego Naval Hospital. In 1986 I was selected to
11 serve at the U.S. Congress where I served for two years
12 an internist in the office of the attending physician
13 taking care of senators and representatives. Don't hold
14 that against me.
15 Q. Republicans or democrats?
16 A. All commerce. And then in -- that would take
17 us to 1988. From 1988 to 1990 I did my fellowship in
18 critical care medicine. So to get board certified in
19 specialities other than internal medicine that's a broad
20 category to get certified in a speciality of internal
21 medicine you're required to do a fellowship and that can
22 be a varying length. In this case, it was two years.
23 That was at George Washington University. It takes us to
24 1990. I then went back to Naval Hospital, Bethesda. I
25 was called up for Desert Storm in '91 and then in '92 I

1 got out of active duty. I stayed in the reserves and
2 that's when I went to George Washington Hospital.
3 MR. SHAW: Your Honor, at this time I would
4 submit Dr. Seneff as an expert in the field of critical
5 care medicine involving the care and treatment and
6 diagnosis, care and treatment of various medical
7 conditions including, without limitation, liver disease,
8 liver cirrhosis, kidney disease requiring dialysis,
9 rhabdomyolysis --
10 THE COURT: Hang on one moment. Okay. Go
11 ahead.
12 MR. SHAW: Rhabdomyolysis, morbid obesity,
13 sleep apnea and the diagnosis, care and treatment of
14 acute moderate and severe hyperkalemia as well as the
15 care and treatment of critically ill patients with end of
16 life issues.
17 THE COURT: Does Plaintiff wish to voir dire
18 Dr. Seneff at this time?
19 MS. ZOIS: Just briefly, Your Honor.
20 THE COURT: That's fine. Take your time.
21 VOIR DIRE EXAMINATION
22 BY MS. ZOIS:
23 Q. Dr. Seneff, you're not a liver specialist,
24 correct?
25 A. THE COURT:

1 consider the issue of insurance.

2 THE COURT: Okay. Well, you know, we can

3 address the issue. Well, first of all, let me hear from

4 Mr. Shaw.

5 MR. SHAW: So it is pertinent as far as the

6 recommendation that Mr. Allen try to be evaluated for a

7 liver transplant and that the fact that he wasn't

8 evaluated from May of 2012 until October of 2012.

9 THE COURT: Why is it pertinent?

10 MR. SHAW: Pardon me?

11 THE COURT: Why is it pertinent?

12 MR. SHAW: It's pertinent because the

13 physicians told him that he needed to get on the liver

14 transplant list or he was going to have major

15 complications in the next few months and unfortunately,

16 passed away.

17 THE COURT: I understand. But why is the

18 insurance existence or non-existence pertinent to that

19 fact pattern?

20 MR. SHAW: I think it is pertinent that he

21 didn't seek to get on the transplant list. If you want

22 to take out "insuranceh" that's fine with me, but I think

23 to parse --

24 THE COURT: Well, it would seem to me that

25 that's up to the Plaintiff if they want to insert that as

1 an issue in terms of explaining why he did or did not act
2 in accordance with what you contend were his
3 instructions, so I would agree with Plaintiff's counsel
4 that it's not relevant and it's -- we shouldn't talk
5 about it.
6 MR. SHAW: My other response is that it's been
7 a part of the medical records from day one that they've
8 had. They're not just hearing about it for the first
9 time now. Secondly, it did come up during Dr. Leo's
10 deposition. I think any prejudice therein has already
11 occurred. So I think they've waived it frankly, at this
12 point because they had the medical records.
13 THE COURT: I don't think it's waived inasmuch
14 as it's coming up again now, but I understand what you're
15 saying that the jury has already heard it, but, you know,
16 prejudice is somewhat of a beast of cumulative measures.
17 So I don't think that them having heard of it once means
18 that if they hear about it again it's of no moment, so I
19 think we should just avoid the question so let's not push
20 through that issue. And --
21 MR. SHAW: I'm sorry. I didn't mean to
22 interrupt.
23 THE COURT: No, no, no.
24 MR. SHAW: But if you listen to my question I
25 didn't ask him about that.

1 THE COURT: I understand.

2 MR. SHAW: He brought that up. I didn't intend

3 to ask him about the insurance.

4 THE COURT: I understand. So to the extent

5 that I'm making a ruling that whether or not the decedent

6 had medical insurance should not come into evidence. We

7 can excuse the jury so that Dr. Seneff can be instructed

8 to that effect unless you are confident that you can

9 divert him away from that fact --

10 MR. SHAW: I'm confident I can steer him --

11 THE COURT: -- without damaging your testimony

12 that you want to elicit.

13 MR. SHAW: I'm confident I can steer him around

14 that. That's the only time that statement occurs in

15 3,000 pages of medical records to the best of my

16 knowledge as I said before. But I'm only 99 percent sure

17 of that.

18 THE COURT: Okay.

19 MR. SHAW: But if Plaintiff's think there's

20 another spot they can tell us about it, but I didn't see

21 one.

22 THE COURT: So it would seem to me that to

23 pause now and instruct the jury is just going to get them

24 thinking about it.

25 MS. ZOIS: I agree, Your Honor.

1 THE COURT: So I would suggest you not
2 entertain even the notion of an instruction at this time.
3 We can chat about it when we do our --
4 MS. ZOIS: Instructions.
5 THE COURT: -- jury instruction conference.
6 MS. ZOIS: I agree, Your Honor.
7 THE COURT: I'd rather not take a recess now to
8 instruct the expert.
9 MS. ZOIS: I agree.
10 THE COURT: But if you're asking me to I will.
11 MS. ZOIS: I'm okay with Mr. Shaw trying to
12 step away from it.
13 THE COURT: Okay. All right. Thank you for
14 your cooperation.
15 MS. ZOIS: Thank you, Your Honor.
16 (Counsel returned to the trial table, and the
17 following occurred in open court:)
18 MR. SHAW: You care for some water, Doctor?
19 THE WITNESS: I'm okay. Thank you.
20 BY MR. SHAW:
21 Q. After October of 2012 when Mr. Allen was
22 discharged from Northwest Medical Center he next was
23 hospitalized at the University of Maryland in January of
24 2013. Are you familiar with that hospitalization?
25 A. Yes, sir.

1 Q. And to save us some time that was another
2 hospitalization where Mr. Allen experienced dramatic
3 weight gain over a short period of time?
4 A. Yes, and that was also the admission where the
5 Membranoproliferative Glomerulonephritis was diagnosed by
6 a biopsy, a renal biopsy, I think on the 30th of January.
7 So I think renal --
8 Q. If you could talk to the jury more towards the
9 microphone so --
10 A. Renal failure played more of a role I believe
11 in that condition and that was the admission where his
12 specific diagnosis of Membranoproliferative
13 Glomerulonephritis which is a form of kidney disease.
14 That was diagnosed by biopsy during that admission.
15 Q. I'll stand somewhere else maybe. You're
16 familiar with the record, Page 86 of the jury extract,
17 the emergency room physician record at the University of
18 Maryland that reported that Mr. Allen's weight had gone
19 from 379 to 420 over two weeks. That's Page 86 of the
20 medical records.
21 A. Yes, he had extreme weight gain that time. It
22 was much more than the 20 to 30 pounds. It was 40 to 50,
23 I believe.
24 Q. And after Mr. Allen -- Mr. Allen was in the
25 hospital that time from January 23 until February 16 and

1 then after he was discharged he returned to the
2 University of Maryland Medical Center on February 27,
3 2013 with a diagnosis of hypokalemia. Can you explain
4 how that happened or why that happened?
5 A. Yes, following that admission in January his
6 diuretics was stepped up so the water pills, the water
7 drugs that he was taking and he had excessive, well, not
8 excessive, he had appropriate loss of water, so he lost a
9 lot of that weight that he had gained, but those
10 medications also cause a loss of potassium. And as his
11 kidney function got better and it did get better after
12 that admission he wasted a lot of potassium from his body
13 because of the medications that were given to reduce all
14 the fluid that was in his body. That caused him to lose
15 a lot of potassium, therefore, he became hypo or low
16 potassium in his blood. I think it was 3 when he was
17 admitted on the 23rd.
18 Q. Mr. Allen was at the University of Maryland
19 Medical Center from February 27 until March 2, 2013 and
20 then he after eight days was taken by 9-1-1 to Northwest
21 Medical Center with a diagnosis of rhabdomyolysis.
22 I do want you to explain from a critical care
23 physician's perspective the rhabdomyolysis and how that
24 impacts on a patient with Mr. Allen's underlying multiple
25 medical diseases and conditions.

1 Q. So rhabdomyolysis is literally breakdown of
2 muscle. So if we like went out and did a spinning class
3 you hadn't exercised, I've seen this, where you haven't
4 exercised in six months and did a very vigorous spinning
5 class that would cause your muscles to overheat and to
6 breakdown. That's called rhabdomyolysis. Heat exertion
7 is another thing that would cause that condition.
8 Mr. Allen started on medication in his previous
9 hospitalization. It's called a statin drug. It's
10 designed to bring down cholesterol. It's also given and
11 the reason why I mentioned that kidney biopsy is because
12 he was given a statin. It's a drug name. Lipitor is a
13 common one probably everybody knows about it was given
14 because he was wasting a lot of protein in his urine and
15 that's the reason that the statin was diagnosed. It's a
16 known cause, a frequent cause of rhabdomyolysis. I
17 believe he was on very high doses here, and I believe
18 that's what caused his rhabdomyolysis.
19 If you look at the history, before he was
20 admitted on the 10th of March to Northwest, he was
21 spending a lot of time in bed, couldn't get up. He had
22 muscle aches. He's very weak. And those are symptoms
23 that you would see with rhabdomyolysis.
24 And instead of it just being limited to, like,
25 his calves that you might see with a spinning class, it's

1 all over the body because it's a medication that he's
2 taking so it affects all the muscles of the body. That's
3 why his CPK, which is a measure of muscle breakdown. So
4 you can see the CPK levels here. That's an enzyme that's
5 in muscles. So when the muscle breaks down, that enzyme
6 is released into the blood, and that's why his levels
7 were so high because it was affecting all of the muscles
8 in his body, and that causes a release of potassium and
9 lots of cellular stuff, so it causes its own problems.
10 Q. So what were Mr. Allen's medical conditions
11 when he was transferred from Northwest Hospital Center on
12 March 10 to the University of Maryland on March 11, 2013?
13 A. He had all of his preexisting conditions, his
14 cirrhosis from his Hepatitis C. He had stage three or
15 four kidney disease at that time. His creatinine, I
16 believe, was three-and-a-half or thereabouts so it's a
17 moderate degree of kidney disease. He had sleep apnea.
18 He still had morbid obesity. On top of that he had
19 rhabdomyolysis with the elevated CPK's.
20 Q. And during the hospitalization on March 11th,
21 2013 was it necessary for Mr. Allen to undergo
22 hemodialysis?
23 A. Yes. So even without preexisting kidney
24 disease rhabdomyolysis can cause renal failure in and of
25 itself because when the muscle breaks down it releases --

1 MS. ZOIS: Your Honor, if we're not using the
2 exhibit if the doctor --
3 THE COURT: That would be fine if the doctor
4 can resume the witness stand, that's preferable, Mr.
5 Shaw.
6 MR. SHAW: Actually, I'm getting ready to go to
7 the next, one more --
8 THE COURT: Like getting ready as in a couple
9 minutes from now or --
10 MR. SHAW: Less than two minutes.
11 THE COURT: All right. You can stay where you
12 are. Doctor, if you would just not hang onto the jury
13 box that would be great.
14 THE WITNESS: Oh, sorry, Your Honor.
15 THE COURT: That's okay. Go ahead.
16 THE WITNESS: So rhabdomyolysis itself can
17 cause renal failure and it exacerbated Pastor Allen's
18 underlying kidney disease.
19 BY MR. SHAW:
20 Q. Now, I want to show you various lab or
21 chemistry values that were taken of Mr. Allen during this
22 hospitalization and I want to show you specifically Page
23 1448 and 1447 of the jury extract and ask you if there
24 was any change and any significant laboratory values
25 between March 17 and the morning of March 18, 2013.

1 A. Okay. So just to go over some of the values
2 we've talked about that they call CK. That's the CPK.
3 That is the elevation of the muscle enzymes and it's very
4 high. It's 30,000, 40,000 throughout his hospital stay.
5 Q. What's normal?
6 A. Under 150, 160. Under 160 I believe is normal.
7 So this was of an extreme elevation, several thousand
8 elevation of his muscle enzymes. His BUN which is a
9 measure of kidney function and his creatine are both
10 elevated. Now, he's been dialyzed. He was dialyzed on
11 the 13th and the 15th so those will reduce the BUN and
12 the creatine levels because those are removed by the
13 kidneys so when you do hemodialysis that's one of its
14 purposes is to remove those substances, so they bounce
15 around a little bit they're three to four. BUN is 30 to
16 40 through most of his hospital stay. The potassium is
17 highlighted. Here it's normal but he's been dialyzed
18 again. So on the 17th what we have is a normal
19 potassium. We have a normal CO2. Now, CO2 is a measure
20 of bicarbonate in the blood so it shows how much balance
21 you have between acid production and base production. So
22 it's a measure of bicarbonate. And up to this time his
23 bicarbonate -- normal level is 24, so he is rock stable,
24 24. He's been 24 throughout his hospitalization.
25 We're going to see that on the next day that

1 changes dramatically. And so we move onto the 18th.
2 Q. Okay. But what are these values intended to
3 study?
4 A. They study the acid base balance of the body
5 which is very important. We're very hard wired for acid
6 base. We what our Ph to be 7.4 in our blood. So, for
7 example, you try to keep that normal. If you make acid
8 you'll try to make bicarbonate to offset it. In other
9 words, on the other hand if you make acid it will tend to
10 reduce the bicarbonate. So if the body is making acid
11 that causes the bicarbonate to decrease because it is
12 bound by the acid.
13 Q. So I'll move to the next day, March 18. This
14 is a blood value that was reported at 1:26 about 11
15 minutes after Mr. Allen received kayexalate.
16 A. Yes.
17 Q. This blood value -- when was this drawn?
18 A. 12:57 I believe was the time of the blood draw
19 or thereabouts.
20 Q. And was the blood drawn before kayexalate was
21 administered?
22 A. It was.
23 Q. And what do you find of significance in the
24 blood values that were drawn before Mr. Allen received
25 kayexalate on March 18, 2013?

1 A. Okay. So this is crucial to my evaluation of
2 this case. Dramatic changes from the previous lab. So
3 the previous labs were, you know, the evening of the
4 17th, the morning of the 17th, 9:00 a.m. the morning of
5 the 17th. These are taken about 30 hours later. So as
6 we said around one o'clock on the 18th and there's a few
7 dramatic changes. Now, you can see that the potassium is
8 7.3, much higher than the normal values before but even
9 more important, to me, is the bicarbonate level. I know
10 it says CO2 but that is a measure of bicarbonate in the
11 blood is 11, so we've got a drop from normal levels of 24
12 to 11. That indicates that a lot of acid is being
13 produced in the body. Why is acid produced in the body?
14 It's produced in the body because of ischemia. Ischemia
15 is low blood flow. So when there's low blood to an organ
16 it can no longer do normal metabolism and instead it
17 produces acid, lactic acid. So what's happened here is
18 before the kayexalate is even given you've got a
19 condition in the body that's new from the previous day
20 where the body is producing a lot of acid. What does
21 that? Ischemic colitis. Many things, of course, but
22 ischemic colitis is one of the culprits that produces a
23 lot of acid like that. So I believe that even before he
24 got the kayexalate, this is an omnibus sign, someone
25 producing that amount of acid in their body is always a

1 critical illness and an emergency. That's an ominous
2 sign that's something is going on. I believe it's
3 because he has already has ischemic colitis.
4 Q. Prospectively looking at these lab values would
5 a reasonably competent physician such as Dr. Burks be
6 able to tell where the ischemia was occurring whether it
7 was in the colon or somewhere?
8 A. No, at this point he's more focused on the
9 potassium. Obviously, there's no obvious situation right
10 now where it's actually coming from. And by the way the
11 reason why the potassium is so high is because of the
12 acid production. So what the body tries to do is to
13 absorb the acid in the cells. So it absorbs the hydrogen
14 that are in the cells and as a result it expels the
15 potassium.
16 So, for example, you know, if we had diabetic
17 ketoacidosis, those patients always have high potassium
18 because they have a lot of acid in their bodies, so the
19 reason why the potassium is probably so high is because
20 of the acidosis.
21 Dr. Burks is focused on that. You know, he's
22 focused on taking care of that potassium at that point
23 because he's got cardiac EKG findings and rhythm findings
24 and that's a hyperkalemic emergency.
25 Q. Now, you weren't here but if Dr. Burks

1 hypothetically testified that about 12:18, sometime
2 before 12:18 that day the cardiac monitors went off and
3 Mr. Allen's heart rate dropped into the 30's and that he
4 was very concerned about an immediate life-threatening
5 arrhythmia. From your review of the medical records was
6 Dr. Burks complying with the accepted standards of care
7 in making that diagnosis?
8 A. Yes, I think he was right on the ball. I mean,
9 he immediately recognized the arrhythmia EKG changes and
10 immediately suspected that it was likely due to the
11 hyperkalemia or hypertension or he was right.
12 MR. SHAW: All right. You can return to your
13 chair now for a moment. I may have you come back.
14 (Whereupon, the witness resumed the witness
15 stand.)
16 BY MR. SHAW:
17 Q. Now, do you have an opinion to a reasonable
18 degree of medical certainty whether if Dr. Burks had not
19 taken actions to treat the acute hyperkalemia as of the
20 afternoon of March 18 whether Mr. Allen would have
21 survived that hyperkalemia of 7.3?
22 A. No. Without it being treated it would have
23 continued to go up and it would have caused a cardiac
24 arrhythmia that would have ended his life.
25 Q. And Doctor, the jury has already heard and

1 already seen orders and the order set for University of
2 Maryland for the hyperkalemia. Have you seen that order
3 set?
4 A. Yes, sir. It was provided to me.
5 Q. And have you seen the management of
6 hyperkalemia guidelines that were provided by -- or that
7 were in effect as of 2013 of University of Maryland
8 Medical Center?
9 A. Yes, sir. That was also provided to me in the
10 records.
11 Q. And did those guidelines meet with accepted
12 standards of care as far as the management of
13 hyperkalemia?
14 A. Absolutely. I think they were right on.
15 Q. There's been testimony that Dr. Burks tried to
16 order or had ordered calcium gluconate but it wasn't
17 available because of a nationwide shortage. Dr. Burks
18 testified that he ordered calcium chloride and felt that
19 it had been administered. Let me ask you this, Doctor.
20 Whether or not Dr. Burks ordered calcium gluconate or
21 calcium chloride did that have any impact or affect on
22 the treatment of Mr. Allen's hyperkalemia?
23 A. No. The effect of calcium is different than
24 all of the other medications that you give. Calcium
25 doesn't affect the potassium level at all. Remember I

1 talked about the movement of potassium in and out of
2 cells. The high potassium around cells causes the heart
3 to be irritable and causes the heart -- it's an
4 electrical organ as well as a mechanical organ and the
5 electricity is very important to the heart and the
6 potassium, the easiest way to explain is that potassium
7 upsets the electricity. That's why you get the EKG
8 changes and that's why you see the bradycardia or the low
9 heart rate. The calcium's sole purpose is to counteract
10 the effect that electricity effect. It does not lower
11 the potassium level.
12 So Dr. Burks wanted to give the calcium because
13 he saw immediate changes in the heart. He also ordered
14 the other medications and they're designed to lower the
15 potassium. I remember the calcium, you know, absence.
16 It was very frustrating for all of us in the hospital.
17 It was difficult to get.
18 In this case, it didn't have any bearing on the
19 outcome because obviously, Pastor Allen did not end up
20 having an arrhythmia, did not end up having any cardiac
21 event at that time likely because the medications that
22 were given to lower the potassium worked quick enough.
23 So, you know, he would have liked to have given calcium.
24 That's why he ordered it. It's the appropriate order.
25 Unfortunately, it wasn't available, but it had no bearing

1 on the case.

2 Q. Doctor Burks did order and it was administered

3 the insulin, the glucose, the sodium bicarbonate, the

4 albuterol, nebulized albuterol and the kayexalate. Did

5 all those orders comply with accepted standards of care

6 what a reasonably competent physician would do when faced

7 with a situation such as Dr. Burks was after 12 -- or

8 after 12 o'clock on March 18th, 2013?

9 A. Absolutely. You were looking at, you know, a

10 hyperkalemic emergency. All of those medications should

11 have been ordered as per the protocol that he had and

12 that's what was ordered and given.

13 Q. Now, if hypothetically, we heard testimony fro

14 the Plaintiff's expert, Dr. Leo, that spread over a

15 weekend or two days that Dr. Burks departed from accepted

16 standards of care by ordering the kayexalate because

17 there was dialysis available at the University of

18 Maryland Medical Center, do you agree with that opinion?

19 A. No, I do not.

20 Q. Can you explain?

21 A. We have dialysis available at our hospital and

22 we still order kayexalate. There's a couple of reasons

23 for that. One is you can never be sure about dialysis.

24 Dialysis involves machinery. It involves technology. It

25 involves personnel. It involves what else is going on in

1 the hospital? And I have had events where I expected
2 dialysis to be done even an emergency dialysis to be done
3 in the next 15 minutes and for one reason or another it's
4 a two hour, three hour delay. That can be because the
5 machine wasn't running or the machine is broken, they
6 have to get a new one, the person -- there's not enough
7 personnel. They're involved doing other emergencies.
8 There's lots of reasons. So that's one reason I would go
9 ahead and give the kayexalate because I'm not certain
10 when the hemodialysis is going to be done.
11 The second reason is that dialysis will reduce
12 the potassium but the body is still making acid and the
13 potassium is going to go back up. So the kayexalate is
14 designed to work over a two to six hour period, if you
15 will, and it will keep the potassium down. So you give
16 it not only to treat the acute rise in potassium but also
17 to try to keep the potassium down even after dialysis has
18 been done. So, you know, that's why we give it all the
19 time. It's certainly within the standard of care. I
20 don't know of any hospital that wouldn't do that or any
21 ones that I've been involved with anyway.
22 Q. Have you personally prescribed kayexalate for
23 patients similar to Mr. Allen who are experiencing acute
24 hyperkalemia that was presenting with life-threatening
25 arrhythmia?

1 A. Many times and even in the process of getting
2 dialysis I would still do it.
3 Q. Are you familiar with reported cases that
4 report an association of ischemic colitis after --
5 developing after kayexalate was given?
6 A. Yes, I'm familiar with most of the case reports
7 that are out there.
8 Q. Are you familiar with how often or how rarely
9 that happens?
10 A. It's very rare. We don't really have an exact
11 number. One in 100,000, maybe less than that. It's a
12 very rare occurrence. It's primarily reported with the
13 70 percent sorbitol solution or at least when the FDA
14 came out with their warning it was mostly situated
15 towards the 70 percent sorbitol which we don't use
16 anymore, but I am aware of those case reports, yes.
17 Q. Have you ever decided not to give kayexalate to
18 a patient who was experiencing acute moderate to severe
19 hyperkalemia because kayexalate posed risks associated
20 complication of ischemic colitis after its
21 administration?
22 A. It is recommended not to give it in patients
23 with bowel obstruction or ileus so that would be the one
24 time that I would avoid it in a patient with known
25 recognized bowel obstruction or ileus I would not give

1 kayexalate. Otherwise, I would never hesitate to give
2 it.
3 Q. And did Mr. Allen fall into that category of
4 bowel obstruction or an ileus?
5 A. No, he didn't have any recognized either one of
6 those conditions.
7 Q. So did it meet with accepted standards of care
8 for Dr. Burks to order kayexalate as part of a
9 hyperkalemia cocktail of medicines at 12:37 a.m., 12:37
10 p.m. on March 18, 2013?
11 A. Absolutely.
12 Q. Now, we heard testimony from Dr. Leo
13 hypothetically because you weren't here that Dr. Burks
14 was required by the standards of care to advise Mr. Allen
15 of -- give him informed consent for kayexalate including
16 the nature of what his condition was, the proposed
17 options for treatment, the proposed risks and
18 complications for each of those options as well as the
19 success or the chance for success for each of those
20 options and permit Mr. Allen to decide how he should be
21 treated including whether he should be given kayexalate.
22 Do you agree with that testimony to a reasonable degree
23 of medical certainty?
24 A. I do not and I've never obtained informed
25 consent on the occasions that I've given kayexalate.

1 It's such a rare complication. You know, if we did that
2 for every -- every medication has a side effect, every.
3 Every medication we give has a side effect. So if we had
4 to get informed consent for every medication we gave we'd
5 never be doing anything except getting informed consent.
6 The best way I can say is like if you're going to give a
7 chemotherapeutic agent let's say for cancer that has very
8 serious side effects, obviously that is something you're
9 going to involve the patient in and say hey, look.
10 Here's what we're talking about. We're going to give you
11 a drug that really has serious side effects. They're
12 pretty common. This is the risk benefit for this
13 medication.
14 With kayexalate it's such a rare, if it's real,
15 there's an association, if that -- with the 30 percent or
16 35 percent sorbitol, it's so rare. No reasonable
17 physician would expect a reasonable patient to say I
18 don't want it because the risk benefit ratio is clearly
19 in favor of giving the medication.
20 Q. If Dr. Burks hypothetically testified that even
21 if he knew that dialysis would have been available within
22 15 minutes after he ordered the kayexalate he
23 nevertheless would have ordered the kayexalate. Do you
24 have an opinion to a reasonable degree of medical
25 certainty whether that meets with accepted standards of

1 care?

2 A. It does and that would fall in the scenario

3 where I said that the dialysis will bring the potassium

4 down but it's going to immediately start going back up so

5 the kayexalate is designed to try to keep it down, so I

6 still would give it that situation.

7 Q. Are there risks and complications associated

8 with dialysis?

9 A. Of course. Low blood -- we get called to the

10 Dialysis Unit weekly for an emergency usually low blood

11 pressure but there are other complications. You can see

12 hypertension. You can see the opposite of low blood

13 pressure. You can see high blood pressure. You can see

14 respiratory depression. You're getting access to a

15 catheter. Air -- you can have air go into the catheter.

16 All kinds of complications associated with the catheter.

17 So yes, there are many complications associated with

18 dialysis.

19 Q. Do you have an opinion to a reasonable degree

20 of medical certainty whether ischemic colitis can be

21 caused by dialysis?

22 A. Not as a direct effect but the low blood

23 pressure, the hypotension. We call it hypotension. It

24 just means low blood pressure that occurs during dialysis

25 affects blood flow. And low blood flow to the intestines

1 is the cause of ischemic colitis. In a patient like
2 Pastor Allen who had cirrhosis and has very high venous
3 pressures already in his intestine he's particularly
4 susceptible to those effects. That's I think what
5 happened.
6 Q. Now, you told us earlier that it was your
7 opinion to a reasonable degree of medical certainty that
8 the kayexalate was not the cause of Mr. Allen's ischemic
9 colitis. Do you have an opinion based upon your review
10 of the medical records as to what the cause or causes
11 were of Mr. Allen's ischemic colitis?
12 A. Pretty much what I just said. I think that he
13 has cirrhosis of the liver makes him at high risk for all
14 complications but, in particular, it increases venous
15 pressure in the intestine. So with higher venous
16 pressures it's like it impendence to blood flow so you
17 need to have even higher blow flow and with the drops in
18 his blood pressure that occurred with dialysis that we
19 see on the 13th a couple of times and I believe that
20 along with his, you know, poor baseline condition is what
21 led to his ischemic colitis.
22 Q. Doctor, you offered the opinion earlier that
23 the ischemic colitis had started before the kayexalate
24 was given?
25 A. That's my opinion, yes.

1 MR. SHAW: I do have another record I'd like to
2 show --
3 THE COURT: Okay.
4 MR. SHAW: Maybe we can just do a blowup of it.
5 Page 282. You may need to come out of your witness
6 stand.
7 THE COURT: 282, you said?
8 MR. SHAW: 282, yes.
9 THE WITNESS: May I?
10 THE COURT: Yes, of course. Thank you.
11 (Whereupon, the witness stands down.)
12 MR. SHAW: Why don't you try to squeeze in
13 beside me.
14 BY MR. SHAW:
15 Q. So this is the nurse's note from Page 2 -- I'm
16 sorry. This is the nurse's note from March 18 of 2013
17 and I'd like to highlight on the upper left 9:00 a.m. and
18 have you read that and explain that.
19 A. All right. This is a nurse's note at 0900.
20 "Assume care of patient. Patient in chair. Reported
21 stooling. It means a bowel movement. Transferred to
22 bed. Cleaned up a small amount of stool. Patient
23 reports generalized discomfort. Breathing labored after
24 swallowing medications. Patient unable to eat breakfast.
25 Only ate small amount. Cardiac monitor in place. VSS

1 means vital signs stable. Will continue to monitor."
2 And then the signature of the nurse.
3
4 Q. And is there any significance to your opinion
5 as to the timing of the onset of ischemic colitis that
6 you can determine retrospectively looking at this record?
7 A. Well, it would only a retrospective analysis.
8 At this time he's unable to eat. He doesn't feel well.
9 I wouldn't be able to say specific -- it's consistent.
10 It's consistent with somebody who's already developing
11 some ischemic colitis, but I couldn't say just looking at
12 that note that that would, you know, set off an alarm for
13 me about it.
14 Q. And the nurse writes, "Breathing labored after
15 swallowing medications." Of what significance is that?
16 A. I wouldn't put much into that just that he's,
17 you know, he's having trouble swallowing. I don't really
18 have to much (indiscernible at 10:32:02).
19 MR. SHAW: If you want to return to your chair.
20 (Whereupon, the witness resumed the witness
21 stand.)
22 BY MR. GASTON:
23 Q. I am going to ask you, Doctor, if you agree
24 with the testimony by the Plaintiff's experts that Mr.
25 Allen died from the administration of the kayexalate?

1 A. Of course not. No, I couldn't disagree more.
2 Q. Do you have an opinion to a reasonable degree
3 of medical certainty as to what caused Mr. Allen's death?
4 A. He died from shock from the ischemic colitis
5 that was already present before the kayexalate was given.
6 Patients with cirrhosis do very poorly with any kind of
7 insult like that and, you know, given that, he was not
8 going to leave the hospital. I believe that he was going
9 to die no matter what.
10 MR. SHAW: One moment, Your Honor.
11 THE COURT: Take your time.
12 (Brief pause)
13 BY MR. SHAW:
14 Q. Have you seen the death certificate that says
15 that ischemic colitis was the cause of death?
16 A. I have.
17 Q. Do you agree that's the only cause of death?
18 A. No, of course not. Ischemic colitis I think
19 was the proximate cause of his demise, but it was because
20 of all of the other existing comorbidities that he
21 succumbed to it.
22 MR. SHAW: That's all the questions I have at
23 this time, Your Honor. Thank you.
24 THE COURT: All right. Very good. Why don't
25 we take a brief restroom recess and when we come back

1 we'll have cross-examination of the Doctor.

2 Doctor, during the recess, please do not

3 discuss or share with anyone in or outside the courtroom

4 the content or purpose or anything about your testimony.

5 THE WITNESS: Yes, Your Honor.

6 THE COURT: Okay. All right. Very good.

7 Court is in brief recess.

8 THE CLERK: All rise.

9 (Whereupon, the jury exited the courtroom at

10 10:34 a.m.)

11 (Whereupon, a recess was taken at 10:34 a.m.,

12 and the matter resumed at 10:48 a.m.)

13 (Whereupon, the jury entered the courtroom at

14 10:48 a.m.)

15 THE CLERK: Circuit Court for Baltimore City

16 Part 19 will now resume its morning session. The

17 Honorable Julie R. Rubin presiding.

18 THE COURT: Thank you everyone. Please do have

19 a seat. Doctor, you remain under oath.

20 THE WITNESS: Yes, ma'am.

21 THE COURT: Ms. Zois, whenever you're ready.

22 MS. ZOIS: Thank you, Your Honor.

23 (Counsel confers with Clerk.)

24 CROSS-EXAMINATION

25 BY MS. ZOIS:

1 Q. Dr. Seneff, you've seen the death certificate
2 in the case?
3 A. I have.
4 Q. And if you need a copy of it let me know.
5 A. That would be great.
6 Q. Okay.
7 THE COURT: If it helps that came in through
8 Dr. Goldstein.
9 MS. ZOIS: Permission to approach the witness?
10 THE COURT: Yes.
11 BY MS. ZOIS:
12 Q. I'm going to show you what's been marked as
13 Plaintiff's Exhibit 78 which is the death certificate
14 that was prepared --
15 A. Thank you.
16 Q. -- for Mr. Allen. And that death certificate
17 was prepared by the Defendant in this case, correct?
18 A. I don't -- it's prepared by -- I don't know if
19 this is Dr. Burks signature or not. It's Samat
20 (phonetic).
21 Q. The Defendant hospital. I'm sorry. I should
22 have been more clear. The death certificate is prepared
23 by the Defendant hospital, correct?
24 A. Yes, correct.
25 Q. And one of the doctors at the hospital signed

1 the death certificate on March the 20th; is that right?
2 A. That's correct.
3 Q. And the death certificate indicates that the
4 cause of death was ischemic colitis; is that right?
5 A. That's what it says, correct.
6 Q. And there's a couple of other -- there's a B
7 and a C and a D, so there's spaces to add other causes
8 there, isn't there?
9 A. There are.
10 Q. But there's nothing added to the death
11 certificate other than ischemic colitis?
12 A. That's correct.
13 Q. And I believe you testified earlier that you do
14 believe that the proximate cause of Mr. Allen's death was
15 ischemic colitis; is that correct?
16 A. That's correct.
17 Q. Okay. Going back to these boards here for a
18 moment, I was having a hard time following you but I just
19 want to understand something for a minute. Your
20 testimony is that you think the first time Mr. Allen
21 showed signs of ischemic colitis was when he had this
22 blood draw on the 18th at 1:26 and it was because of the
23 CO2 level?
24 A. Yes. And better stated that it's the first
25 time he showed of excessive acid production in the body.

1 Q. Okay. And you're aware that he was supposed to
2 have his blood drawn at 4:30 in the morning, correct?
3 A. Yes, I'm aware of that.
4 Q. All right. So to you this number here at 1:38
5 in the afternoon tells you that he has something going on
6 and it's your opinion that it was the ischemia; is that
7 correct?
8 A. Yes. At the time I wouldn't have been able to
9 say that. I've only been able and why I specified he's
10 got a lot of acid production going on. At the time I
11 wouldn't be able to say it's ischemic colitis. It's only
12 a day later that it becomes apparent that's that it was.
13 Q. Okay. And that leads me to my next point
14 because there were no signs or symptoms of ischemic
15 colitis, correct?
16 A. In Mr. Allen or in anybody else it starts you
17 and it usually doesn't have any symptoms; that's correct.
18 Q. There was no bloody stools before the
19 administration of kayexalate, correct?
20 A. That's correct.
21 Q. And there was no abdominal pain before the
22 administration of kayexalate, correct?
23 A. Well, we went through he had a poor appetite
24 but he didn't specifically complain of abdominal pain,
25 yes.

1 Q. So there was no abdominal pain noted in the
2 chart before the administration of kayexalate, right?
3 A. Correct.
4 Q. And yet this is telling you here that you think
5 he has ischemic colitis but, Doctor, you would never give
6 a patient kayexalate if they were showing any signs or
7 symptoms of ischemic colitis, correct?
8 A. Right. I said ileus, you know, a bowel
9 obstruction and certainly ischemic colitis would fall --
10 if I knew a patient had ischemic colitis I would not give
11 kayexalate.
12 Q. Directing your attention for a moment to the
13 hospital guidelines. When were you first provided with a
14 copy of those guidelines?
15 A. Which guidelines are we talking about?
16 Q. The hyperkalemia treatment guidelines?
17 A. I don't remember exactly when. I know I
18 reviewed them again last night but I had them prior to
19 that, so I don't remember exactly when.
20 Q. You gave your deposition in June of this year,
21 right, June 2016?
22 A. Yeah, I think that's right. Correct.
23 Q. Okay. And you didn't have them then, correct?
24 A. I believe I did not have them then. I believe
25 they were provided to me after that, but I really don't

1 know the exact date.

2 Q. All right. So we know that you didn't have

3 them as of June 7th of 2016, correct?

4 A. If that's what the deposition says; that's

5 correct.

6 Q. And you received them at some point before

7 testifying here today?

8 A. Yes, ma'am.

9 Q. But you gave all of your opinions in this case

10 back on June 7th, 2016 without the guidelines, right?

11 A. Yes. The guidelines are pretty standard. They

12 just cover what we all know and do anyway, so the

13 guidelines was not new information to me. The actual

14 protocol was new, but it's not new information to me.

15 Q. And I think you said earlier on in your

16 testimony that you actually agree with all the guidelines

17 that the hospital has; is that right?

18 A. Yes.

19 Q. And I know you said you looked at the

20 guidelines last night, but can you tell me who sent you

21 the guidelines and how you received them?

22 A. Originally?

23 Q. Yes?

24 A. I got them from counsel, from Defense counsel.

25 Q. Were they handed to you? Were they e-mailed to

1 you?
2 A. I was -- in Dropbox, I believe.
3 Q. And was it this month, was it in September?
4 A. I really don't know, counselor. It was -- you
5 know, you get. You know how it is with these cases? You
6 get stuff sent to you along the line and I don't have it
7 recorded as any specific date.
8 Q. Do you have any idea why they were sent to you
9 before your deposition on June 7th, 2016?
10 A. I don't.
11 Q. All right. Let's talk about the guidelines for
12 a minute since it's my understanding that you agree with
13 most of what's in the guidelines. Do you know the extent
14 to which the defendant went in order to come up with the
15 guidelines? Do you know the history behind how the
16 guidelines were created by University of Maryland Medical
17 System?
18 A. No, I do not.
19 Q. Okay. So you're unaware that they did an
20 exhaustive literature search before coming up with the
21 guidelines?
22 MR. SHAW: Objection as to form, Your Honor.
23 THE COURT: Overruled.
24 THE WITNESS: That would be pro forma. In
25 other words, that would be the way it is -- I've been --

1 I've put together many guidelines myself. Usually we do
2 it with a multi-speciality group and you do -- a
3 literature search would be the first way you would start
4 to do it. So it wouldn't surprise me at all.
5 BY MS. ZOIS:
6 Q. And are you aware that the first article that's
7 cited by the University of Maryland Medical System says
8 that a major complication rate of ischemic colitis and
9 bowel perforation is as frequent as 1.8 percent; are you
10 aware of that?
11 MR. SHAW: Objection.
12 THE COURT: Basis?
13 THE WITNESS: Am I aware that --
14 MR. SHAW: Foundation.
15 THE COURT: Hang on.
16 MR. SHAW: Foundation.
17 THE COURT: Overruled.
18 THE WITNESS: Am I aware that it's in the
19 guideline?
20 BY MS. ZOIS:
21 Q. Are you aware that the first piece of
22 literature that the University of Maryland Medical System
23 cites to when they created the guidelines say that the
24 rate of -- the major complication rate or ischemic
25 colitis --

1 A. Oh.

2 Q. -- and bowel perforation is 1.8 percent?

3 A. That's one paper. I'm sorry. That's one

4 paper. There are many papers out there that have varying

5 degrees of what the concentration is and also you have to

6 specify what is the preparation of the kayexalate. It is

7 a 70 percent sorbitol? Is it a 30 percent sorbitol? So

8 that doesn't surprise me at all. There are a lot of

9 different papers out there that look at kayexalate and

10 the association with ischemic colitis.

11 BY MS. ZOIS:

12 Q. So my question --

13 THE COURT: Counsel, I'll just ask you to pause

14 for a moment.

15 MS. ZOIS: Yes.

16 THE COURT: For the moment the objection is

17 overruled. Go ahead, Ms. Zois.

18 BY MS. ZOIS:

19 Q. So my question is then you are aware that 1.8

20 percent is one of the statistics regarding major

21 complications for ischemic bowel and bowel perforation,

22 correct?

23 MR. SHAW: Objection.

24 THE COURT: Overruled.

25 THE WITNESS: I'm not aware of the specific

1 paper you're talking about, but it doesn't surprise me.
2 BY MS. ZOIS:
3 Q. Okay.
4 THE COURT: Overruled.
5 MR. SHAW: Move to strike. He wasn't aware of
6 that, Your Honor.
7 THE COURT: Overruled.
8 BY MS. ZOIS:
9 Q. You do agree then that a major complication of
10 administering kayexalate is ischemic bowel and bowel
11 perforation, correct?
12 A. No, I don't. I'm undecided about that. I've
13 done all the reviews. There's an association, a very
14 rare association of kayexalate being given that causes
15 ischemic colitis. It's never been a -- there's never
16 been a scientific study that shows that it's a direct
17 cause and effect. So my appropriate answer to you would
18 has ischemic colitis been reported in the setting of
19 kayexalate being given and I would say yes to that. If
20 you asked me does kayexalate specifically ischemic
21 colitis my answer would be I really don't know.
22 Q. So you don't agree with the hospital
23 guidelines?
24 A. I said I agreed in general with the hospital
25 guidelines. That doesn't mean I agree with every single

1 statement on it.

2 Q. Would looking at the hospital guidelines be

3 helpful for you at this point?

4 A. Sure.

5 Q. Okay.

6 MS. ZOIS: Madam Clerk, can I have Exhibit 65,

7 please? Permission to approach, Your Honor.

8 THE COURT: That's fine. Thank you.

9 BY MS. ZOIS:

10 Q. Dr. Seneff, I'm going to show you what's been

11 marked as Plaintiff's Exhibit No. 65 and are these the

12 hospital guidelines that you got sometime after your

13 deposition, but before today? Is that a copy of what you

14 received?

15 A. Yes, that is what I received.

16 Q. All right. If you could turn to the page that

17 talks about major complications associated with

18 kayexalate. I believe it's on Page 3.

19 A. I see it.

20 Q. Okay. So the hospital guidelines the defendant

21 themselves, the University of Maryland Medical System has

22 determined after their literature research, consulting

23 with their experts, putting together these guidelines

24 that major complications are intestinal necrosis and

25 bowel perforation. Do you agree with that or do you

1 disagree with that?

2 A. I said -- I'm not going to change what I said.

3 I agree that it's been a complication reported with the

4 use of kayexalate. In terms of whether it's cause and

5 effect I don't agree. I don't know. I don't know

6 because there hasn't been a specific study done. I do

7 agree with the statement that it should not be -- as I

8 previously said, it should not be used in patients -- the

9 guidelines go on to say it should not be used in patients

10 with evidence of bowel obstruction, ileus, or ischemia or

11 in renal transplant patients. And I agree with that

12 statement.

13 Q. Right. So you agree when it absolutely

14 positively should not be used which is the second

15 paragraph, right?

16 A. I agree with that statement, right.

17 Q. But my specific question for you, Dr. Seneff,

18 is do you agree that kayexalate its major complications

19 are intestinal necrosis and bowel perforation? Do you

20 agree or disagree with that statement?

21 MR. SHAW: Objection. Asked and answered.

22 THE WITNESS: I agree that --

23 THE COURT: Overruled.

24 THE WITNESS: -- it's associated with the use

25 of kayexalate. I do not agree that it's a direct cause

1 and effect. I think we're saying the same thing. It
2 means that --
3 BY MS. ZOIS:
4 Q. They don't sound the same.
5 A. You know, when you give kayexalate the
6 complication of ischemic colitis has been noted. I'm
7 just making the distinction that there's no specific
8 study that says that kayexalate in a 35 percent or 30
9 percent sorbitol form actually causes ischemic colitis.
10 There's never been a good scientific study to prove that.
11 I agree that one of the warnings and complications that
12 is listed with kayexalate is ischemic colitis. So I
13 think we're saying the same thing.
14 Q. Okay. And Mr. Allen suffered from intestinal
15 necrosis, correct?
16 A. He certainly did.
17 Q. And he suffered from bowel perforation,
18 correct?
19 A. He had -- he did not have bowel perforation
20 until he had his surgery, if that's what you mean.
21 Q. So the surgeon noticed that his bowel was
22 perforated, correct?
23 A. The surgeon noted that he had bad ischemic
24 colitis, yes.
25 Q. Doctor, you only give kayexalate in life-

1 threatening situations, correct?

2 A. Yes, that would be accurate.

3 Q. So in 2009 when the FDA warnings came out the

4 policies and practices at your hospital changed, right?

5 A. Not substantially.

6 Q. But after that you only give kayexalate in

7 life-threatening situations, correct?

8 A. Generally, I've never -- you know, we've

9 generally only given kayexalate in patients who have, you

10 know, moderate to severe hyperkalemia. Life-threatening,

11 I don't know that I quite agree with, but any moderate or

12 severe hyperkalemia we would give kayexalate.

13 Q. You remember testifying in your deposition,

14 correct?

15 A. I do.

16 Q. All right. Do you remember testifying, "I

17 don't give it unless there are life-threatening

18 complications from the hyperkalemia. We give kayexalate

19 even when we are anticipating dialysis is going to be

20 started as well as almost all the physicians and/or all

21 the physicians I talked to in my department."

22 But your testimony in deposition was, "I don't

23 give it unless there are life-threatening complications."

24 A. What I meant by that is life-threatening levels

25 of potassium and generally, that would be if a potassium

1 is greater than seven.
2 Q. And this is hyperkalemia; that's what we're
3 talking about in this case, correct?
4 A. Correct.
5 Q. So you don't give kayexalate unless there's
6 life-threatening hyperkalemia; right?
7 A. I would give it in this situation exactly like
8 this situation, yes.
9 Q. Okay. But you don't give it otherwise? You
10 only give it in life-threatening --
11 A. I don't give it for mild hyperkalemia.
12 Q. All right. Going back a couple of steps. Do
13 you agree that the rhabdomyolysis that Mr. Allen had was
14 statin induced, correct?
15 A. I think it was, yes. I know there's varied
16 opinions about that both in the chart and among some of
17 the depositions I've read, but I think it was statin
18 induced, yes.
19 Q. And the University of Maryland Medical System
20 prescribed that statin to him, correct?
21 MR. SHAW: Objection, Your Honor.
22 THE WITNESS: They did.
23 THE COURT: Basis?
24 MR. SHAW: Approach?
25 THE COURT: Yes.

1 (Counsel approached the bench, and the
2 following ensued:)
3 THE COURT: Just so the question was about
4 prescribing the statin?
5 MS. ZOIS: Yes.
6 MR. SHAW: So I object to this line of
7 questioning. If she intends to ask whether it's
8 appropriate to give statin or not. There's been no
9 discovery provided by the Plaintiffs that there's any
10 issue with prescribing the statin. That's not a basis of
11 the Complaint.
12 THE COURT: Okay. All right. So that hasn't
13 been asked. Is that where you're going?
14 MS. ZOIS: No.
15 THE COURT: Okay.
16 MR. SHAW: You're not going there?
17 MS. ZOIS: Uh-uh.
18 MR. SHAW: Okay.
19 THE COURT: Okay.
20 MR. SHAW: All right. Just wanted to -- before
21 the damage was done.
22 THE COURT: I appreciate it. I understand. I
23 get it.
24 (Counsel returned to the trial table, and the
25 following occurred in open court:)

1 THE COURT: Go ahead, Ms. Zois.

2 MS. ZOIS: Thank you.

3 BY MS. ZOIS:

4 Q. And you treat rhabdomyolysis in your practice,

5 correct?

6 A. I treat patients with rhabdomyolysis, yes.

7 Q. And you treat patients with hyperkalemia in

8 your practice, correct?

9 A. All the time.

10 Q. Do you remember testifying at your deposition

11 that in 25 years you've only seen 50 to 100 patients like

12 Mr. Allen?

13 A. With all three of those things, yeah, that

14 would be accurate. You know, to have all three of those

15 conditions end stage renal disease and end stage liver

16 disease and rhabdomyolysis, that's not that common.

17 Those separate conditions are very common. I see them

18 every week. But those three together in a patient I was

19 trying to be honest in a patient like Mr. Allen, no,

20 probably 50 to 100. That's pretty accurate.

21 Q. Okay. So you see patients like Mr. Allen maybe

22 two to four times a year?

23 A. With all of those specific conditions is what I

24 was answering.

25 Q. Right.

1 A. I see patients with his comorbidities as I said
2 earlier, that would be thousands.
3 Q. Well, I'm more concerned about how often do you
4 see patients like Mr. Allen in this case and I believe
5 your answer at deposition was you only see 50 to 100 over
6 the whole course of your career which is by my math about
7 two or four patients a year?
8 A. Fair enough. I'm limiting that to his specific
9 -- with all of his constellation of problems.
10 Q. So that's two to four patients a year, correct?
11 A. Okay.
12 Q. Is that right?
13 A. Sure.
14 Q. Let's talk about the different ways to address
15 a cardiac event like what happened in this case. We know
16 that Mr. Allen had very high potassium at around noon on
17 the 18th, correct?
18 A. 7.3, yes.
19 Q. We know that now because the labs after they
20 were emergently drawn stat showed 7.3, right?
21 A. Correct.
22 Q. And that's a high level of potassium, high
23 enough to cause a life-threatening cardiac event,
24 correct?
25 A. In his situation. Not always. I would say

1 some patients have those levels walking around and have
2 no problems. It depends on how acutely it develops. But
3 in his situation it was clearly life-threatening.
4 Q. So the cardiac alarms go off, right?
5 A. Noticed that he is bradycardiac, correct.
6 Q. And Dr. Burks clicks through an order set to
7 treat hyperkalemia, correct?
8 A. He writes orders. I don't know how he
9 specifically does it or whether he's clicking or doing
10 something else, but yes, he develops. He produces orders
11 to treat the hyperkalemia.
12 Q. Do you have an order set at your hospital?
13 A. We do. We do. We have, you know, like any
14 electronic medical record one of the advantages is that
15 if you name a condition it will bring up suggested
16 orders, a suggested order set. You are either free to
17 use that or to do something else.
18 Q. Did you bring your order set with you to court?
19 A. I did not.
20 Q. Do you know what your order set is for the
21 treatment of hyperkalemia?
22 A. Specifically, for hyperkalemia?
23 Q. Yes?
24 A. I usually don't use the order sets personally,
25 so I couldn't tell you specifically what it is.

1 Q. So you don't know if your order set that you
2 use is the same or different than the order set that
3 exists at the defendant hospital?
4 A. That would be accurate.
5 Q. All right. So the first thing that you want to
6 do when a patient is having a life-threatening cardiac
7 problem the very first thing you want to do is order
8 calcium gluconate, correct?
9 A. Yes, you would order everything but you would
10 want the calcium to be given first, correct.
11 Q. And that's because the calcium is so important
12 that it has to stabilize the heart, right?
13 A. As I explained earlier, it stabilizes the
14 electrical system of the heart.
15 Q. And that's the first thing you want to do?
16 A. That's what you would try to do, correct.
17 Q. And the records show that calcium gluconate was
18 never administered to Mr. Allen; would you agree with
19 that?
20 A. I agree that that's what the record shows.
21 Q. Are you aware that there were 253 vials of
22 calcium gluconate at the hospital during the week of Mr.
23 Allen's admission?
24 A. No.
25 Q. You're not?

1 A. No, I wasn't told that at any point.

2 Q. Are you aware that there was calcium chloride

3 in the crash cart?

4 MR. SHAW: Objection to this line based on

5 prior basis, Your Honor.

6 THE COURT: I appreciate the objection. It is

7 overruled.

8 THE WITNESS: That wouldn't surprise me. We

9 keep calcium in all the crash carts.

10 BY MS. ZOIS:

11 Q. And are you aware that calcium chloride was

12 never administered to Mr. Allen?

13 MR. SHAW: Objection.

14 THE WITNESS: I'm aware that it's not --

15 THE COURT: Overruled.

16 THE WITNESS: -- in the record and also I'm

17 aware of it from testimony and stuff that calcium

18 chloride was never given.

19 BY MS. ZOIS:

20 Q. You sort of trailed off and I got lost in the

21 objection.

22 A. I am aware that calcium chloride was not

23 administered.

24 Q. So the most important medication to give to a

25 patient under a life-threatening situation was not

1 administered in this case, correct?

2 MR. SHAW: Objection.

3 THE COURT: Overruled.

4

5 THE WITNESS: It was ordered. They were told

6 that it was a shortage and that it was not available. I

7 don't know what, you know, what -- like I said earlier, I

8 lived through that too. It was very frustrating for all

9 of us in terms of not having a medication that you feel

10 is important that the pharmacy cannot provide.

11 BY MS. ZOIS:

12 Q. So the answer to my question is yes?

13 MR. SHAW: Objection.

14 THE COURT: Overruled.

15 THE WITNESS: What was your question? Say it

16 again.

17 BY MS. ZOIS:

18 Q. The most important medication to be given to a

19 patient having a life-threatening cardiac event was not

20 given on this day, correct?

21 A. I wouldn't say it's the most important. It's

22 the one that directly -- I mean, you wouldn't give it and

23 not give the other ones, for example. I mean, the most

24 important goal is to get the potassium down, so I would

25 disagree that it's the most important. I would agree

1 that you would definitely want to give it.
2 Q. Well, the drugs that you give for potassium
3 that doesn't protect the heart, correct?
4 A. Right. He didn't die of any heart event. If
5 he hadn't given the other medications he would have died,
6 so I would argue with you that the other medications here
7 are much more important because calcium was not given and
8 he never had a cardiac event.
9 Q. I understand.
10 A. So to argue that it should have been given that
11 it's the most important drug and nothing happened and
12 really the most important drugs here to get the potassium
13 down which were given.
14 Q. My question was the drugs that were given for
15 the potassium didn't directly help his immediate emergent
16 condition with his heart, correct?
17 A. Of course, they did. They brought his
18 potassium down and reversed the effects of the potassium
19 on the heart. Of course they helped.
20 Q. Did the kayexalate --
21 A. He didn't have an event.
22 Q. Did the potassium removing drugs immediately
23 get him out of a life-threatening situation after the
24 cardiac alarms went off?
25 A. Well, they work within five or ten minutes so

1 immediate is if you're going to say immediate within five
2 to ten, 20 minutes, then yeah, they did.
3 Q. So your position is that kayexalate works
4 within five to ten minutes?
5 A. No, my position is the insulin, the bicarb, in
6 particular, works the quickest. The albuterol also works
7 very fast and the insulin and glucose.
8 Q. Okay.
9 A. The kayexalate I've already stated is more
10 further downstream.
11 Q. Got it. So we're I think comparing some apples
12 and oranges here so let me try and be more clear. The
13 first thing to do is to stabilize the heart with the
14 calcium chloride or calcium gluconate, correct?
15 A. Correct.
16 Q. The second thing to do is to give the
17 medications that shift the potassium away from the heart,
18 correct?
19 A. I would say the first thing to do is to give
20 all of those medications. I don't want to be
21 argumentative, you know, but we don't do things like that
22 in medicine. We order the whole set. We would want to
23 give the calcium first, absolutely. I absolutely 100
24 percent agree with you that the calcium would be what we
25 would want to give first. It was not available and, you

1 know, it didn't matter because he didn't have a cardiac
2 arrhythmia and that's the only reason to give the calcium
3 is to prevent a cardiac arrhythmia. And, in fact, Mr.
4 Allen did not have a cardiac arrythmia.
5 Q. Doctor, again, you were deposed in this case,
6 correct?
7 A. Yes, ma'am.
8 Q. And you discussed the order of importance on
9 what you would like to give first at your deposition,
10 right, correct?
11 A. Yes, I think I gave just about the same answer
12 I just gave. The calcium is the one you want to give
13 first but you order all of them at the same time.
14 Q. Well, what you said was --
15 MR. SHAW: Can I have the page and line,
16 please, so I can follow.
17 BY MS. ZOIS:
18 Q. In the --
19 THE COURT: Counsel, do you have the page and
20 line for --
21 MS. ZOIS: I do, Your Honor. It's Page 22,
22 Line 18 to 21.
23 THE COURT: Thank you.
24 BY MS. ZOIS:
25 Q. "In the order, if you had on hand calcium

1 first, insulin and bicarb second, kayexalate third."
2 Isn't that correct?
3 MR. SHAW: Your Honor, can I have a question
4 and answer, please?
5 THE COURT: She's asking a question, Mr. Shaw.
6 She asked if that was correct. Go ahead. You can state
7 the question again if you'd like?
8 MS. ZOIS: I'm going to read the whole question
9 and answer.
10 THE COURT: Okay.
11 MS. ZOIS: That was Counsel's problem with it,
12 and I like it that way better as well.
13 BY MS. ZOIS:
14 Q. The question was, "Now, of these particular
15 modalities to treat hyperkalemia that's causing the
16 cardiac arrhythmias there is a particular order when they
17 should be administered time-wise, sequence-wise?"
18 And your answer was, "You would give the
19 calcium as soon as possible. You would give the shifting
20 agents as soon as possible, and we would give the
21 kayexalate as soon as you could as well. In the order,
22 if you only had on hand, calcium first, insulin and
23 bicarb second, kayexalate third."
24 A. Yeah. I'm making the point that if you only
25 had on hand then you would give the calcium first.

1 They're all ordered at the same time. I believe that's
2 pretty close to the answer I just gave.
3 Q. I think your testimony was you believed the
4 ischemic colitis was caused by some bouts of hypotension.
5 A. Along with his high portal vein. I talked in
6 the deposition a lot about his portal vein pressure also
7 being high so that his cirrhosis puts him at odds or at
8 risk to have ischemic colitis even with small dips in his
9 blood pressure that we know occurred during his dialysis
10 on the 13th and 15th.
11 Q. So you're talking about two bouts of
12 hypotension on the 13th and the 15th?
13 A. Two specific bouts. Well, two on the 13th
14 where his blood pressure I believe dropped into the 70's
15 and then one on the 15th, I believe.
16 Q. But you don't know how many times he was
17 hypotensive, correct?
18 A. Other than these times during dialysis, no, I
19 don't.
20 Q. And you don't know for how long he was
21 hypotensive, correct?
22 A. Correct.
23 Q. And you don't know how long hypotensive needs
24 to last in order to cause ischemic colitis, do you?
25 A. We don't know that in any particular patient

1 ever. I mean, it's very individual. It depends on the
2 risk of the patient. Some patients tolerate blood
3 pressures of 70 for hours and don't have any problems, so
4 it's very individual.
5 Q. And a colon can be deprived of blood for up to
6 six hours without having a reversible problem, correct?
7 A. I don't know what literature you're quoting
8 there.
9 Q. I'm quoting actually one of Defense counsel's
10 experts that was here yesterday Dr. Schweitzer and
11 another one of Plaintiff's counsels experts that was here
12 Dr. Goldstein. So do you agree or disagree with that?
13 MR. SHAW: I object as to foundation of that,
14 Your Honor.
15 THE COURT: Overruled. The question is whether
16 you agree or disagree?
17 THE WITNESS: Define loss of blood flow because
18 if you clamp the aorta --
19 BY MS. ZOIS:
20 Q. Complete loss of blood flow.
21 A. -- and have six hours of no blood flow to the
22 colon I absolutely disagree. You would not have -- you
23 would definitely have ischemic colitis.
24 Q. Okay. But I guess my question is more pointed.
25 You might have ischemic colitis but it could be

1 reversible after six hours of lack of blood flow?
2 A. Oh, that's a different matter. No, you would
3 definitely have ischemic colitis. As to the extent of
4 how much reversibility it is, that would be variable.
5 Q. And you do not believe that low blood flow to
6 the colon through the arteries caused ischemic colitis in
7 this case?
8 A. I believe that the episodes of hypotension
9 contributed.
10 Q. So in your deposition you said that you don't
11 believe that low blood flow to the colon through the
12 arteries caused ischemic colitis. Do you remember saying
13 that?
14 A. I talked about the high venous pressures again
15 in terms of them putting the colon at risk and the small
16 bowel. We know also from the autopsy that there was
17 extensive small bowel ischemia too so I think we can talk
18 about the entire bowel.
19 Q. But my question was more specific. Do you
20 remember stating in your deposition that you don't
21 believe that low blood flow to the colon through the
22 arteries caused the ischemic colitis? Do you remember
23 saying that?
24 A. I think we talked -- I don't remember saying
25 that exactly. I think it's low blood flow through the

1 capillaries and at the mucosal level that we talked about
2 but I don't remember specifically saying that, no.
3 MS. ZOIS: Counsel, Page 62.
4 MR. SHAW: May I show the doctor that
5 deposition?
6 THE COURT: Counsel, you can at your redirect.
7 I don't think she's obligated to do that under the rule.
8 BY MS. ZOIS:
9 Q. Beginning on Page 61, question, "What I'm
10 trying to say is do you believe that there was low blood
11 flow to the colon that caused or precipitated the
12 ischemic colitis?"
13 And your answer was, "I think his ischemic
14 colitis is multi factorial. His episodes of hypotension
15 contributed but low blood flow like global low blood
16 flow, no. I'm not going to -- I'm not going to say
17 that."
18 Do you remember giving that testimony?
19 A. Yeah, that's pretty consistent with what I've
20 been trying to say that the hypotension contributed to
21 it. He didn't have an episode of global low blood flow
22 where he was hypotensive for a long period of time.
23 That's what I was trying to say.
24 Q. And directing your attention to the small bowel
25 for a minute. You would agree that since the surgeon

1 didn't operate on the small bowel that there was no
2 evidence of low blood flow to the small bowel during the
3 surgery; you would agree with that, correct?
4 A. They didn't look at the small bowel. They did
5 a colonoscopy and they did a upper -- they looked at the
6 stomach and the esophagus. They did not look at the
7 jejunum or the ileum.
8 MS. ZOIS: Page 64, Counsel.
9 BY MS. ZOIS:
10 Q. The question was, "Okay. So far, the fact that
11 they did not try to remove -- or they did actually
12 remove, I think, most of the colon and left the small
13 intestine intact, does that leave you to believe the
14 small intestine was still functioning at the time they
15 concluded the operation?"
16 Your answer was, "Leads me to believe that the
17 surgeon did not identify that the small bowel was
18 ischemic at that time."
19 A. Yeah, because he couldn't -- he didn't do an
20 endoscopy. The surgeon says that the colon appeared
21 normal on the outside. They only were able to look at
22 the small bowel on the outside. They weren't able to do
23 an endoscopy. They only identified the ischemic colon by
24 doing the colonoscopy, which is an instrument inserted
25 into the colon. So from the inside, they were able to

1 see the colon was ischemic. They weren't able to do that
2 for the small bowel.
3 If they had been able to do it, they would have
4 seen small bowel ischemic colitis. It wouldn't have
5 mattered. You can't remove the entire bowel so, you
6 know, the surgeon probably still wouldn't have taken the
7 small bowel out. But from the outside, all of the bowel
8 looked normal.
9 Q. But what you said was the fact that he didn't
10 take it out led you to believe that the surgeon did not
11 identify that the small bowel was ischemic at that time,
12 correct?
13 A. Because he couldn't -- yes, that's correct for
14 the reasons he could not -- he didn't do an endoscopy of
15 the small bowel.
16 Q. Okay. So you also agree with Dr. Goldstein
17 that if it was low blood flow to the small -- if there
18 was a low blood flow issue the small bowel would be
19 impacted first, correct?
20 A. If it's a global low blood flow the small bowel
21 is more sensitive, correct.
22 Q. Okay. So when you have global low blood flow
23 all your organs are impacted not just your colon,
24 correct?
25 A. To a variable degree. Organs have like the

1 kidneys and the heart have an ability to adapt better to
2 low blood flow so they're affected in a different way.
3 Each organ is affected in a different way.
4 Q. You also -- so you testified that you thought
5 that he became hypertensive during the hemodialysis
6 treatments and that that was part of why you think he got
7 ischemic colitis. Would you agree with me that the
8 hemodialysis note on the guidelines. Do you still have
9 the guidelines in front of you?
10 A. Yeah.
11 Q. Don't list a major complication as intestinal
12 necrosis or bowel perforation. You would agree with me
13 there, right?
14 A. I would agree with you.
15 Q. Okay. So intestinal necrosis and bowel
16 perforation is listed as a major complication for
17 kayexalate but is not listed by the hospital, the
18 defendant hospital as a major complication with
19 hemodialysis, correct?
20 A. Dialysis doesn't cause specifically ischemic
21 colitis. It would only be through its indirect effects
22 through the low blood pressure as we've talked about.
23 Q. So the answer --
24 A. I would agree with your question.
25 Q. So the answer to my question is correct, right?

1 A. That's what the guidelines say, correct.
2 Q. And the guidelines also say that hemodialysis
3 rapidly removes large amounts of potassium, right?
4 A. Yes.
5 Q. And it says it's the treatment choice for
6 patients with life-threatening hyperkalemia, correct?
7
8 A. Correct.
9 Q. Treatment of choice for patients just like Mr.
10 Allen who is having life-threatening hyperkalemia,
11 correct?
12 A. No one would dispute that.
13 Q. And it can lower your potassium level by an
14 entire point in one hour?
15 A. Very effective.
16 Q. And it can lower your potassium point in the
17 next hour, correct?
18 A. Very effective.
19 Q. And it's the gold standard in eliminating
20 potassium in renal failure patients, right?
21 A. No one would argue with that.
22 Q. The gold standard?
23 A. No one would argue with that.
24 Q. And as for kayexalate you would agree with me
25 that doesn't even start to work for two hours, right?

1 A. Give or take, yeah. It's got to transit
2 through the colon -- you know, it's got to go through the
3 small bowel. It works by exchanging potassium for sodium
4 in the small bowel and colon so it has to -- it takes a
5 while for it to get through.
6 Q. We've heard testimony in this courtroom that it
7 can take up to 24 hours to start working. Do you agree
8 with that?
9 A. I don't know about that, but, you know, it's
10 variable. I certainly would agree that, you know,
11 there's no predictable time-line.
12 Q. And we know that the duration of action is four
13 to six hours. Do you agree with that?
14 A. Well, unless it takes 24 hours like you just
15 said but, yeah. The typical -- you know, that's what --
16 the typical duration of action would be four to six
17 hours. That's why it's usually given repeatedly.
18 Q. So just so we're clear because I think you and
19 I are on the same page here, but the duration of action
20 is after it starts to work, the duration of action is
21 four to six hours beyond when it starts, correct?
22 A. Yeah. I mean, yes. I'm not going to argue
23 with that. That's fine.
24 Q. Okay. And that's what the University of
25 Maryland Medical System, the defendant in this case says

1 according to their guidelines, right?
2 A. Sure.
3 Q. So the kayexalate doesn't start to work
4 immediately, doesn't work effectively until about
5 potentially eight hours after this cardiac event, right?
6 A. Yeah, I think we said onset, a typical onset of
7 action within two hours and then it works for four to six
8 hours.
9 Q. Do you agree that those shifting agents that
10 are given to get the potassium away from the heart they
11 have a duration of action that can be between one and
12 three hours? Do you agree with that?
13 A. I think -- I agree with the guidelines that
14 they state there. It's a range, of course, but yes, I
15 agree with that.
16 Q. Okay. So you agree that the heart can maintain
17 and be protected for the period of time that show up in
18 the guidelines whatever they might be?
19 A. Yes. That's why you give them -- that's why
20 you do everything, right. So the shifting agents work in
21 the first hour to two. The dialysis you can get
22 hopefully within an hour to bring the potassium down even
23 more and then the kayexalate has a sustained effect over
24 four to six hours to keep the potassium down which is
25 really going to be a problem with Mr. Allen because of

1 the acid production. His potassium was going to
2 skyrocket back up as we know that it did subsequently,
3 so.
4 Q. So you agree that the shifting agents can
5 protect the heart for up to the duration that's in the
6 guidelines which is it could be as long as three hours,
7 right?
8
9 A. I don't know about protecting the heart. They
10 can bring the potassium level down by their stated
11 amounts within, you know, an hour to two hours.
12 Q. And these agents can be repeated to stabilize
13 the heart, correct?
14 A. They can, but it can be a problem to keep
15 giving insulin and glucose and bicarb. You typically
16 would only like to do that once.
17 Q. If you have a patient that has the bottle of
18 kayexalate and the hemodialysis machine that's sitting
19 there ready to hook that person up are you going to give
20 him the kayexalate?
21 A. I might if it's in this situation to keep it
22 down and when I know that you're producing a lot of
23 potassium. If I knew that dialysis was going to start in
24 the next five minutes I still might give the kayexalate
25 especially in this type of situation.

1 Q. Do you remember testifying in your deposition
2 that if hemodialysis is started there's no need for the
3 kayexalate?
4 A. It depends on the situation. I may have said
5 that, but we weren't clear about what situation. That is
6 not 100 percent -- if I said that, I was wrong because
7 it's not a 100 percent situation. It depends on
8 obviously each individual. I would always go with
9 dialysis. I'm not arguing with you.
10 Q. Okay. So my specific question or Mr. Gaston's
11 specific question at your deposition was --
12 MR. SHAW: Counsel, page?
13 MS. ZOIS: 32.
14 BY MS. ZOIS:
15 Q. "If the dialysis in this case had been started
16 before Mr. Allen actually was administered kayexalate,
17 would there be any need to administer the kayexalate on
18 top of the dialysis?"
19 Your answer then was "No."
20 A. Well, I wasn't clear maybe on the question that
21 the -- I'm not sure that -- I would give kayexalate to
22 keep the potassium down like we've talked about.
23 Q. Well, the question was specific to Mr. Allen
24 and specific to this case. So the question specifically
25 was, "If the dialysis in this case had been started

1 before Mr. Allen actually was administered kayexalate,
2 would there be any need to administer the kayexalate on
3 top of the dialysis?" A very specific question.
4 And your answer at the time of your deposition,
5 your sworn testimony under oath was, "No."
6 A. It was a very specific question but it was over
7 the duration of a long deposition where we talked about
8 where I thought the -- you narrowed it down to a specific
9 situation where we had previously discussed that the
10 dialysis -- he didn't know that the dialysis was going to
11 be done in five minutes. I said the kayexalate should be
12 given because he's not sure when the dialysis was going
13 to be given. For all the reasons I stated earlier,
14 technology, personnel, other patients in the hospital.
15 You went on and narrow it down to a theoretical situation
16 and then to that I answered no. If he knew that the
17 dialysis was going to be in five minutes there would be
18 no reason to give the kayexalate. I agree with that.
19 But that's a very specific scenario. It does not apply
20 to this case.
21 Q. Except the question was asking about
22 specifically Mr. Allen?
23 A. Theoretically because he said if he knew and he
24 did not know, so you narrowed it down to a theoretical as
25 lawyers always do to a very theoretical situation. I

1 answered that theoretical question. That's not what
2 happened here.
3 Q. Mr. Allen had hemodialysis on the 13th,
4 correct?
5 A. Yes.
6 Q. He had hemodialysis on the 14th, correct?
7 A. The 13th and 14th and 15th.
8 Q. And the 16th?
9
10 A. I don't believe on the -- no, he did not on the
11 16th.
12 Q. So you don't believe he had hemodialysis on the
13 16th?
14 A. I don't remember that he had dialysis on the
15 16th.
16 Q. Well, I'll represent to you that he did.
17 A. Okay.
18 Q. So he's had hemodialysis four days in a row and
19 he skips a day on the 17th?
20 A. That's correct. That's the day that he did not
21 get dialysis; that's correct.
22 Q. And we know that he's in the kind of room that
23 he should be in to get hemodialysis, correct?
24 A. I would assume so. I don't know with
25 University of Maryland. I would assume so.

1 Q. That's an important point. You don't know the
2 University of Maryland. But you do know that
3 hemodialysis was done at his bedside, correct?
4 MR. SHAW: Objection, Your Honor.
5 THE COURT: Basis?
6 MR. SHAW: Side comment with no question to it.
7 THE COURT: Overruled.
8 MR. SHAW: Move to strike.
9 THE COURT: Overruled.
10 BY MS. ZOIS:
11 Q. You do know that hemodialysis was done at Mr.
12 Allen's bedside, correct?
13 A. That's typical, yeah.
14 Q. All right. So we know he had the right
15 plumbing in the room to have the hemodialysis, correct?
16 A. Good point. That's not always the case.
17 Q. And you know that he was already under the care
18 of a nephrologist at the hospital, correct?
19 A. Yes.
20 Q. And you know that the nephrologist was actually
21 in his room on the morning of the 18th at 11:30, correct?
22 A. The fellow was, yes.
23 Q. And the fellow was looking for his lab work,
24 right?
25 A. Yeah, I recall that, yes.

1 Q. All right. So there's no evidence in the chart
2 that there's any lack of quantity of hemodialysis
3 machines at the defendant hospital, is there?
4 A. No. Of course, they can do dialysis. None of
5 those dates speaks to whether or not it was immediately
6 available but there's no problem with -- obviously they
7 can do dialysis in the hospital, yes.
8 Q. But you haven't been provided with any evidence
9 or testimony or read any depositions that there was some
10 shortage of hemodialysis machines at this hospital,
11 correct?
12 A. No, and I didn't say that there was. That's
13 not -- that wasn't part of my answer.
14 Q. And you haven't been provided with any
15 testimony or evidence that there was any shortage of
16 technicians to perform hemodialysis, have you?
17 A. I wasn't provided with any direct knowledge of
18 that, no.
19 Q. And you weren't provided with any testimony or
20 any evidence that a bunch of the hemodialysis machines
21 were inoperable or broken or anything along those lines?
22 A. No.
23 Q. All right. And the hemodialysis after it was
24 ordered by Dr. Burks got there within an hour and 15
25 minutes, correct?

1 A. Yeah, give or take, yeah.
2 Q. All right. Going back to before the
3 administration of the kayexalate the cardiac alarms go
4 off. Calcium gluconate and calcium chloride are not
5 given. The shifting agents are given, correct?
6 A. Yes.
7 Q. And after the shifting agents are given Mr.
8 Allen's heart comes under control, right?
9 A. Yes, the bradycardia resolves. The slow heart
10 rate resolves.
11 Q. And the alarms stopped going off?
12 A. Presumably.
13 Q. No additional strips were generated showing
14 that he was having a bradycardia event, correct?
15 A. None that I saw.
16 Q. So albeit it temporarily the life-threatening
17 emergency is over for the moment, correct?
18 A. Yeah. The key word there is "temporarily."
19 Q. And that's before the kayexalate was
20 administered, right?
21 A. Yeah. He's not having a bradycardia when the
22 kayexalate is given.
23 Q. So he's not having an emergency situation, a
24 life-threatening event when the kayexalate is given,
25 correct?

1 A. I wouldn't agree with that. He's not having an
2 emergency cardiac arrhythmia at the time the kayexalate
3 was given. He definitely was having a hyperkalemic
4 emergency though still.
5 Q. Okay. And Dr. Burks wasn't in the room when
6 the kayexalate was given to Mr. Allen, correct?
7 A. I don't know about that.
8 Q. So you haven't read the deposition testimony
9 and that Dr. Burks wasn't in a room and a nurse brought
10 the kayexalate in a styrofoam cup?
11 A. I did read his deposition but I don't -- I
12 think he also said that he was not aware of, you know,
13 where he was all the time. But fine. I don't see what
14 -- why that's important, but go ahead.
15 Q. Okay. So by your reading of the depositions I
16 think we can agree that when the kayexalate was
17 administered Dr. Burks was not in the room, fair?
18 A. If that's what the deposition shows, I'm okay
19 with that. I don't recall specifically what it says.
20 Q. Directing your attention for a minute about the
21 blood draws. You know that there was an order for Mr.
22 Allen to have his blood drawn at 4:30 in the morning,
23 correct?
24 A. Yes. He was supposed to have his regular daily
25 blood work drawn at that time.

1 Q. And the blood was not drawn at that time,
2 correct?
3 A. I believe he refused, correct.
4 Q. Oh, you think so?
5 A. I believe that was the testimony.
6 Q. Well, that's in Dr. Burks' report, right?
7 A. I believe yeah, that's in the records.
8 Q. All right. So Dr. Burks after realizing that
9 his patient has developed ischemic colitis and is off to
10 emergency surgery writes the report where it says, "Mr.
11 Allen refused the blood draw." Right?
12 A. I don't know about that specific chronology
13 that you're talking about. I would have no reason to
14 doubt his honesty.
15 Q. All right. So the blood draw issue was
16 addressed by Dr. Burks in his discharge summary, right?
17 A. I recall that. I think so, yeah.
18 Q. Yes. And that discharge summary wasn't until
19 the 19th and when he's discharging him from the immediate
20 care up to the ICU, correct?
21 A. Transferring him, yes.
22 Q. Transferred. Okay. So this discharge summary
23 where he writes that Mr. Allen refused his labs was after
24 everybody realized that he needed to go to emergency
25 surgery, correct?

1 A. I guess. Again, I'm not doubting the honesty
2 of Dr. Burks. I'm just reporting what I read in the
3 records.
4 Q. Did Defense counsel or did you read the
5 deposition of Demetrius Jones from the hospital?
6 A. I don't remember.
7 Q. So you're unaware that the phlebotomist that
8 went by Mr. Allen's room on the evening of the 18th did
9 not draw his blood; you're unaware of that fact?
10
11 MR. SHAW: Objection, Your Honor.
12 THE COURT: Overruled.
13 THE WITNESS: The evening of the 18th?
14 BY MS. ZOIS:
15 Q. Four-thirty in the morning on the 18th?
16 A. I know that blood was not drawn on the morning
17 of the 18th, correct.
18 Q. Are you aware that the phlebotomist from
19 University of Maryland Medical System came in here and
20 told this jury that she, in fact, did not draw his blood
21 because he was getting dialysis that day?
22 A. I don't remember that. I didn't see that
23 deposition. I don't think.
24 Q. So you're unaware of the fact that the reason
25 Mr. Allen didn't have his blood drawn was not because he

1 refused but was because the phlebotomist at 4:30 or when
2 she made her rounds was told not to draw his blood
3 because he was having hemodialysis that day; you're
4 unaware of that?
5 MR. SHAW: Objection. Same basis as before.
6 THE COURT: Overruled.
7 THE WITNESS: I'm being made aware of it right
8 now.
9 BY MS. ZOIS:
10 Q. Okay. So Doctor, we can agree that Dr. Burks
11 gets to the hospital around 6:30 or 7:00 every morning
12 according to his deposition?
13 A. Yes.
14 Q. And the first thing he does when he gets to the
15 hospital is check the labs, right?
16 A. I believe he testified to that, yeah. He
17 checks on the status of his patients.
18 Q. Labs are important, aren't they?
19 A. Yes. Everything that we do is important.
20 Q. Right. Because you have to base you care and
21 treatment of that patient based on what your labs tell
22 you, right?
23 A. In part.
24 Q. And he didn't know what the labs were at seven
25 o'clock in the morning, right?

1 A. They weren't drawn. Well, he didn't know what
2 they were from that morning. He knew them from the day
3 before.
4 Q. So he didn't know what his lab levels were at
5 seven o'clock in the morning, correct?
6 A. For that day, no, he did not.
7 Q. He didn't know what is lab levels were at
8 eight?
9 A. They weren't available.
10 Q. He didn't know what his lab levels were at
11 nine?
12 A. Still weren't available.
13 Q. Didn't know what the lab levels were at ten?
14 A. Correct.
15 Q. Didn't know what the lab levels were at eleven?
16 A. Correct.
17 Q. Didn't know what the lab levels were and when
18 the nephrologist is in his room at 11:30 saying, "pending
19 labs." Didn't know what the lab levels were then,
20 correct?
21 A. Neither did the nephrologist for that matter
22 but, yes, nobody did. He didn't have the labs at that
23 time.
24 Q. And I believe you testified in your deposition
25 that the reason he didn't know what the lab levels were

1 was because he was busy with other things. Do you
2 remember giving that testimony?
3 A. I said I believe that was one of the
4 possibilities that he, you know, could have been busy
5 with other -- I think he even said at the time that he
6 was busy with, you know, doing and seeing other patients
7 and he wasn't aware that the labs had not been drawn.
8 Q. Right. And you got that information that he
9 was busy with other things from reading his deposition
10 transcript, correct?
11
12 A. I believe so, yes.
13 Q. And you also in your deposition said that the
14 reason he didn't know what the lab levels were was
15 because he was busy with his seven other patients or busy
16 with other patients, correct?
17 A. I believe that's what he testified to or to
18 that effect, maybe not that exact words, but.
19 Q. And it wasn't until the life-threatening
20 cardiac event that occurred that he realized that the
21 labs were missing, correct?
22 A. Correct.
23 Q. And Dr. Seneff, you agree with me that the
24 timing of the labs could have impacted the treatment in
25 this case, don't you?

1 A. Of course. I mean, if he had gotten those labs
2 earlier on they would have shown the same -- probably
3 shown the same abnormalities that I've already talked
4 about, the increased acid production, potassium certainly
5 would have been higher. He likely would have acted
6 earlier. It wouldn't have changed the outcome of Mr.
7 Allen, but he likely would have acted earlier.
8 Q. So you said a lot of things just now and I'm
9 going to break it down. So if he got the labs back at
10 the time that he should have at eight o'clock in the
11 morning and noticed that his potassium level was at 7.3
12 you would expect that he's calling the nephrologist
13 saying the hemodialysis machine over here, correct?
14 A. Yes, he would have done that.
15 MR. SHAW: Objection, Your Honor.
16 THE COURT: Basis?
17 BY MS. ZOIS:
18 Q. So --
19 THE COURT: Basis?
20 MR. SHAW: Same basis as before, Your Honor.
21 THE COURT: Overruled.
22 BY MS. ZOIS:
23 Q. So the hemodialysis machine shows up in the
24 morning. And we know that the hemodialysis machine can
25 lower the serum by one whole point in the first hour,

1 right?

2 A. We've established that, yeah.

3 Q. And two whole points in the second hour, right?

4 A. Yep.

5 Q. So Doctor, you would agree with me that if he
6 had the labs back early got hemodialysis hooked up within
7 the first two hours his potassium level would have been
8 5.3 and he never would have had this cardiac event?

9 A No, I don't know that for a fact. Now, the
10 same thing would have happened. Let's say Dr. Burks gets
11 those labs at 8:00 a.m. He's going to order the exact
12 same lab set that he ordered when he found out at 12:57.
13 He's going to order the shifting agents. He's going to
14 order the calcium. He'll find out there's no calcium.
15 He'll give the shifting agents. He'll order the
16 kayexalate and he'll contact dialysis. He'll do the
17 exact same thing at eight o'clock that he did at 12
18 o'clock. It probably would have prevented the cardiac
19 problem that ended up not being a problem because he
20 never has any consequence from the cardiac -- he never
21 has cardiac arrhythmia. Never. He has bradycardia. He
22 gets the shifting agents. It goes away. So the lack of
23 a calcium or the lack of that cardiac event would not
24 have changed the treatment one bit. It just would have
25 been four hours earlier.

1 Q. If he had hemodialysis for four hours before
2 noon the need for kayexalate wouldn't have existed?
3 A. No, that's not right. If he at eight o'clock
4 gets a potassium of 7.3 he's going to order the exact
5 same labs that he ordered at 12:57. He would have done
6 the exact same thing he did at 12:57.
7 Q. All right. Just so I'm clear and the jury is
8 very clear on this point when asked at your deposition,
9 "If the dialysis in this case had been started before Mr.
10 Allen actually was administered kayexalate, would there
11 be any need to administer the kayexalate on top of the
12 dialysis?"
13 Your answer back on June the 7th of 2016 was,
14 "If he had started the hemodialysis, we wouldn't have
15 ever needed the kayexalate."
16 Are you disagreeing with your deposition today?
17 A. No, you just said something completely
18 different than what you said before. You said if he had
19 the labs at eight o'clock and had gotten dialysis
20 immediately. I'm saying at eight o'clock, he would have
21 ordered the exact same labs, the exact same treatment
22 that he ordered at 12:57. The dialysis didn't come in
23 five minutes, did it? It came in an hour and 15 minutes
24 later after the shifting agents and kayexalate had been
25 given. It probably would have been the exact same

1 scenario at 8:00 a.m. He would have ordered the shifting
2 agents and the kayexalate and the dialysis. They would
3 have all been given and then the dialysis would have been
4 started at 9:15. It wouldn't have changed the scenario
5 one bit. Now, you asked me if he got dialysis right away
6 before he got the kayexalate would I have given the
7 kayexalate and I said no. But again, that's a
8 theoretical, counselor. That's not what happened here.
9 Q. Okay. That's just what I wanted to know.
10 Starting him on dialysis was already started he wouldn't
11 have needed the kayexalate, right?
12 MR. SHAW: Objection, Your Honor.
13 THE COURT: Overruled.
14 MR. SHAW: It's four times.
15 THE COURT: Overruled.
16 BY MS. ZOIS:
17 Q. Correct?
18 A. Correct.
19 MS. ZOIS: Court's indulgence for a moment,
20 Your Honor.
21 THE COURT: Take your time.
22 (Brief pause.)
23 BY MS. ZOIS:
24 Q. Before I do this, your testimony is that Mr.
25 Allen was going to die during this hospitalization,

1 correct?

2 A. After the identification of the acid production

3 and the ischemic colitis, correct, because he had

4 ischemic small bowel, ischemic large bowel. You can't

5 survive that.

6 Q. And his admissions that were before this

7 admission, the last admission were for liver and kidney

8 problems primarily, right?

9 A. Yes, decompensation of various stages of his

10 liver and kidney problems.

11 Q. And you're aware in looking at the medical

12 chart in this case that the nephrologist at the

13 University of Maryland Medical System actually said that

14 ultimately he's going to need long-term dialysis to

15 optimize his condition in preparation for the

16 liver/kidney transplant. Are you aware of that

17 nephrologist statement?

18 A. Yeah, I saw that note. He was never evaluated

19 for transplant, however.

20 Q. And you saw the note also then that says, "We

21 will initiate transplant evaluation process while

22 inpatient per patient's wishes." Correct?

23 A. Correct. It was never done, but I saw that

24 note.

25 Q. And you saw the other two notes that indicate

1 that he was on the transplant list?
2 A. I saw those notes written. I believe by health
3 officers it was not accurate, however.
4 Q. So if Dr. Burks note himself says that he's on
5 the transplant list, Dr. Burks would have gotten that
6 wrong?
7 A. I don't -- he's not on it. He was not on a
8 transplant list so that was just an inaccurate statement.
9 It doesn't have anything to do with whether he's on the
10 transplant list or not. It has nothing to do with my
11 opinion that he was 100 percent mortality on the morning
12 of the 18th.
13 Q. And on the day of the 19th there's another note
14 that he's on the transplant list. You would say that was
15 inaccurate, an incorrect medical record also?
16 A. Show me where he was on the transplant list.
17 He was never on the transplant -- he was never evaluated
18 for a transplant.
19 Q. But you've read the medical records right,
20 Doctor?
21 A. I have. Those are inaccurate statements.
22 Q. Okay. So you're challenging the accuracy of
23 the Defendants records?
24 A. Of that particular statement.
25 Q. Okay. Just wanted to make sure. Now, Mr.

1 Allen was in the Intermediate Unit, right?
2 A. Yes.
3 Q. He's not in the ICU.
4 A. Correct.
5 Q. He's not under the care of a critical care
6 doctor?
7 A. Not at that time. I mean, he was subsequently
8 transferred to a higher level of care, but.
9 Q. Before the cardiac event on the 18th?
10 A. That's correct.
11 Q. He's in the Intermediate Care, not up in ICU?
12 A. Under the care of a hospitalist, not a critical
13 care doctor.
14 Q. All right. And no one is talking about
15 palliative care with his family, right?
16 A. I didn't see any palliative care notes, no.
17 Q. And nobody is talking about hospice with the
18 family, right?
19 A. Correct.
20 Q. They're not organizing a meeting to talk about
21 his terminal illness and end of life conversations are
22 not happening?
23 A. Not in the hospital. He's been told by various
24 doctors that he has a shortened life span because of his
25 liver disease but not in the hospital at this time.

1 Q. So none of the doctors at the defendant
2 hospital are making a plan for the family to have end of
3 life discussions, correct?
4 MR. SHAW: Objection as to timing, Your Honor,
5 on that.
6 THE COURT: Could you clarify the timing?
7 THE WITNESS: Yeah.
8 BY MS. ZOIS:
9 Q. Before the surgery?
10 A. I mean, I was going to make that point anyway.
11 No, not until the 19th obviously when things changed. I
12 would say they changed on the morning of the 18th, but I
13 didn't see any palliative care notes.
14 Q. And do you agree that he took an unexpected
15 turn for the worse?
16 A. Yes, I would agree that ischemic colitis is
17 always a bad unexpected turn for the worse.
18 Q. Again, I'm a little bit confused at some of
19 these numbers over here but we're talking about the liver
20 and kidney levels and that's this GFR, right?
21 A. GFR is a calculated value.
22 Q. Okay. So just to kind of go through these with
23 you. I kind of want to go backwards. The GFR value of
24 his kidney when he got there on the 13th was a 12?
25 A. It's not accurate because he's getting

1 dialysis. The GFR is just a calculation. They take the
2 lab values and then calculate -- based on his weight and
3 whether or not he's an African American and they
4 calculate the GFR. So in someone who's getting dialysis
5 the calculated GFR is not accurate. But go ahead. I
6 mean --
7 Q. Well, my question, was a lab taken at six
8 o'clock in the morning on the 13th?
9 A. Oh, you mean before the dialysis?
10 Q. Yes.
11 A. Okay.
12 Q. Yes. So at six o'clock in the morning on the
13 13th his level was 12, right?
14 A. Calculated out. Normally it would be 100 to
15 150, okay, 120.
16 Q. That's low?
17 A. Very low.
18 Q. Okay. So on the 14th after he gets
19 hemodialysis he's gone up to a 17, right?
20 A. Yeah, that's where they become inaccurate
21 because he's being dialyzed.
22 Q. Okay. All right.
23 A. So he's having artificial removal of the BUN
24 and creatine. It's not the kidneys taking the BUN and
25 creatine.

1 Q. Okay.
2 A. So totally -- it should be totally ignored
3 beyond that part.
4 Q. Well, I don't want to ignore it. I want to talk
5 about it. So the GFR after he was getting hemodialysis
6 daily which is what the transplant specialist said that
7 he should get to making a candidate for a transplant his
8 GFR level gets better, right?
9 A. Counselor, no. You can't --
10 Q. No.
11 A. That is a -- that is a --
12 Q. (Indiscernible at 11:47:39.)
13 MR. SHAW: Let him finish, Your Honor.
14 THE WITNESS: It's a fantasy number.
15 THE COURT: Sustained.
16 THE WITNESS: Because the lab, the computer
17 doesn't know he's getting dialysis. The computer thinks
18 he's generating these numbers on his own. He no longer
19 is. He's getting dialysis. So a calculated GFR in the
20 setting of dialysis is not accurate and no one would look
21 at it and say that it's reflective of kidney function.
22 BY MS. ZOIS:
23 Q. Okay. Let's just talk about the numbers. All
24 right. On the 12th -- on the 13th, his GFR was a 12,
25 right?

1 A. That's what --

2 Q. And you had explained to the jury your position

3 of why you think these are bogus, these numbers and don't

4 count and nobody should look at them. Get it.

5 His GFR on the 14th is a 17, right?

6 A. That's what the computer says.

7 Q. Okay. And the computer says that on March 15th

8 his GFR is a 21.

9 A. Okay.

10 Q. Right? And his GFR on the 16th is a 22?

11 A. Okay.

12 Q. And his GFR on the 17th is a 23, right?

13 A. That's what the numbers is written. That's the

14 number that's written, correct.

15 Q. And these are the lab values that doctors rely

16 on in providing treatment and care?

17 A. No doctor relies on a GFR when the patient is

18 getting dialyzed. I'm sorry. No one does.

19 Q. Okay.

20 MS. ZOIS: Court's indulgence for a moment,

21 Your Honor.

22 THE COURT: Take your time.

23 (Brief pause.)

24 BY MS. ZOIS:

25 Q. The last question about the numbers that may or

1 may not matter depending on dialysis or not.
2 A. They don't matter. I promise you they don't
3 matter.
4 Q. Okay. They don't matter. None of these
5 numbers matter, right?
6 A. The GFR does not matter.
7 Q. All right. But you want to talk about this
8 CO2, right?
9 A. Yes, ma'am.
10 Q. And you said that the CO2 on the date that you
11 worried about it was low and that was evidence of
12 acidosis; do I have that right?
13 A. Yes.
14 Q. Can you tell us what portion of that was
15 related or what percentage of that was related to
16 rhabdomyolysis?
17 A. Well, rhabdomyolysis in and of itself does not
18 cause acidosis. So I mean, it can cause some conditions.
19 It can contribute to some conditions but it doesn't cause
20 ischemia per se. So rhabdomyolysis itself does not cause
21 acidosis.
22 Q. Okay.
23 MS. ZOIS: Court's indulgence.
24 THE COURT: Take your time.
25 MS. ZOIS: Nothing further, Your Honor.

1 THE COURT: All right. Redirect?

2 MR. SHAW: Thank you, Your Honor.

3 REDIRECT EXAMINATION

4 BY MR. SHAW:

5 Q. Dr. Seneff, how complicated it would be for you

6 to try to explain why a GFR is immaterial after dialyses

7 has been started? Is that pretty complex medicine?

8 MR. GASTON: Objection. Leading.

9 THE COURT: Overruled.

10 MS. ZOIS: No, that's my job.

11 MR. GASTON: Yes, it is. Sorry.

12 MS. ZOIS: Objection. Leading.

13 THE COURT: Overruled.

14 THE WITNESS: No, it's not complicated.

15 BY MR. SHAW:

16 Q. All right. So can you take your best shot

17 because I don't understand why, but take your best shot

18 at telling me and telling members of the jury why --

19 A. Okay. So --

20 Q. Ms. Zois was asking you about the GFR and those

21 levels weren't relevant after hemodialysis was started.

22 A. So the GFR on these lab printouts is a

23 equation. It's a Cockcroft equation. That's the name of

24 the guy that invented it. It's meant to estimate GFR

25 which is glomerular filtration rate. That's the GFR

1 stands for. It's how the kidney filters the blood. A
2 normal value being 100 to 120. The equation assumes that
3 the patient is doing all the work that your kidney is
4 doing all the work. That equation involves a BUN
5 creatine and body weight, a few other things a factor.
6 Q. It already sounds pretty complicated.
7 A. Okay. But put it this way if you have the
8 kidneys is supposed to be doing it instead it's a machine
9 doing it those values no longer are important. They're
10 not telling you what the kidney in the person is doing,
11 it's tell you what the machine is doing. So the machine
12 is giving him a GFR of 21, not his kidneys.
13 Q. Now, you were asked about lab draw or a blood
14 draw on the morning of March 18th and you explained it
15 exactly the same thing would have been done if the labs
16 been drawn earlier. Can you explain that?
17 A. Okay. So let's say the draws were drawn at
18 4:30 and they showed the identical thing or very close to
19 what the labs at 12:57 showed even without the cardiac
20 issues Dr. Burks would have initiated the exact same
21 order set. We've already discussed that the University
22 of Maryland has an order set for moderate to severe
23 hyperkalemia. He would have initiated -- he may not have
24 given the calcium so maybe he wouldn't have had the
25 heartburn of not having calcium because we give that for

1 bradycardia and cardiac arrhythmias and that would not
2 have been present at eight o'clock. So the only
3 difference is he may not have ordered the calcium. He
4 could have avoided the heartburn of the calcium
5 deficiency but he would have initiated the exact same
6 order set including the kayexalate. And I promise you it
7 probably would have taken another hour and 15 minutes for
8 dialysis to get there especially at the time of the day
9 and the exact same treatment would have been given.
10 Q. And Doctor, do you have an opinion to a
11 reasonable degree of medical certainty even with the
12 blood being drawn earlier whether Mr. Allen's ischemic
13 colitis had started prior to that 8:00 a.m. in that
14 morning?
15 A. Yeah, it definitely would have been there and
16 he would have had the acidosis just like I've discussed.
17 And, you know, drawing blood doesn't prevent or treat
18 ischemic colitis.
19 Q. And do you have an opinion to a reasonable
20 degree of medical certainty what Mr. Allen's prognosis
21 was at 8:00 a.m. whether or not a blood draw was drawn?
22 A. Given my --
23 Q. 8:00 a.m. on -- let me ask that again so it's a
24 timely question. Do you have an opinion to a reasonable
25 degree of medical certainty what Mr. Allen's prognosis

1 was as of 8:00 a.m. on March 18, 2013 whether or not
2 blood levels -- blood was drawn and the chemistry was
3 provided?
4 A. I do. He had a process that was producing a
5 tremendous amount of acid in his body. I believe that
6 process was ischemic colitis. That process involved his
7 entire bowel. It's not a survival event. I think he
8 would have died 100 percent.
9 Q. And do you have an opinion to a reasonable
10 degree of medical certainty if kayexalate had been
11 withheld on March 18, 2013 whether that would have
12 altered Mr. Allen's outcome and prevented his death?
13 A. Not one bit. It would have been the exact same
14 course.
15 MR. SHAW: That's all the questions I have.
16 THE COURT: Thank you very much.
17 MS. ZOIS: Nothing based on that, Your Honor.
18 THE COURT: Doctor, you are released, if you
19 will. You are under an instruction not to discuss or
20 share with anyone in or outside the courtroom the content
21 or purpose of your testimony until this case is complete.
22 Okay?
23 THE WITNESS: I understand, Your Honor.
24 THE COURT: Thank you very much.
25 (Whereupon, the witness was excused.)

1 MR. SHAW: Your Honor, approach, please?
2 THE COURT: Yes, that's fine.
3 (Counsel approached the bench, and the
4 following ensued:)
5 MR. SHAW: Would Your Honor entertain an early
6 lunch because --
7 THE COURT: Yes, that's fine.
8 MR. SHAW: -- just about the time I get started
9 it will be lunch time.
10 THE COURT: That's fine.
11 MR. SHAW: He's going to be my last witness,
12 Your Honor. So I don't know that he's going to be as
13 long as Dr. Seneff. Should we be prepared for closings
14 today or not?
15 THE COURT: Well, doubtful because I would
16 imagine jury instructions and verdict sheet conversations
17 may be spirited if history predicts.
18 MR. SHAW: Well, I don't know. I might agree
19 with everything you've done.
20 THE COURT: A girl can dream. Okay. So what I
21 will say is I have a 12:30 appointment that I can't move
22 so are you --
23 MR. SHAW: Two o'clock -- I mean, two o'clock
24 is plenty --
25 THE COURT: Is two o'clock objectionable?

1 MR. SHAW: No. Plenty of time, Your Honor.
2 MR. GASTON: But before we break I did want to
3 move to strike Dr. Buescher because he's a critical care
4 medicine just like Dr. Seneff. And I believe he's going
5 to say the exact same opinions, we're going to go over
6 the exact same grounds.
7 THE COURT: I think we're past that in the
8 litigation but I'm seeing Mr. Shaw's head moving in a way
9 that suggests that he does not anticipate that his final
10 expert will be cumulative.
11 MR. SHAW: Well, he's not going to be exactly
12 like the last one. I can tell you. He has some things
13 that he's going to testify to that we heard for the first
14 time by Dr. Seneff.
15 THE COURT: I'll say this. Obviously, I will
16 listen to any objection that's posed, but without, you
17 know, is there a -- you've made somewhat of a proffer.
18 An imprecise proffer, but what is he being called?
19 What's the purpose of his testimony?
20 MR. SHAW: Well, he's going to be -- he's the
21 only witness from -- who practices in Baltimore City
22 who's going to testify about hyperkalemia is managed in
23 this area.
24 THE COURT: Why does that matter?
25 MR. SHAW: It does matter because it's a local

1 -- it is -- if you look at the Maryland --

2 THE COURT: Local standard?

3 MR. SHAW: It has to be familiar with what

4 happens locally, so I think -- plus it reinforces, Your

5 Honor, that it is appropriate care. And he's going to --

6 but I'm not going to spend three hours with him. He is

7 going to testify about the cause of death and the bowel

8 ischemia and what was going on on the morning of the

9 18th.

10 We heard from three of the Plaintiff's experts

11 about the cause of death.

12 THE COURT: I know we did. For right now, I'm

13 going to table the issue. And I do appreciate that on

14 some level sort of more local standards are admissible

15 evidence in cases such as this. So I'm going to kind of

16 let it go for right now. If you feel that there is

17 something that's objectionable, I know you're going to

18 stand up and say objection.

19 MR. GASTON: You do, Your Honor, as I tried to

20 do during counsel's cross.

21 THE COURT: I'm being smart. I shouldn't be.

22 MR. GASTON: No. Levity is appreciated.

23 THE COURT: So I will excuse the jury until

24 2:00. What I anticipate is we'll finish up your case.

25 I'll hear from you following the close of all evidence.

1 And then I'm going to let them go so that we can hash out
2 the jury instructions, the verdict sheet, and then
3 tomorrow we can start with them fresh, and we can do
4 instructions and closing. Maybe we'll get our verdict by
5 the end of the day. Who knows?
6 MR. SHAW: I was actually ready for closing. I
7 was up late night. The pace went a little bit slower
8 today, so I guess I don't have to work real late tonight.
9 MS. ZOIS: I might be on that. I'm motivated
10 to get it done today so if we can agree --
11 THE COURT: I mean, I'm not saying no. Let's
12 just see where it takes us.
13 MS. ZOIS: Okay.
14 MR. SHAW: Right. Okay.
15 THE COURT: Okay. All right. So I'll let them
16 go until 2:00. All right. Thank you.
17 MS. ALI-SCHNEIDER: Thanks, Your Honor.
18 (Counsel returned to the trial table, and the
19 following occurred in open court:)
20 THE COURT: Madam Clerk, would you approach for
21 a minute?
22 (Court confers with Clerk.)
23 THE COURT: Counsel, can you -- I'm sorry to
24 ask you, and you need roller skates at this point. Can
25 you approach, please?

1 (Counsel approached the bench, and the
2 following ensued:)
3 THE COURT: What if we come back at 1:30 and
4 they come back at 2:00 so that -- I think I can be back
5 by 1:30 because then we can start hashing out jury
6 instructions because what I'm hearing is that there's not
7 going to be any --
8 MR. SHAW: I'm going to argue. But, you know,
9 that's not going to help us as far as the motion for
10 judgment at the end. You know, I just don't think how we
11 could -- thinking about this, even if the jury comes back
12 at 2:00 --
13 THE COURT: It would be a tight squeeze.
14 MR. SHAW: It not only would be a tight
15 squeeze. I would be starting my closing at 4:30 to 5:00.
16 I really don't think that's fair.
17 THE COURT: All right.
18 MR. SHAW: I think the jury is going to be
19 tired by then. I'll be tired by then.
20 MS. ZOIS: Okay.
21 THE COURT: We'll stick with the plan.
22 MR. SHAW: Okay.
23 THE COURT: All right. Thank you.
24 (Counsel returned to the trial table, and the
25 following occurred in open court:)

1 THE COURT: Ladies and gentlemen, we are going
2 to break for a little bit of a longer lunch today than we
3 have. So I will ask Madam Clerk to take you to get your
4 stipend and I would ask, I do ask that you be in the jury
5 room at 2:00 p.m. a little longer than usual, but there
6 are reasons for that, trust me. And following that we
7 will hear the last witness to be presented in the case,
8 so I believe unless there are other rebuttal information.
9 We'll wait to hear. So we'll figure that out when we get
10 there. The last Defense witness will be presented. So
11 please do honor your ongoing instructions about no
12 communications or research or sharing about the case and
13 I will see you at 2:00 p.m. Enjoy the day.
14 THE CLERK: All rise.
15 (Whereupon, the jury exited the courtroom at
16 12:01 p.m.)
17 (Whereupon, a luncheon recess was taken at
18 12:01 p.m.)
19
20
21
22
23
24
25

1 A F T E R N O O N S E S S I O N

2 (2:10 p.m.)

3 (Whereupon, at 2:10 p.m., the jury entered the

4 courtroom.)

5 THE CLERK: The Circuit Court for Baltimore

6 City Part 19 will now resume its afternoon session. The

7 Honorable Julie R. Rubin presiding.

8 THE COURT: Thank you so much. Please take

9 your seat and make yourselves comfortable.

10 Good afternoon again. Recalling Allen v.

11 Burks, Case 24-15-003384. Let the record reflect all

12 counsel and parties are present.

13 Mr. Shaw?

14 MR. SHAW: Thank you, Your Honor. On behalf of

15 the Defendants we would call Dr. Buescher as our last

16 witness.

17 THE COURT: Okay.

18 MR. SHAW: Hold the applause, please.

19 THE COURT: Doctor, can you please raise your

20 right hand and remain standing.

21 Whereupon,

22 PHILIP BUESCHER, M.D.

23 a witness produced on call of the Defense, having first

24 been duly sworn, was examined and testified as follows:

25 THE COURT: All right. You can have a seat.

1 Lower your hand. Can you please lean into the mic and
2 state your full name for the record and your business
3 address?
4 THE WITNESS: My name is Philip Buescher. My
5 business address is Union Memorial Hospital, Baltimore,
6 Maryland.
7 THE COURT: Okay. And how do we spell your
8 last name, sir?
9 THE WITNESS: It's B-U-E-S-C-H-E-R.
10 THE COURT: All right. Go ahead, Counsel.
11 MR. SHAW: Thank you, Your Honor. Approach the
12 witness?
13 THE COURT: Yes.
14 DIRECT EXAMINATION
15 (Defense Exhibit Number 72
16 was marked for identification.)
17 BY MR. SHAW:
18 Q. Let me show you what's been marked as --
19 MR. SHAW: I'll show it to Counsel first.
20 MR. GASTON: Sure. I've seen that. Thank you,
21 sir.
22 BY MR. SHAW:
23 Q. I'll show you what's been marked as Defense
24 Exhibit No. 72. Is that a reasonably current and
25 accurate copy of your curriculum vitae?

1 A. It's probably not the newest version.
2 Q. Will it suffice for our purposes today?
3 A. It should.
4 Q. Okay.
5 MR. SHAW: I would move it into evidence, Your
6 Honor.
7 THE COURT: Any objection?
8 MR. GASTON: No, Your Honor.
9 THE COURT: So admitted. That's Defense 72,
10 Tangier.
11 THE CLERK: Thank you, Judge.
12 THE COURT: Thank you.
13 (Defense Exhibit Number 72
14 was received in evidence.)
15 BY MR. SHAW:
16 Q. So Dr. Buescher, you hold more than one
17 position currently; is that correct?
18 A. Yes.
19 Q. Can you tell us -- I know you tend to speak
20 sort of rapidly, but can you tell us the various
21 positions that you currently hold?
22 A. Yes, I hold various positions. I'm the
23 director of the Medical and Surgical Intensive Care Unit
24 at Union Memorial Hospital which is here in Baltimore
25 right on 33rd Street. I'm also the director of the

1 Intensive Care Unit and the Intermediate Care Unit at
2 Good Samaritan Hospital which is about three miles away
3 to the northwest. Additionally, I hold faculty positions
4 where I work at Hopkins doing pulmonary or critical care
5 about three rotations a week at Hopkins which I've been
6 doing for years.
7 Q. So in your positions you have supervisory
8 functions over other physicians in the ICU as well as in
9 the Intermediate Care Unit similar to where Dr. Burks was
10 working in March of 2013; is that correct?
11 A. Yeah, that's correct. So I wasn't here today
12 the standard is that all of these hospitals have training
13 programs. So if you have an Intensive Care Unit or the
14 IMC where you have a serious of patients there's a number
15 admitted every day and a number discharged every day.
16 There's an entire team where we have interns people one
17 year out of medical school, people two years out of
18 medical school, three years out of medical school and
19 people five, six and seven years out of medical school
20 that I'm training. So you go what's called rounds where
21 you have nurses there, pharmacists there and the house
22 staff are collecting all the data, the doctors, the
23 training doctors and they can call you during the day if
24 they have help or you help them put in IVs and lines and
25 such. So I am the attending meaning, I am managing all

1 of those patients in those different places in concert
2 with a whole lot of help. So I'll look at 24, 30 people
3 a day but I'm doing that with nurse practitioners, PA's,
4 interns, residents. So all day long I'm reviewing
5 patients that come into the Intensive Care Unit, leave
6 the Intensive Care Unit. And I also see outpatients. So
7 I do different things. I also manage the Open Heart
8 Surgery Unit at Union Memorial where I supervise NP's and
9 PA's there so I do like a heart surgery cases as well and
10 I see people in the office that have pulmonary issues of
11 various types.
12 Q. I don't believe the jury has been advised of
13 this before this but can you talk to us about the ICU and
14 the Intermediate Care Unit and what their designed for
15 and if there are any differences and similarities?
16 A. Yes. It used to be you're either in the
17 hospital or you're not and then actually early on in the
18 '60s here in Union Memorial they put the sicker people on
19 one end of the floor, the ones that were on breathing
20 machines. So in a different place in the world. They
21 would localize who has what particular type of disorder
22 to a certain ward and that evolved into the notion of an
23 Intensive Care Unit.
24 So, in general, the ICU, most hospitals have
25 them because you can't predict who in the hospital is

1 going to go the wrong way and end up so sick they need
2 support and support could be you're so weak you have to
3 go on a breathing machine. It could be you're so weak
4 you need a device to help your heart. You're so weak
5 you're unstable and you want a nurse to sit by your
6 bedside in case something happens quickly to address the
7 issue adjusting this, adjusting that, that type of thing.
8 So Intensive Care Units traditionally have the
9 sickest people within the hospital are in one. They can
10 be on breathing machines to help them breath. They can
11 be on heart devices to help the heart work. They could
12 be on fancy machines to take over for your heart and
13 lung. They can be giving you dialysis if you needed
14 that. There's all sorts of equipment and stuff.
15 So the difference between an ICU and an IMC is
16 largely the nurse to patient ratio. Most the ratios are
17 one to one or one to two in an ICU. An IMC at Good Sam
18 it's one to three, but at Hopkins it's one to two. So
19 they're really different hospitals, but there's a lower
20 ratio of -- one nurse working with two patients or three
21 versus that's my patient for the whole day. So it's
22 generally who goes in the ICU is based on who is busier.
23 Q. When you say IMC, that's short for Intermediate
24 Care Unit?
25 A. Yeah, or they call them Step Down Units or

1 Intermediary Care Units. So people say well, it's less
2 intensive care. Well, it's really just different. The
3 biggest difference is, in general, most places although
4 Hopkins and Good Sam we do have people on vent support on
5 these units, but you don't have all the invasive
6 monitoring and the nurse ratio is different.
7 Q. Do critical care patients such as Mr. Allen's
8 condition in March of 2013 up through March 18, 2013 be
9 properly cared for in an Intermediate Care Unit or IMC?
10 MR. GASTON: Objection, Your Honor. He's not
11 been qualified yet. He's giving opinions now.
12 THE COURT: Sustained.
13 MR. GASTON: Thank you.
14 BY MR. SHAW:
15 Q. Can patients who are critically ill be cared
16 for in an Intermediary Care or a Step Down Unit?
17 MR. GASTON: Objection.
18 THE WITNESS: Depends on their diagnosis.
19 THE COURT: Sustained. Counsel, I sustained
20 that objection.
21 MR. SHAW: I didn't ask about Mr. Allen. I'm
22 just asking in general --
23 THE COURT: I understand, but --
24 MR. SHAW: -- about comparing the two.
25 THE COURT: Sustained.

1 MR. SHAW: All right.
2 BY MR. SHAW:
3 Q. So have you had occasion over the years of your
4 experience to care for patients with liver disease
5 including liver cirrhosis?
6 A. Yes.
7 Q. How much experience do you have of that?
8 A. Well, liver cirrhosis is relatively common so
9 cirrhosis is a chronic condition where your liver scars
10 and that can get progressive scarring from alcohol use,
11 it can get scarring from different viruses.
12 MR. GASTON: Objection. Beyond the scope.
13 THE COURT: Overruled.
14 THE WITNESS: And so that's a very common
15 disorder. So I see hundreds of patients that have
16 various degrees of cirrhosis, mild, moderate and severe.
17 BY MR. SHAW:
18 Q. And do you have experience in caring for
19 patients with kidney disease including the need for
20 dialysis?
21 A. Yes. In fact, I was in charge of dialysis at
22 Union Memorial for a number of years. When I first
23 started there which was in 1987 I was in charge meaning,
24 I assessed, delivered, did it, didn't do it, started it,
25 stopped it. I was in charge of dialysis. So to this day

1 I still have privileges, but generally I am not writing
2 orders anymore for dialysis myself.
3 Q. And do you have experience with patients
4 suffering from rhabdomyolysis?
5 A. Yes, various degrees. There's various degrees
6 of rhabdomyolysis.
7 Q. Am I pronouncing, it's rhabdomyolysis or
8 rhabdomyolysis?
9 A. Well --
10 Q. Potato/potato?
11 A. Normally, we say rhabdomyolysis.
12 Q. Myolysis.
13 A. People say it different ways. I don't think it
14 matters.
15 Q. All right. And do you have experience with
16 patients suffering from morbid obesity?
17 A. Yes.
18 Q. And do you have experience with patients
19 suffering from sleep apnea?
20 A. Yes.
21 Q. And Doctor, have you had occasion in the past
22 to care for patients who were experiencing acute,
23 moderate or severe hyperkalemia?
24 A. Yes.
25 Q. Are you familiar with the standards of care as

1 far as treating such patients with acute moderate to
2 severe hyperkalemia?
3 A. Yes.
4 Q. Are you familiar with the drug kayexalate?
5 A. Yes.
6 Q. Are you familiar with the standards of use as
7 far as using the drug kayexalate?
8 A. Yes.
9 Q. Are you familiar with end of life issues and
10 life -- the prognosis used with respect to patients who
11 are critically ill with various conditions?
12 A. Yes.
13 Q. Doctor, have -- I am going to have you go back
14 and have you trace for us your educational background
15 beginning with college.
16 A. Well, I was born in St. Louis, grew up in
17 Philadelphia, went to Durham, North Carolina for eight
18 years. I went to college at Duke. I was an engineering
19 student and then I went to medical school at Duke which
20 is in North Carolina. So I was there eight years. And I
21 came to Hopkins in 1981 to do an internship and then I
22 stayed. I got involved in a research study of the way
23 blood flows through organs using magnetic radiation. So
24 I got involved in research and went into pulmonary. So I
25 did three years of training in internal medicine at

1 Hopkins and then I did three more years of research and
2 training in the field of critical care. So that allows
3 me to boarded. It's like medicine has these different
4 sub-specialities. You could be a pediatrician or a
5 surgeon or a medical doctor or an OB/GYN or a
6 psychiatrist. Beyond that you can branch again.
7 So I did the internal medicine branch and then
8 beyond that did the pulmonary and critical care branch.
9 Q. So pulmonary is lung?
10 A. Pulmonary is lung. So lung and critical care.
11 You could also do anesthesia as the other expert did, so
12 there's different tracks to be a critical care doctor.
13 My training is different than an anesthesia critical care
14 doctor.
15 Q. And in what specialities are you board
16 certified?
17 A. In internal medicine, pulmonary and then
18 there's a certification exam in critical care. In all
19 three I'm certified.
20 Q. And then how long have you been at Union
21 Memorial?
22 A. I've been there since 1987.
23 Q. And do you also go back to Hopkins on occasion
24 for care and treatment of patients?
25 A. Yes, I do.

1

2 Q. Tell us about that.

3 A. Same thing. I do three rotations a year at

4 Hopkins where I do oncology. The last five years I've

5 done mostly oncology or if you're critically ill in the

6 Weinberg Center you would have me as your attending.

7 Those are mostly people with leukemia, bone marrow --

8 really bad tumors where you're critically ill from the

9 tumors. So leukemia, bone marrow transplants and other

10 solid tumors where you're really sick.

11 This last year I've been doing mostly the

12 bronchoscopy and the pulmonary IMC service at Hopkins.

13 Well, it's not the ICU. It's the IMC.

14 Q. And do you have teaching responsibilities at

15 Hopkins and at Union Memorial?

16 A. Yes, I teach every day. So you have interns,

17 residents and students every day.

18 MR. SHAW: Your Honor, at this time I would

19 move that Dr. Buescher be recognized as an expert in the

20 field of internal medicine, critical care medicine and

21 including, without limitation, the care and treatment of

22 patients with liver disease including cirrhosis, kidney

23 disease including dialysis, rhabdomyolysis.

24 THE WITNESS: Just say rabdo.

25 MR. SHAW: Rabdo. Okay. Morbid obesity, sleep

1 apnea, the care and treatment and diagnosis of -- I'm
2 going too fast -- of hyperkalemia, including the
3 prescribing of kayexalate as well as prognosis and end of
4 life issues with patients with multiple medical
5 conditions or multiple comorbidities.
6 THE COURT: I will ask Plaintiffs if they'd
7 like to voir dire at this time, but I will state, Mr.
8 Shaw, that I'm not going to accept any expert as an
9 expert in things in the way that you set it out. In
10 other words, "including, without limitations."
11 So the Court will entertain a motion to accept
12 an expert in a particular field and I understand that
13 that's what you're doing. So would Plaintiff like to
14 voir dire at this time?
15 MR. GASTON: I would, Your Honor, please.
16 Thank you.
17 VOIR DIRE EXAMINATION
18 BY MR. GASTON:
19 Q. Doctor, is it fair to say you're not a liver
20 transplant surgeon?
21 A. That's correct.
22 Q. And you're not a kidney surgeon?
23 A. No.
24 Q. You don't operate at all, right?
25 A. Well, I do surgical --