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Transcript of Jason M. Johnson, M.D.

Date: May 30, 2025
Case: Complaint Against Circuit Judge Pauline Newman, In Re:

WORLDWIDE COURT REPORTING & LITIGATION TECHNOLOGY

1

2   BEFORE THE JUDICIAL COUNCIL

3   OF THE UNITED STATES COURT OF APPEALS

4   FOR THE FEDERAL CIRCUIT

5

6   - - - - - - - - - - - - x

7   IN RE: :

8   COMPLAINT NO. 23-90015 :

9   - - - - - - - - - - - - x

10

11   Deposition of JASON M. JOHNSON, M.D.

12   Washington, D.C.

13   Friday, May 30, 2025

14   9:12 a.m.

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18

19

20   Job No.: 584243

21   Pages: 1 - 123

22   Reported By: Karen Young

1   Deposition of JASON M. JOHNSON, M.D., held at

2   the offices of:

3   TORRIDON LAW PLLC

4   801 17th Street, Northwest

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6   Washington, D.C. 20006

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10

11   Pursuant to notice, before Karen Young, Notary

12   Public in and for the District of Columbia.

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 1              A P P E A R A N C E S

 2   ON BEHALF OF THE JUDICIAL COUNCIL OF THE

 3      FEDERAL CIRCUIT:

 4        PATRICK F. PHILBIN, ESQUIRE

 5        CHASE HARRINGTON, ESQUIRE

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12   ON BEHALF OF JUDGE PAULINE NEWMAN:

13        JOHN J. VECCHIONE, ESQUIRE

14        GREGORY DOLIN, ESQUIRE

15        NEW CIVIL LIBERTIES ALLIANCE

16        4250 North Fairfax Drive, Suite 300

17        Arlington, Virginia 22203

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19

20   ALSO PRESENT:

21        Ned Shannon, New Civil Liberties Alliance

22
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1                    C O N T E N T S

2    EXAMINATION OF JASON M. JOHNSON, M.D.      PAGE

3      By Mr. Vecchione                            5

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12                    E X H I B I T S

13              (Attached to Transcript)

14   Exhibit 1    Report of Dr. Johnson        11

15   Exhibit 2    Dr. Filler's Report          14

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22
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1   P R O C E E D I N G S

2   (Deposition Exhibit Number 1 was marked

3   for identification.)

4   JASON M. JOHNSON, M.D.,

5   having been duly sworn, testified as follows:

6   EXAMINATION BY COUNSEL FOR REGINA CARNEY, M.D.

7   BY MR. VECCHIONE:

8   Q   Doctor, could you tell us your full name

9   please?

10   A   Jason Michael Johnson.

11   Q   All right, and what's your profession or

12   occupation?

13   A   Neuroradiologist.

14   Q   All right. Have you had your deposition

15   taken before?

16   A   No.

17   Q   Okay, so I'll just go through the general

18   rules. I'm going to ask you a question. Wait

19   till I'm done with my question before answering.

20   You may think you know the answer -- you may know

21   the answer, but for the record, it's better to

22   make sure that -- for clarity, that I finish and

1   then you start. I'll attempt not to interrupt you

2   as well on your answers. On occasion, your

3   attorney may object. Wait till his objection

4   fades away and then answer the question unless he

5   instructs you not to answer.

6   And if you have any questions or don't

7   understand my question, please ask me to clarify.

8   Otherwise I'll assume that you have understood the

9   question, and that's pretty much the rules. If

10 you want to take a break at any time, I may want

11 to finish up a question, but we can take a break

12 whenever you'd like if you need that, all right?

13   A Yes.

14   Q All right. Do you specialize in a

15 particular field of medicine?

16   A Neuroradiology.

17   Q Okay, and what does that consist of?

18   A Predominantly diagnostic imaging of the

19 brain, head, neck and spine. There's some

20 interventions that we do, particularly for the

21 spine, but also we biopsy and do some procedures

22 in the head and neck also.

1   Q   And by interventions, you mean therapies

2   of some sort?

3   A   We use image guidance to place needles.

4   Q   Okay.

5   A   We can deliver drugs through those needles

6   and to certain parts of the body which may have a

7   therapeutic effect.

8   Q   Okay. You understand that you've been

9   designated as an expert witness in this case on

10 behalf of the Special Committee of Judicial

11 Council in the matter of Judge Newman?

12   A   Yes.

13   Q   Okay. Is there any reason you can't

14 provide complete, accurate and truthful answers to

15 the questions to this deposition today?

16   A   No.

17   Q   All right. Are you charging for your time

18 for this deposition today?

19   A   Yes.

20   Q   At what rate?

21   A   For deposition, $700 an hour.

22   Q   Okay, and that's the same rate you charge

1 the Special Committee?

2   A Yes.

3   Q Okay. When were you first contacted about

4 working on this particular case?

5   A Late January, I received an e-mail from --

6   Q One of the attorneys.

7   A I don't remember if it was Chase or -- or

8 Pat.

9   Q All right. And then you were asked to --

10 to -- to put together your report?

11   A Yes.

12   Q All right, and I asked you before whether

13 you'd had a deposition. You said no, so I presume

14 you haven't been deposed as an expert before.

15   A Correct.

16   Q Okay, and have you ever served as an

17 expert in a legal matter before?

18   A Yes.

19   Q What was that, or what were those?

20   A All as a neuroradiologist.

21   Q Okay. How many times?

22   A About 25 cases.

1   Q   All right, and what was the nature of the

2   -- and by nature, let me clarify. Were they

3   malpractice, were they -- that's what I mean, like

4   what kind of cases were they?

5   A   Yes, the majority were failure to meet a

6   reasonable standard of professional care.

7   Q   Okay, and you didn't go to deposition in

8   any of them.

9   A   No.

10   Q   Did you provide a report in those cases?

11   A   About a third.

12   Q   Okay, and you were a consulting expert in

13 the other ones?

14   A   The -- some of these are still ongoing.

15   Q   Okay.

16   A   There may be a deposition.

17   Q   I got it.

18   A   I do have a deposition that's coming up

19 that I don't think we've settled on a final date

20 yet. Others were settled, and others, they heard

21 my initial opinion and -- and my involvement --

22 they didn't need me anymore.

1   Q Got it, and were any of those cases

2 involved in assessing cognitive function?

3   A There -- in some of the cases related to

4 traumatic brain injury, there was a question of

5 cognitive function that was raised, yes.

6   Q Okay. Did you opine on that or were you

7 separate from that?

8   A The diagnosis and degree of cognitive

9 function was -- was provided by a specialist in

10 that area, usually a neurologist or

11 neuropsychiatrist, and so not being my area of

12 expertise, it was tangential to my case, but I was

13 brought in more specifically from the neuroimaging

14 point of view, and we do not -- we don't use our

15 tools to diagnose cognitive impairment or the lack

16 of cognitive impairment.

17   Q Okay, and have you ever been excluded as

18 an expert by any court?

19   A No.

20   Q You said about 25 times. Do you recall

21 how long ago you were first asked to be an expert

22 in a case? Any case, not this case.

1   A   Sixteen months, 18 months.

2   Q   Okay, and then since then, you've done it

3 a number of times, I take it.

4   A   Yes.

5   Q   And since you haven't been deposed, some

6 questions are going to be repetitive just because

7 I've got to ask them, but have you ever been the

8 subject of a Daubert or other hearing as to the

9 qualifications and opinions?

10   A   No.

11   Q   Have you ever been a defendant in a

12 medical malpractice case?

13   A   No.

14   Q   When -- have you primarily been retained

15 by the defense or the plaintiff's side in these

16 cases?

17   A   Roughly even.

18   Q   All right, well, I've had marked already

19 as Exhibit 1 your report in this matter. Do you

20 want to mark them? I have it marked already, and

21 I have copies, gentlemen.

22   MR. PHILBIN: Thanks.

1 BY MR. VECCHIONE:

2   Q   And I have a copy for you if you'd like

3 it. I have my own copy here. All right, do you

4 recognize the document in front of you?

5   A   Yes.

6   Q   And what -- could you state for the record

7 what it is?

8   A   This is a printed copy of the report that

9 I filed earlier this year, and the FDA approval

10 document for the software used by Dr. Filler, or

11 rather, George Washington University Hospital.

12   Q   Uh-huh.

13   A   And then I believe a -- yes, and a copy of

14 my --

15   Q   C --

16   A   -- curriculum vitae.

17   Q   Okay. Is there anything you want to add

18 to your C.V. that's not there that you think is

19 important or relevant to this hearing?

20   A   I don't think there's anything. There's

21 been a small number of publications since this

22 time, but I don't think they provide relevance.

1   Q Okay, and prior to this report, how many

2   times had you prepared an expert written report?

3   A   Seven or eight.

4   Q Okay.

5   A Approximately.

6   Q All right, and what did you do to prepare

7   for today's deposition?

8   A   I reviewed the documents submitted by

9   Dr. Filler. I looked at some of the scientific

10 literature that was referenced in his reports and

11 related to the topic of discussion. I reviewed my

12 report. I looked at some images -- related

13 images.

14   Q   From the -- from the scans of -- of Judge

15 Newman?

16   A   From the scans of Judge Newman, and I was

17 looking at some related images at the hospital,

18 but after discussion with Mr. Philbin, I stopped

19 that.

20   Q Okay. Have you -- you said reports. Have

21 you -- have you seen Dr. Filler's what we call the

22 rebuttal report?

1   A   Yes, sir.

2   Q   Okay. Why don't we mark those now. We'll

3 mark the first Filler report Exhibit 2, and the

4 rebuttal report Exhibit 3, and I'll give them to

5 you one at a time just so you can have them in

6 front of you in case you need to refer to them.

7 These have not been put together for reasons

8 unknown. Does anybody have any clips? Here, that

9 one isn't clipped. The rest are clipped. Why

10 don't you mark this one as Exhibit 2.

11   (Deposition Exhibit Number 2 was marked

12 for identification.)

13   MR. VECCHIONE: Apparently just mine is

14 not clipped.

15   MR. PHILBIN: Thank you.

16   MR. VECCHIONE: Let me just do something

17 here, and we will have as Exhibit 3 what I'll call

18 the Filler response.

19   (Deposition Exhibit Number 3 was marked

20 for identification.)

21 BY MR. VECCHIONE:

22   Q   Do you recognize those documents, Doctor?

1   A   Yes.

2   Q   All right, and you've reviewed those as

3   part of your preparation to -- to attend this

4   deposition?

5   A   Yes.

6   Q   All right. To the extent you need to

7   refer to them at any time, feel free to do so in

8   response to my questions.

9   A   Thank you.

10   Q   All right, you said you reviewed

11 documents. Are there any documents you reviewed

12 that aren't in your report besides the Filler

13 response?

14   A   The -- well, the FDA, so no, I don't

15 believe so. There were the scientific articles

16 that we discussed.

17   Q   Right.

18   A   The majority of which are referenced, and

19 some of them are included in their entirety --

20   Q   Okay.

21   A   -- Filler's report.

22   Q   All right, and so you reviewed the Filler

1   report, the Filler response, and looked at some of

2   the scientific -- the learned treatises that were

3   referenced there?

4   A   Yes, sir.

5   Q   All right. Anything else?

6   A   Some scientific literature not referenced

7   by Dr. Filler but within the same vein of --

8   Q   Okay.

9   A   -- of thoughts.

10   Q   Do you recall what any of those were?

11   A   Not off the top of my head, but I have --

12 but I can find them and share them.

13   MR. VECCHIONE: Okay. Can you provide

14 whatever he reviewed?

15   MR. PHILBIN: Sure.

16 BY MR. VECCHIONE:

17   Q   All right, thank you. Did you take any

18 notes?

19   A   Yes.

20   Q   All right, and where are those notes?

21   A   On my computer.

22   Q   Okay, and where is that?

1   A   In the office.

2   Q   Okay. What were the nature of the notes?

3   A   Some comments, or some thoughts on the

4   scientific articles that were documented here. So

5   there's a number of scientific articles, and in

6   lieu of highlighting, I made some notes on some

7   key phrases and my thoughts on those articles.

8   Q   All right. Do you recall any of those

9   thoughts or what they were on?

10   A   Particularly on the -- I believe it's

11 three or four articles relating the use of C.T.

12 perfusion imaging toward neurocognitive

13 evaluation.

14   Q   Okay, and you refer to those -- those

15 articles in your report, don't you? Well, turn to

16 your report for a moment.

17   A   Yeah, please.

18   Q   Page 4?

19   A   Okay.

20   Q   Dr. Filler points to a limited number of

21 articles indicating preliminary research,

22 suggesting relationship between cerebral perfusion

1   and certain types of dementia at the population

2   level, but perfusion C.T. has not been

3   demonstrated to reliably identify individuals as

4   either having or not having cognitive dysfunction.

5   Are those the articles you're referring to?

6   A   Yes, sir.

7   Q   All right, and that remains your opinion?

8   A   Yes.

9   Q   The other thing in your report, you say

10 that you didn't see the raw data, if you look at

11 the first page of your report, you say you didn't

12 see it. Have you seen the raw data since that

13 time?

14   A   No, sir.

15   Q   What is the raw data?

16   A   The -- when the patient's in the scanner,

17 the C.T. scanner for the purposes of acquiring

18 C.T. perfusion, and I'm not -- I don't exactly --

19 know exactly how George Washington University

20 Hospital acquires their C.T. perfusion data for

21 their type of scanner, but the typical methodology

22 is that either the scanner stays still and studies

1 the same segment of brain repetitively, so usually

2 on the order of about one set of images per

3 second, or the scanner jogs. It moves quickly to

4 broaden the volume of tissue that may be studied.

5 Either way, it's taking a rapid set of pictures of

6 the brain from right after the contrast has

7 started to be injected in the peripheral vein for

8 a certain period of time, usually for clinical

9 purposes, and clinical purposes meaning for

10 stroke, which is the way that most of these

11 protocols are set up and the way I believe it was

12 arranged in this case, they scanned for somewhere

13 of the order of let's say approximately 60

14 seconds.

15   Q Okay.

16   A And so you're expecting the number of

17 slices that were acquired times the number of time

18 acquisitions images, which we would either call

19 the C.T. perfusion source imaging or would just

20 generically refer to as the raw data. That data

21 is then pushed to a server which houses the

22 software, the RAPID software in this case, and

1   then that generates -- automatically generates

2   these processed images, which were made available

3   to me.

4   Q   Okay, and does the lack of raw data have

5   any effect on your opinion today?

6   A   Not to a significant degree. It's novel

7   -- it's the first time I've been asked to engage

8   in a case as an expert on neuroradiology and not

9   been provided with the raw data.

10   Q   Okay.

11   A   So --

12   Q   How many times have you been engaged in

13   such a project?

14   A   To --

15   Q   To -- to look at the neurological -- to

16   make a neurological evaluation and not seen the

17   raw data, how many times have you done that?

18   A   I wouldn't say that I provide a

19   neurological evaluation as a neuroradiologist, but

20   as far as I'm always engaged on an assessment of

21   the central nervous system, so usually the brain

22   and spine. So I'm -- there's always -- there's

1 always neuro -- oh, excuse me. There was one or

2 two cases where it was neck imaging, but there --

3 there's always imaging because I'm a diagnostic --

4   Q Okay.

5   A -- neuroimaging expert.

6   Q All right. All right, so subsequent to

7 your written report, you reviewed the Filler

8 response. Is there anything else you reviewed

9 that you haven't told me about yet since your --

10 writing your report?

11   A No, I think we've talked about everything

12 that I've reviewed.

13   Q Okay, all right. Do you -- you have a

14 number of publications attached to your -- your --

15 that are in your C.V. and are attached to your

16 report. What -- how many of those articles do you

17 consider you're the author or coauthor of where

18 the subject was a cognitively impaired individual?

19   A Oh, excuse me.

20   Q And you can refer to it and think about

21 it. I'm just --

22   A Cognitively impaired.

1   Q   Yeah.

2   A   Cognitive impairment is a feature of the

3 outcomes in a number of publications involving --

4 let's say six, eight. It's one of the features

5 that is studied in one of the -- so when we treat

6 patients for cancer, we've got a variety of

7 different tools to use to treat that cancer, and

8 for example, in the setting of head and neck

9 cancer, we're pretty successful in putting

10 patients into remission and allowing them to live

11 a long time, so -- but there often are side

12 effects, and one of those could be cognitive

13 impairment.

14   So the goal is is to give them enough

15 treatment to get them into remission, but not so

16 much that you impact their quality of life, and a

17 major quality of life determinant for patients

18 with brain cancer, head and neck cancer would be

19 -- would be cognitive impairment, and so it -- it

20 is a feature in a number of those. It's also

21 tangentially talked about in some of these case

22 reports involving -- well, anyway, but as far as

1   the primary, I think just one or two that I was

2   involved in.

3   Q   All right. Now, according to your C.V.,

4   you're a board certified diagnostic radiologist

5   and have a certificate of neuroradiology, and you

6   had a fellowship in pediatric radiology as well?

7   A   Yes, sir, a certificate of added

8   qualification from the American Board of Radiology

9   in diagnostic neuroradiology, and that was taken

10   -- those boards were taken after my two-year

11   fellowship in diagnostic radiology at

12   Massachusetts General Hospital, Harvard Medical

13   School, and I chose to do an additional year of

14   training focusing on pediatric neuroradiology at

15   the University of California San Francisco.

16   Q   Okay, but you're not a neurosurgeon,

17   correct?

18   A   No.

19   Q   All right, and you're not a neurologist,

20   correct?

21   A   No.

22   Q   How often do you work with neurologists?

1   And let me -- let me narrow that down. How often

2   does a neurologist ask you to make a diagnosis

3   from a radiograph like this, a C.T., let's say.

4   A   Every day that I'm on clinical service.

5   We -- so the studies are ordered.

6   Q   Uh-huh.

7   A   And I may not talk directly to the

8   neurologist, but it ends up in my work queue, and

9   we treat it as if they've provided me -- you know,

10 as if they've called me and say hey, can -- can

11 you give me a consultation. Although we don't

12 actually have that verbal communication, it's

13 treated as such, and so every day that I'm on

14 clinical service, some of the volume of cases that

15 I read will be C.T. scans ordered by a

16 neurologist.

17   Q   Okay. And you evaluate the perfusion

18 computer tomography produced by Dr. Filler in his

19 report?

20   A   I reviewed the processed images --

21   Q   Yes.

22   A   -- that was provided from the data

1   acquired at George Washington University Hospital.

2   Q   All right. From now on, I'm just going to

3   call that a C.T. and not say perfusion computed

4   tomography. Is that okay?

5   A   Understood, yes.

6   Q   All right, good. Now, you list three

7   things that you reviewed in coming to your

8   conclusions in the report, my understanding, and

9   that was the report of Dr. Filler, right? And

10 this is all on page 1 --

11   A   Oh, ah.

12   Q   -- of your report. So the report of

13 Dr. Filler dated 9/17/2024, right? Correct? You

14 got to answer verbally.

15   A   Yes, sir.

16   Q   I didn't say that in my -- in my warm-up,

17 so not your fault. Perfusion C.T. interpretation

18 report from Dr. M. Reza Taheri dated 8/22/2024,

19 correct?

20   A   Yes.

21   Q   And that's the George Washington -- that's

22 the actual scans themselves?

1   A   It's the formal interpretation provided

2   from the -- from the neuroradiologist that must

3   have been on service the day -- or at least he

4   signed off the report written by a trainee.

5   Q   Okay, explain that to me. So he -- so

6   either he did it himself or he had a trainee

7   review it? Is that your understanding?

8   A   The -- there's a line in the report --

9   Q   Uh-huh.

10   A   -- that the report was initiated by a

11 different doctor.

12   Q   Got it.

13   A   And that's usually a resident. I do

14 believe they have a neuroradiology fellowship that

15 I think has one fellow, so -- and -- but I don't

16 know who those individuals are, so statistically

17 it's more likely the resident, but -- so the

18 report would have -- the original report would

19 have been written, and then he would have edited

20 and -- and final signed it.

21   Q   Okay, and then finally, the processed

22 perfusion C.T. JPEG images.

1   A Yes, I reviewed those.

2   Q All right. So since your report, you

3 reviewed Dr. Filler's report, rebuttal report,

4 Exhibit 3 here. Did anything in Exhibit 3,

5 Dr. Filler's rebuttal report, change any of your

6 views concerning the opinions in your report?

7   A No.

8   Q All right. All right, so go through your

9 report in a minute. All right, the -- still on

10 the first page of your report, we discussed the

11 raw data, and then you say, "The submitted data

12 consists of 134 JPEG images processed by i-RAPID

13 AI CTP iSchemaView software," right? And that's

14 the software that we were discussing earlier?

15   A Yes.

16   Q And then you say, "The Food and Drug

17 Administration 510(k) clearance indication for

18 this software." What is 510(k) clearance?

19   A There's a variety of different clearances

20 that the Food and Drug Administration provides.

21 So for example, if you want to sell a cosmetic,

22 it's a different -- it's a different code. If you

1   want a drug, it's a different code, and if you

2   have a medical device, you go through a -- what's

3   called a 510(k) clearance through the FDA, so this

4   would be for a medical device.

5   Q   Okay, and then you say, "Can be used by

6   physicians to aid" -- this is the next page. "Can

7   be used by physicians to aid in the selection of

8   acute stroke patients with known occlusion of the

9   intracranial internal carotid artery or proximal

10   middle cerebral artery," right? And then you cite

11   the U.S. Food and Drug Administration. What's

12   that mean?

13   A   When -- to sell a medical device in the

14   United States, you need to have a 510 clearance,

15   and the 510 clearance is given for a specific

16   indication. So for example, if I want to sell you

17   a medical device that measures blood pressure, I

18   would need to demonstrate to the Food and Drug

19   Administration that it's a reasonably reliable

20   device that -- that measures -- actually measures

21   blood pressure and compare it to a known device on

22   the market, for example. You know, that's a

1   relatively straightforward example of where, you

2   know, I have a Food and Drug approved

3   sphygmomanometer or blood pressure device, and I

4   take your blood pressure with it and then I use my

5   new device and I also take your blood pressure,

6   and I say look, it's -- it's equivalent or -- or

7   close enough, and then the FDA says sure enough,

8   it looks like you have a device that truly

9   measures blood pressure. It is not significantly

10   different from other things being marketed.

11   So that's the -- the general theme, is --

12   so there's a -- a thing that like a medical device

13   is supposed to do, and they need to demonstrate

14   that it actually does that thing well and

15   reliably.

16   Q   And your next -- your next statement is

17   that the provided images, meaning the 134 JPEGs we

18   discussed earlier, right, reveal -- well, can you

19   read it?

20   A   Yes, sir. "The provided images reveal a

21   satisfactory quality examination without findings

22   of significant motion or artifact. The data

1   suggests no evidence of an acute arterial

2   infarction or evidence of abnormal regional

3   cerebral blood flow or increased blood transit

4   time.

5   Q   What does that mean in layperson's

6   understanding?

7   A   In -- another way of putting it is I don't

8   think she's having an acute infarction about the

9   time that she had this imaging study.

10   Q   Okay. Anything else?

11   A   The methodology to acquire the data and

12   the way that it was processed is not intended to

13   make other assessments.

14   Q   Okay.

15   A   The -- it's a largely qualitative study to

16   look for regional perfusion abnormalities to

17   select patients for usually acute intervention,

18   given the concern for an acute arterial

19   infarction, more specifically, anterior

20   circulation. As they specify, they're -- it's

21   approved for looking for occlusions of the

22   internal carotid artery or proximal distal artery,

```
1    which are the larger vessels feeding the anterior

2    part of the brain.

3         Q  Uh-huh.

4         A  C.T. perfusion has a pitfall in that it's

5    not very good looking for acute infarctions or

6    vascular deficits in the posterior circulation,

7    which is why it's not in the FDA indication.  It's

8    a known -- it's a known struggle with C.T.

9    perfusion methodology.

10        Q  All right, and let's go through it.  The

11   next paragraph is that on page 1 of the report --

12   hang on for a second.  Now, you would agree with

13   me that nothing in the FDA approval process

14   prohibits a physician for using the device for

15   other purposes, correct?

16        A  That's -- yes, that's reasonable.

17        Q  All right, and in fact, the FDA is

18   prohibited by federal law from regulating the

19   practice of medicine, correct?

20        A  I don't know.

21        Q  All right, so you don't know whether 21

22   USC section 396 prohibits the FDA from regulating
```

1   the practice of medicine?

2   A   No, I wasn't aware of that code.

3   Q   Okay. In your practice, have you ever

4   used FDA-approved devices for other than the

5   510(k) purpose?

6   A   Yes. One common example was when I was a

7   resident -- this has subsequently changed -- there

8   was no FDA-approved gadolinium. Gadolinium is a

9   type of contrast agent used for MRI scanning.

10   There was no FDA-approved gadolinium contrast

11   agent for use in children, but yet, many institute

12   -- almost all institutions around the world

13   decided that the risk-benefit profile was

14   reasonable and did it anyway.

15   Q   Right, and let's talk about risk-benefit.

16   That is something that all doctors do before

17   prescribing or -- or -- or initiating a therapy,

18   that the -- what they are prescribing or proposing

19   to do, the benefits to the patient outweigh the

20   risks.

21   A   Correct.

22   Q   And doesn't mean there are no risks. It

1 just means that in the assessment, you're better

2 off doing it than not doing it.

3   A Yes.

4   Q And in fact, the FDA does not list every

5 clinical use and diagnosis C.T. scans can be used

6 to investigate anywhere, does it?

7   A No.

8   Q Okay, and to your knowledge, the FDA does

9 not regulate the practice of neuropsychology?

10   A I do not believe so.

11   Q Doesn't regulate the practice of

12 neuroradiology, does it?

13   A No. It regulates or has control over the

14 medical device manufacturers of what the -- what

15 the indications are they're able to sell me

16 devices to do. So if the company that makes the

17 software, for example, told me -- sent me

18 marketing material that said hey, Jason, I can

19 diagnose diabetes with this software, that'd be a

20 violation of the Food and Drug Administration Act.

21 So if I choose to use it to diagnose things or to

22 exclude the diagnosis of things, you're right,

1   that's not between the FDA and I.

2   Q   Okay, and the last question, same

3   question, the FDA doesn't regulate the practice of

4   neurology.

5   A   Neurology?

6   Q   Yeah.

7   A   I'm not a neurologist, but I do not

8   believe so.

9   Q   Now, let's go back to your report, and I

10   think -- all right, let's just go back for a

11   second to the provided images about what you --

12   what you looked at. Am I correct that that

13   paragraph starting, "The provided images" means

14   that you didn't see in any of these images signs

15   of injury to Judge Newman's brain?

16   A   The short answer is -- is no as phrased.

17   However, the methodology that -- that led to the

18   processed images is really only intended for a

19   relatively singular focus, which is the detection

20   of acute arterial infarction --

21   Q   Right.

22   A   -- or a significant regional perfusion

1   deficit. It does appear from the processed data

2   that there likely is an issue with cardiac output

3   function, but that's not an issue with the brain.

4   Q Okay, and that isn't part of your opinion

5   in this matter.

6   A My -- no.

7   Q Okay.

8   A I didn't think it was relevant. I was

9   asked to focus on -- or at least I chose to focus

10 on a relatively simple question, which -- rather,

11 you say two questions, which is has C.T. perfusion

12 been demonstrated to be able to show cognitive

13 impairment or cognitive health, and furthermore,

14 in this case, do the C.T. perfusion images lead to

15 the conclusion as stated by Dr. Filler.

16   Q Okay.

17   A So --

18   Q I got it. And that gets us to the

19 criticism of Dr. Filler's report relating to the

20 brain scan. The first thing you state in your

21 report about this is that Dr. Filler has

22 mislabeled where the hippocampi is?

1   A   Yes.

2   Q   What is the hippocampi?

3   A   Hippocampi are paired curved structures in

4   the brain that run more or less along the lateral

5   margin, the lateral ventricle, and they're

6   involved in memory.

7   Q   Now, if we go to your report, you have a

8   picture on page 3. Are we looking at the same

9   thing?

10   A   Yes, sir.

11   Q   All right, and you've got this from

12 Dr. Filler's report?

13   A   Yes.

14   Q   And you say the areas shown are the -- is

15 it putamen?

16   A   Putamen, yes.

17   Q   Putamen, and Sylvian fissures. What are

18 those?

19   A   The putamen is a -- a structure -- a

20 paired structure -- there's one on each side of

21 the brain -- of the basal ganglia, and they are

22 involved in a variety of functions, including

1   movement control.

2   Q   Okay. Now -- and you say that -- well, I

3   guess what you say here in this last paragraph on

4   page 2 is that, "The annotated image provided in

5   the report by Dr. Filler and included as figure 1

6   below is an image of a slice of brain at a

7   position higher, closer to the top of the head,

8   than the level of the hippocampi," right? That's

9   your --

10   A   Yes.

11   Q   -- opinion? "The hippocampi reside below

12   the level of the putamen" --

13   A   Yes.

14   Q   -- "and Sylvan fissure, which as my

15   annotations show, figure 2" -- that's the next

16   page.

17   A   Yes.

18   Q   All right, "are visible on this image.

19   The annotated red area in the images are related

20   to significant concentration of iodine in the

21   large cerebral arteries and veins." Is that what

22   the arrows are pointing to in 1? Figure 1.

1   A   The most likely conclusion of what we are

2   seeing there by that red color is the regional

3   sizable arteries and veins. This appearance is

4   seen in all C.T. perfusion images of similar

5   color, and all patients, unless they have lack of

6   blood flow, for example, in the middle cerebral

7   artery ipsilateral to the -- to this area have

8   this appearance.

9   Q   And you say they do not reflect blood flow

10 to the hippocampi, right? That's your opinion?

11   A   The short answer is no, this is not

12 reflective of blood flow to the hippocampus, and

13 now, could you take it a step further and you say

14 is there any blood flow in the hippocampus that --

15 or draining -- or arteries going into or veins

16 draining out of that could be a component of the

17 flow that we're seeing at this level, and the

18 answer is yeah, there's probably some. The --

19 there's four -- in a normal human, there's four

20 arteries that feed the brain, so all of the iodine

21 that comes in and out of the brain has to come in

22 through one of these four arteries, and then the

1   interesting thing is on the venous outflow side,

2   there's really -- the majority of all the drainage

3   comes out of two large veins.

4   So everything that goes in then processes

5   through capillary beds, so to speak, processes

6   through the brain parenchyma itself and then is

7   drained out the other side through the venous

8   system, and so there -- there's a combination of

9   what we're seeing here. We're seeing iodine still

10   coming in through the arteries, and there's a

11   number of large arteries that reside in the

12   Sylvian fissure branches of the middle cerebral

13   artery, and some lenticulostriate --

14   Q You can go on, unless you're finished, but

15   I want you to finish.

16   A I'm just trying to remember where -- well,

17   anyway, so you've got a number of arteries coming

18   through that area bringing the iodine in, and that

19   iodine's going to a variety of places, the

20   majority of which is actually going to tissue

21   superior to where those arteries are, so feeding

22   the rest of the middle cerebral artery territory,

1   which is the largest vascular territory in the

2   brain.

3   Q   All right.

4   A   You also have vein straining through that

5   area, not the biggest veins, not the, shall I say,

6   most important draining veins, which are deeper

7   structures centrally and then also superficially

8   along the brain, but there are some veins in that

9   area, and there's always in that region, although

10   I don't think it's what is being pointed out on

11   this slice. In a -- in a -- in a -- a nearby

12   slice, there's also significant blood flow in the

13   choroid plexus, which is in the lateral ventricle.

14   The interesting thing about the choroid

15   plexus, which is you could say near the

16   hippocampus, is the choroid plexus interestingly

17   does not have a blood-brain barrier. It's one of

18   the few organs in the brain that doesn't have this

19   barrier, and it's a highly perfused structure.

20   Q   Meaning?

21   A   It -- it receives a -- per gram of tissue,

22   it receives a lot of blood flow. So the

1   interesting thing is is that when I teach my

2   fellows how to adjust their view settings to look

3   at perfusion imaging in the brain, I tell them use

4   the choroid plexus as an internal control because

5   it's always very bright. This is a very common

6   finding in individuals of -- regardless of

7   cerebral vascular status and regardless of

8   cognitive function.

9   Q All right, and the next opinion you have

10 in this paragraph is, "In fact, elevated relative

11 cerebral blood flow to this degree would be

12 pathologic if observed in the hippocampus." What

13 do you mean by that?

14   A There's -- a good analogy is that we --

15 your -- your skin one day is normal and has a

16 certain degree of blood flow, and let's say you

17 irritate it. Let's say you accidentally burn

18 yourself or maybe get a skin infection, maybe you

19 get a sunburn, and part of the reparative

20 mechanism is that your body through a variety of

21 mechanisms delivers more blood flow to that

22 region, which could be quantified and measured in

1   some way.

2   And so just an analogy, so there's a

3   normal degree of blood flow that we expect in

4   certain organs, and hyper or any significant

5   elevation of blood flow to certain organs would be

6   abnormal.

7   So for example, we -- one of the things we

8   use is we use MR perfusion imaging. We could use

9   C.T. perfusion imaging, but we tend to use MR

10   perfusion imaging for some reasons which we could

11   discuss if you like, in patients that have had

12   treatment for brain tumors, and one of the things

13   we need to be aware of is that when they do, for

14   example, an anterior temporal lobectomy, they may,

15   in the purpose of getting a good tumor resection,

16   a helpful tumor resection, they may irritate the

17   hippocampus or amygdala, and/or the act of doing

18   surgery alone or the act of the tumor alone may

19   cause seizures.

20   Epileptiform activity can be really

21   irritating to the hippocampus, and that can lead

22   to significant increases in blood flow and can

1 lead to a pitfall that can look like recurrent

2 tumor based upon the increased blood flow.

3   So there's a normal -- there's a range of

4 expected blood flow in the hippocampus, and

5 elevation above that is only seen in pathologic

6 states.

7   Q All right.

8   A The most common would be -- that we would

9 see clinically would be, again, epileptiform

10 activity.

11   Q Okay, and so that -- that is the meaning

12 of that sentence, what you just related, that's

13 the pathological problem that you identified.

14   A Yes, as opposed to if we wanted to assess

15 somebody's physical health by measuring their

16 bicep, and there are some pathological states that

17 can lead to a big bicep. You could have problems

18 with your lymphatic drainage, for example, you

19 know, but for the most part, it's probably because

20 you're going to the gym. That analogy doesn't

21 really apply here in that there's -- it's not a

22 marker of health to have hyperperfusion of a gray

1   matter structure.

2   Q   All right. I'd like you to turn to

3   Exhibit 2. Exhibit 2 is Dr. Filler's report.

4   A   Oh, sorry.

5   Q   Exhibit 2 is Dr. Filler's --

6   A   Not --

7   Q   Not 1, yeah, yeah, exactly.

8   A   Okay.

9   Q   Exhibit -- Exhibit 2, and I just -- go to

10 page 3 on the executive summary.

11   A   Okay.

12   Q   I'd like you to go to the bottom of the

13 page, and I'd like you to read from, "I am an

14 editor of the principal textbook" out loud please.

15   A   "I am an editor of the principal textbook

16 in neurosurgery, Youmans & Winn, Neurological

17 Surgery, eighth edition, Elsevier, and an author

18 of several chapters in including the chapter,

19 Exhibit 3, on diffusion tensor imaging of the

20 brain, a technology I invented and patented."

21   Q   You can stop there.

22   A   Okay.

1   Q Does it seem plausible to you that -- do

2 you have any reason to disagree that Dr. Filler

3 has that qualification and writes in that

4 textbook?

5   A No.

6   Q All right. Does it seem plausible to you

7 that a man with those -- that background doesn't

8 know where the hippocampi is?

9   A No.

10   Q All right, and now I'd like you to take up

11 Exhibit 3, which is the rebuttal report.

12   A Okay.

13   Q And I gave a copy of this already, right?

14 Everyone has it? Okay.

15   A Would now be an okay time for a break?

16   MR. VECCHIONE: Oh, yeah, no question.

17 It's about an hour.

18   (Recessed at 10:00 a.m.)

19   (Reconvened at 10:11 a.m.)

20 BY MR. VECCHIONE:

21   Q Doctor, during the break, did you talk to

22 anyone about your testimony?

1   A Pat and I had a -- had a chat.

2   Q Concerning?

3   A Well, I recalled that when I was 18, I was

4 talked to about a lawsuit in Arizona related to a

5 roommate at football camp who got hit in the eye

6 with an acorn and later sued the football camp,

7 and they did -- it was a phone conversation, and

8 they did make a transcript of it, and so when we

9 were talking about expert witness work, deposition

10 et cetera, it didn't seem relevant to me, but I

11 did want to clarify. I don't remember exactly the

12 way you asked the question, but I did want to be

13 --

14   Q Have you ever been deposed, I asked, so --

15   A Oh, okay, then I believe that was a

16 deposition, so --

17   Q How old are you now?

18   A Forty-five.

19   Q All right. You're correct, Doctor, it's

20 not relevant. Thank you.

21   A You're welcome. Thank you.

22   Q Let's see. Well, I'll ask this. What was

1   the outcome of your testimony? Did you have to go

2   to court or do anything after that?

3   A   Yeah, I was -- the interesting thing is I

4   remember going to court in Phoenix, but I don't

5   remember whether I testified. I think I did

6   testify, but it was very brief. I think they

7   largely had me corroborate that they had a written

8   --

9   Q   In any event, you were a fact witness.

10   A   I believe so. Not -- certainly not there

11   for my --

12   Q   Right.

13   A   -- expertise for anything as an 18-

14   year-old.

15   Q   All right.

16   MR. DOLIN: Expertise as a roommate.

17   BY MR. VECCHIONE:

18   Q   Thank you -- thank you for that

19   clarification. I appreciate it. Let's -- let's

20   go to Exhibit -- yeah, let's go to Exhibit 3,

21   which is Dr. Filler's rebuttal report. Now, in

22   one part of this, he responds to your report, and

1 that starts on page 7 of 25. Are we on the same

2 page?

3   A   Seven?

4   Q   Yeah, 7 of 25.

5   A   Oh, okay.

6   Q   All right. So now, you've reviewed this

7 report.

8   A   Yes, sir.

9   Q   I'm going to ask you whether you agree or

10 disagree with certain statements in it. Paragraph

11 11, Dr. Filler notes, "There's also no FDA

12 approval of the use of neuropsychology or

13 neuroradiology or neurology to assess dementia."

14 Do you agree with that statement?

15   A   That seems reasonable, but I believe we

16 previously discussed that the FDA doesn't regulate

17 those types of things.

18   Q   Okay, and -- and I think I've answered

19 some of these questions before, so -- but your

20 answer doesn't change looking at this. The FDA

21 approval -- well, I'll just -- I'll boil it down.

22 The FDA doesn't approve every clinical use for

1   C.T. scans, correct?

2   A   That is correct.

3   Q   Okay, and I'll ask you -- and I think

4   paragraph 12 sort of comports with your gadolinium

5   story, or pediatric gadolinium. If you look at

6   the last sentence in paragraph 12, it says -- he's

7   referring to CTs. Quote, "It was used to diagnose

8   and treat tumors and hemorrhages immediately and

9   without waiting for the FDA or the U.K. Medicines

10   and Health Care Products Regulatory Agency to

11   render approval for device sales." Is that the

12   same type of use of a device as you talked about

13   using gadolinium for pediatric reasons earlier?

14   A   No, I would draw a distinction.

15   Q   And what is that distinction?

16   A   Well, so C.T. scanners like MRI scanners

17   like our iPhones basically take pictures, and it's

18   reasonable to take an imaging device, whether it's

19   an ultrasound machine or a camera or an MRI or

20   C.T. scanner, and just say that I expect if

21   there's a presence of a thing such as hemorrhage,

22   that I should reliably be able to see that, and in

1 a patient that doesn't have hemorrhage, I should

2 reliably be able to say there isn't hemorrhage,

3 and those are the types of examples at play here.

4   So the idea -- by the way, C.T. scanners

5 are actually not good at finding or treating

6 tumors, so I don't use it for that, but from the

7 same token, we'll go to an MRI scanner. It's very

8 reasonable that an MRI scan with contrast should

9 be able to identify, it's highly sensitive in the

10 detection of intracranial neoplasms, and

11 furthermore, it's also reasonably specific in that

12 in the absence of a brain tumor, the examination

13 should be negative. Going -- so I'll just stop

14 there. So that's reasonable, those specific

15 entities that are put forth here.

16   To take it further and to say because

17 they're reasonable to use a scanner for the

18 detection of a -- a nail shot in somebody's head,

19 which is something we'd use it for if you get an

20 unfortunate -- excuse me, not you. If an

21 individual has an unfortunate accident and we

22 needed to go looking for a foreign body, C.T.

1 scanners are a really good tool for that, and I

2 completely agree that I wouldn't need to wait for

3 the Food and Drug Administration to give me a

4 specific approval to look for a specific type of

5 foreign body, whether it be wood or metal.

6   Q All right, you've brought up MRIs, and I

7 think you've brought them up before. Do you have

8 any understanding of whether Judge Newman can be

9 put through an MRI or not?

10   A I don't have enough understanding about

11 the type of pacemaker she has to give judgment on

12 that. We had a very active pacemaker MRI program

13 at MD Anderson, and I was the chief of neuro-MRI,

14 so therefore, was in charge of that program, and

15 we also had a pacemaker program at Yale. We had a

16 pacemaker program at Mass General and UCSF, and

17 Penn has a very active program, for example, and

18 so does Hopkins, and so it's possible that she

19 could have an MRI scan.

20   Q All right.

21   A The presence of a pacemaker --

22 defibrillators are usually a problem. Pacemaker,

1   maybe, maybe not.

2   Q   Okay, but you've already said that you

3   haven't examined Judge Newman.

4   A   No, sir.

5   Q   And you have no doctor-patient

6   relationship with her.

7   A   No, sir, and if I had, I'm not a

8   specialist in the --

9   Q   Okay.

10   A   -- assessment of cognitive function.

11   Q   So if her doctors have told her that the

12   -- the risks of an MRI outweigh the benefits of an

13   MRI, you have no reason to disagree with that

14   diagnosis.

15   A   I don't have enough information to state

16   whether or not that's reasonable. What -- when I

17   was a fellow at Mass General, we often -- the

18   field -- the comfort level -- the comfort level at

19   the time was different, so pacemakers that we

20   would have said we can't scan -- or excuse me,

21   individuals with certain types of pacemakers that

22   we didn't feel had a reasonable risk-benefit

1   profile, when I was a fellow, we might have gladly

2   scanned or we might have had a much better

3   attitude of scanning when we were at MD Anderson.

4   And so some pacemaker MRI programs are --

5   have different comfort levels. It may be very

6   reasonable that given that this is a -- a very

7   well respected but not as big of a hospital, that

8   it doesn't have a robust MRI pacemaker program,

9   which is a collaboration usually between

10   electrophysiology, which is a subspecialty within

11   cardiology, and the radiologist. So I don't know

12   enough about the case, and additionally, I don't

13   make that final determination. We work closely

14   with cardiology, or specifically electrophysiology

15   to make these determinations, so that'd be a great

16   question for one of them.

17   Q Thank you. You know what? Why don't you

18   take Exhibit 2, which is the first Filler report,

19   for a minute, and I'd like you to turn to page 11.

20   It'll be there. It's scans.

21   A Yeah.

22   Q Did you review this scan as part of your

1   review of records for your report?

2   A I -- I saw this JPEG, but I think -- I

3   mean yes, I've seen this report, yes.

4   Q All right, and do you see where it says --

5   the string of scans that say perf BL, and then

6   it's down that column?

7   A Yes.

8   Q All right. What does perf BL mean, to

9   your knowledge?

10   A I'm not sure what the BL is. What -- I

11   don't think you can make out on this image, but I

12   believe if we had the JPEG up on the computer, I

13   think this is annotating the arterial input

14   function and the venous output function, I think,

15   and we just can't really make it out because of

16   the way it's blown up, but this map is intended

17   for a rapid review of the data for, number one,

18   quality assurance, and then number two, again, the

19   software in its intended usage is for the

20   identification of acute anterior circulation

21   infarction or a lack of blood flow to a territory

22   of the anterior circulation. And so when that is

1   present, you can wrap -- you can look quickly at

2   these maps and you can say hey, there's a wedge-

3   shaped area of color abnormality that shouldn't be

4   there, so this is --

5   Q   Do you see that here?

6   A   No.

7   Q   So I'll ask a second question, same --

8   same column. Does this at least show the gross

9   structure of the brain?

10   A   Yes.

11   Q   Okay.

12   A   That's --

13   Q   And clarify my -- do you see any

14 abnormality in this series going down the line?

15   A   These are not intended as diagnostic

16 images. They are not acquired --

17   Q   The question is do you see any sign of

18 abnormality.

19   A   No, I don't see a gross abnormality.

20   Q   Thank you. Now let's go back to -- let's

21 go back to Exhibit 3, which is Filler's rebuttal

22 report, so you can put that aside for now. Let me

1   get to it, and go back to page -- okay, let's go

2   to paragraph 13, which is on page 7, starts on

3   page 7.

4   A Okay.

5   Q Now, here, this is Dr. Filler's response

6   to your view of figure 1 in his -- in your report,

7   correct? Is that what he's discussing here, to

8   your knowledge?

9   A I believe.

10   Q Okay. He says, "This is not a vascular

11   anatomy image." Do you agree with that?

12   A Not exactly. So we would not use this for

13   what as I would call a direct assessment of the

14   intracranial vasculature. That's not what we use

15   this study for. However, we do get data about the

16   large vessels of the brain.

17   Q Okay.

18   A So it's -- it's not inherently true or

19   false. It's something other -- so I wouldn't -- I

20   wouldn't say that.

21   Q Okay. Well, let's look at the -- after

22   the dash. "Perfusion C.T. is used to create

1   cerebral blood flow, CBF assessments, to calculate

2   differences" -- "regional differences between the

3   arterial input function, AIF, and the venous

4   outflow function, VOF." Do you agree with that?

5   A The -- the -- the word -- to make this

6   more reasonably accurate, the word "relative"

7   should have also been included. So it doesn't --

8   creates relative cerebral blood flow amounts.

9   Q And relative to what?

10   A That's a -- an -- relative -- in this

11 scenario, what it does is it normalizes or,

12 rather, pseudo-normalizes the blood flow in the

13 brain to the peak blood flow seen in this set of

14 images, which is why the vessels, as pointed out

15 on multiple figures, are always red in all

16 individuals. The rest of the brain parenchyma is

17 then normalized from that setting of a peak or a

18 ceiling, and then there's a gradient downward.

19   Q Why do you use the word

20 "pseudo-normalized"? What's that?

21   A The mathematical processing is

22 complicated, and one sense of normalizing would be

1   is that we have an expected standard such as --

2   let's say we want to set -- we want to scale all

3   of our -- we want to scan five random people, and

4   we're going to set that their highest blood flow

5   is -- is a hundred. You could call that

6   normalization, but that's not really being done

7   here.

8   So pseudo-normalized, so first off, the

9   blood flow is -- the data acquired's not

10   quantitative, so there's a qualitative nature to

11   the way the data is analyzed and the outcome is,

12   and then that's further scaled based upon the

13   highest level observed. So the typical

14   nomenclature used is, again, pseudo-normalization,

15   because it's not based on an objective value

16   because it's not a quantitative -- it's not a

17   quantitative set of data, or excuse me, as

18   processed, it's not quantitative or intended to be

19   used necessarily in a quantitative fashion.

20   Q   Thank you. Let's go to the next sentence.

21   "It is therefore necessary to include flows

22   outside of the hippocampus itself in order to

1 calculate a CBF for the area of interest." Do you

2 have an opinion about that sentence?

3   A Yes. So I'm -- I'm actually not

4 completely clear what he's trying to get at

5 because one thing that wasn't done here was

6 quantitative analysis of the actual hippocampus

7 was not performed. These are qualitative maps

8 performed for the purposes of assessing for acute

9 arterial infarction, and an annotation is pointed

10 at vascular flow, not terribly far away from the

11 hippocampi. So to do quantitative analysis of the

12 hippocampus would require very different

13 methodology than what was done here.

14   Q All right, and that -- that's the opinion

15 you've already stated, right?

16   A I -- at least in part, yes.

17   Q Okay.

18   A Might have added some additional details

19 there.

20   Q And the next sentence here is the arrow,

21 meaning of figure 1, designates a CBF region that

22 includes some of the hippocampal venous outflow.

```
1          A   Which figure 1?

2          Q   Figure 1 is the figure 1 in your -- that

3    -- in your -- in the Johnson -- in the Johnson

4    report number 1.

5          A   Okay, I -- the reason I wanted to clarify

6    --

7          Q   Go ahead.

8          A   This is -- figure 2 in Exhibit 2 is a

9    relative cerebral blood flow map.

10         Q   Okay.

11         A   And the first figure in Exhibit 3 is

12   actually a different map.  It's the relative

13   cerebral volume map.  So what was originally

14   annotated in his first report --

15         Q   Yeah.

16         A   -- isn't what's annotated in figure 1 of

17   his second report.  It's a different -- it's a

18   different map.

19         Q   Okay.

20         A   So I just -- so okay, so we're talking

21   about -- we're talking about this one?

22         Q   Right.
```

1   A   Okay.

2   Q   So do you agree with that?

3   A   Sorry, what was the question?

4   Q   The question is the arrow in figure 1 of

5   the -- of your first report that you said is not

6   -- the arrow designates a CBF region that includes

7   some of hippocampal venous outflow, and the reason

8   I ask is I think you were discussing that when I

9   first asked about that.

10   A   Yeah, so it's true in as far as that the

11 drain that leads from your house to your septic

12 system includes -- not blood flow. Excuse me.

13 Includes water from one of the sinks on your -- on

14 your upper floors, so a volume of the traffic on

15 this interstate came from a side street. There --

16 it is most reasonable to conclude that only a

17 small percent of the blood flow in these vessels

18 or in this region would be from the hippocampus,

19 which is not a very big organ in the brain, number

20 one.

21   Number two, there's no way using this

22 methodology to understand what percent it is, but

1 the hippocampus I believe is something on the

2 order of a couple milliliters in volume, right?

3 The right middle cerebral artery territory is

4 let's say approximately 120 to 160 milliliters of

5 volume. So the blood flow going through that

6 region feeds the whole middle cerebral artery

7 territory. The hippocampus is a couple

8 milliliters in volume give or take. The whole

9 middle cerebral artery territory, not including

10 the basal ganglia and other structures in that

11 region --

12   Q The base -- stop, slow down. Not

13 including the what?

14   A Basal ganglia.

15   Q Okay, go on.

16   A But you could make a rough estimate that

17 if we assume that these vessels being pointed at

18 here are responsible for all of the middle

19 cerebral artery territory, including the deep gray

20 structures at the base of the brain, including the

21 hippocampus, amygdala and the basal ganglia, it

22 would comprise a few percent at most of the volume

1   being supplied by these vessels.

2   So could you say that there's hippocampal

3   blood flow as part of this? You could say that,

4   just like you could say the street on your house

5   is part of the 95 traffic flow. It's --

6   Q   Okay.

7   A   Did I get to all points of your question?

8   Q   You did.

9   A   Okay.

10   Q   And then I'll just ask, he then says that,

11   "There's no means to separate, for instance,

12   choroidal flow from the hippocampal flow in a C.T.

13   scan obtained," dash, "even with the very high

14   initial acquisition resolution used. Therefore,

15   the literature in this field considers the

16   perfusion of the hippocampal region and is not

17   intended to be a high-resolution anatomical image

18   of hippocampus or individually identified

19   vessels." Do you agree with that statement?

20   A   No.

21   Q   Why not?

22   A   Well, first off, there -- this isn't a

1   high-resolution imaging technique, although it's

2   repeated multiple times. The raw data is

3   comprised of scans that are -- you could argue --

4   you could say are high resolution, or at least

5   they're acquired as thin slices, but the physical

6   properties of acquiring those thinner slices are

7   very noisy. So --

8   Q Noisy? Define noisy.

9   A There's inherent artifact, there's

10 inherent -- how to describe noisy without using

11 the word "noisy." Margins are not clear. The

12 data is not -- the data is not necessarily valid

13 in and of itself. And so what we tend to do, and

14 what's done in this case is that these multiple

15 thinner slices are mathematically combined to

16 create thicker slabs, and so like we talked about

17 earlier, typically the acquisition parameters for

18 these is usually acquiring slices, it's somewhere

19 one to one and a half millimeters in thickness.

20 If we do that, then we --

21   Q Millimeters?

22   A Yes, sir, millimeters.

1   Q   Okay.

2   A   So if we do that, we're expecting that we

3   would then process, and our outflow -- or our

4   output, if we keep the same resolution, we would

5   then have not just about, whatever, 16 or 20

6   slices of the brain, we would then have something

7   like close to let's say a hundred to 120 because

8   16 millimeters -- or excuse me, 16 centimeters is

9   a reasonable estimation of the top-to-bottom

10   measurement of -- of the brain, but we don't -- we

11   don't have that.

12   So what's happened is the data's then

13   summarized, and one of the reasons the data's

14   summarized is because it's noisy, and by

15   mathematically adding stacking slices, we not only

16   reduce noise, but we also make it more manageable

17   to interpret.

18   So we don't want noise. Noise is bad

19   because it means we're not accurate, and the other

20   one is is we don't have to scroll or look at

21   hundreds of images when we could get a reasonable

22   -- a 16 -- set of 16 slices, so to speak, or 16

1   slabs. So these slabs typically as processed are

2   something on the order of let's say approximately

3   five millimeters in thickness or about half a

4   centimeter.

5   Q   What do you do that with?

6   A   The -- the software does that

7   automatically.

8   Q   Okay.

9   A   So there's -- there's that issue as far as

10   -- and then the part that I was additionally

11   confused on is it seems like he goes on to say

12   it's a high-resolution technique, and that was

13   also repeated in his report multiple times about

14   the idea that this is a state-of-the-art very

15   high-resolution technique, which is not something

16   that we say in 2025. The way that C.T. perfusion

17   data was acquired in this instance has not

18   significantly changed for well over a decade. So

19   in 2025, we don't necessarily refer to this as

20   state of the art or high resolution because we

21   don't consider it to be either.

22   But -- so he says it's high resolution,

1   but then I feel like he goes on to say that it's

2   not intended to be a high-resolution image of the

3   hippocampus or individual identified vessels,

4   which I do agree with that, that it's not a high-

5   resolution image, but I'm confused at the argument

6   that says -- that's stated multiple times that

7   said this is high resolution, this is very fancy,

8   this is very sophisticated, but yet, it's not, and

9   therefore, I can't actually see the thing that I'm

10   talking about. The way that the research is done

11   --

12   Q I'll -- I'll -- can I interrupt you for a

13   moment?

14   A Sure.

15   Q So I want to talk about high resolution,

16   because I -- I don't want to lose that thread.

17   What would you consider high resolution?

18   A Typically we start -- in medical imaging

19   of the brain, we start referring to things as high

20   resolution when the slices are somewhere on the

21   order of about one millimeter in thickness.

22   Q Okay, and that's with a C.T. scan?

1   A   No, we would use similar nomenclature for

2   MRI scans. And so if we're acquiring -- we're

3   acquiring diagnostic quality images of

4   approximately one millimeter, we would start to

5   apply the -- the term "high resolution." And so

6   the most common place we acquire high-resolution

7   imaging data using C.T. for the brain is when

8   we're looking at the temporal bones, because

9   there's really tiny bones. Your ossicles that

10 help us hear each other, those are really small.

11 They're on the order of a couple millimeters in

12 length, and so we really do need high resolution

13 to see those well.

14   The reason we don't do high-resolution

15 imaging of the brain parenchyma typically is

16 because as you increase resolution, you have to

17 increase the radiation dose or you have to

18 increase the number of photons to keep your noise

19 at a reasonable level.

20   The other issue we run into is that for

21 the majority of us, we have a bone surrounding our

22 brain, so there's --

1   Q   Call it the skull?

2   A   Some people might call it that, sir, or

3   the calvarium, but yes. So to get enough photons

4   through the skull, the photons that you really

5   want to provide good gray-white matter

6   differentiation or good imaging quality of the

7   brain are actually the lower energy photons, but

8   those don't get through the skull very well. The

9   ones that get through the skull very well are the

10   higher energy photons, so something more on the

11   order of 120 or 140 kiloelectron volt, but those

12   don't provide great soft tissue contrast.

13   So we can do it where we can provide good

14   quality high-resolution imaging of the brain, but

15   it requires a significant radiation dose, and in

16   the end, we still don't necessarily have a tool to

17   enable us to make meaningful diagnostic

18   interpretations that we wouldn't just go do with

19   an MRI scan.

20   Q   Okay.

21   A   So it ends up being this very niche

22   population of issues with C.T.

1   Q All right. Well, let's -- let's -- I'm

2 going to give you a hypothetical. Hypothetically,

3 if Judge Newman could not use an MRI, that's the

4 premise, would a C.T. be the next best thing?

5   A For what diagnostic purpose?

6   Q To examine her brain.

7   A If Dr. Newman came to, for example, our

8 neuro -- our neurologist or psychiatrist at Yale

9 and said I think I'm having issues with my memory,

10 in this scenario that we're -- that we're

11 hypothetically certain she cannot have an MRI

12 scan, then it is likely that they would do a C.T.

13 of the brain without contrast to assess for

14 alternative explanations of -- of possible

15 cognitive dysfunction, and also to assess for

16 whether or not she may have of course had

17 microvascular ischemic disease or had had a stroke

18 or had a brain tumor, things of that sort, so in

19 this hypothetical scenario.

20   But in this case, we did not do a C.T.

21 scan of the brain. We did not do a diagnostic

22 C.T. scan of the brain, or -- and if one was done,

1   I have not been provided with those images.

2   Q   All right. You used the term F1. What is

3   that?

4   A   Excuse me?

5   Q   You used the -- oh, if one. I thought you

6   said if an F1 was done. I got it. If one was

7   done, you didn't see it. I got it. Let's go to

8   paragraph 14.

9   A   Yes.

10   Q   I'd just like you to read the paragraph to

11 yourself, has to do with the responsibility of the

12 neurosurgeon and the radiologist.

13   A   Okay.

14   Q   All right, so you've read paragraph 14

15 where he talks about the duties of

16 neuroradiologists and neurosurgeons, and upon your

17 review of Dr. Filler's -- Exhibit 3 and paragraph

18 14, do you have any opinion about what's stated

19 there?

20   A   Yes.

21   Q   And what is that opinion?

22   A   Well, there's a lot of different kinds of

1   neuroradiologists and practicing neurologists and

2   neurosurgeons, and we're making some blanket

3   statements on their comparative ability to provide

4   certain medical opinions, so we -- there are

5   neurologists out there that have done

6   neuroradiologist fellowships, for example. For

7   example, Dr. Filler has stated he's done extensive

8   additional imaging training and has argued that

9   he's an expert in neuroimaging.

10   So to state that all neurosurgeons are a

11 hundred percent fully able to understand and

12 interpret all of neuroimaging, I do not find that

13 to be accurate. I find that including at

14 Massachusetts General Hospital, which at the time

15 I was there was the number one hospital in

16 America, and my time at the University of

17 California San Francisco, which at the time I was

18 there was the number seven hospital in America,

19 and my time at the University of Texas MD Anderson

20 Cancer Center, which is still the number one

21 cancer center in America, and was then, that

22 neurosurgeons did rely upon me and my colleagues

1   to understand particularly more complicated

2   neuroimaging, and even at Yale, which is a very

3   high-rated institution, I work closely with the

4   neurosurgeons to help make sure that I'm providing

5   data that they need and then helping them

6   understand -- the vice chair of operations, for

7   example, of neurosurgery at Yale, a very senior

8   spine surgeon, for example, calls me not

9   uncommonly to go over complex cases.

10   So the analogy here used is that if I

11   mislabel a report, that it's his duty to

12   understand -- to not operate at the wrong level

13   equates with him having full understanding of

14   neuroimaging to me doesn't necessarily follow, and

15   then additionally, I do find it reasonable whether

16   we're talking about a colorectal surgeon or an

17   otolaryngologist or -- which is an ear, nose and

18   throat specialist. Actually, we'll talk about him

19   for a second. For example, the otolaryngologists

20   that I've worked with are very good at

21   understanding imaging of the head and neck,

22   particularly as it pertains to making decisions of

1   doing surgery.

2   So typically C.T. perfusion images -- or

3   rather, when neurosurgeons tend to have higher

4   level of expertise in C.T. perfusion imaging, it

5   tends to be because they're endovascular

6   neurosurgeons and are directly involved in the

7   treatment of stroke. We do have two such

8   neurosurgeons, for example, at Yale, and I've

9   worked with others in my -- at other institutions.

10 They have a very good understanding of C.T.

11 perfusion because they're using it in the acute

12 context, acute meaning we're making rapid

13 decisions usually in the emergency department, but

14 sometimes with admitted patients to determine

15 whether they're going to do a dangerous

16 intervention to try to protect brain parenchyma.

17   My neurosurgeons that tend to do, for

18 example, spine surgery or tend to focus on

19 traumatic brain injury and trauma usually don't

20 look at C.T. perfusion or tend to have strong

21 opinions about it one way or the other.

22   Neurologists, if I didn't mention before,

1   particularly stroke neurologists in this context

2   tend to have very good understanding of C.T.

3   perfusion and other types of vascular imaging.

4   The final comment, that the two

5   specialties often have little direct personal

6   contact with each other in relation to the care,

7   that's an interesting categorization of two fields

8   of medicine, and so I have multidisciplinary

9   conferences with neurologists and neurosurgeons on

10 a regular basis, and so do most of my peers at

11 similar institutions, as we would expect that Reza

12 does here at George Washington University

13 Hospital. So -- so there's -- there's a lot going

14 on here that it's hard for me to in short agree

15 with the statement.

16   Q Okay. If I can boil that down, it depends

17 on the circumstances?

18   A Many things are true depending on the

19 circumstance, as this statement, yes.

20   Q All right. So on Exhibit 3, on the

21 rebuttal, do you have any other opinions about the

22 rebuttal other than what you've told me about, his

1   response to your report? Was there anything in

2   the rebuttal that you -- you took in and made a

3   different opinion or that you had a commentary on?

4   A I don't understand why he switched the

5   images. I don't know why he -- he labels -- he

6   labels the cerebral blood flow and makes a big

7   deal about this, suggesting it's the hippocampus,

8   but then in the rebuttal, he chose a different

9   image from a different processing methodology. So

10   I didn't understand and I didn't see that it was

11   necessarily explained on why we're using a

12   completely different processed set of data.

13   I guess the other one is there was an

14   assertion made that I haven't published on

15   perfusion imaging, and that's not accurate.

16   Q Okay, and could you point out on your

17   resume -- in your list, you can take your time on

18   this, which ones you think are published on

19   perfusion? And if you would, take a pen and put a

20   checkmark next to them, on Exhibit 1, and I have a

21   pen for you if you don't have one.

22   A I do not. Thank you. There's a grant

1   involved with perfusion imaging. There's another

2   grant involved in perfusion imaging.

3   Q   And you're putting a checkmark next to

4   those?

5   A   Yes, sir.

6   Q   Okay, thank you.

7   A   This grant involved perfusion imaging.

8   Let's see. This very first abstract, or oral

9   presentation given at the European Society of

10 Neuroradiology in the title says perfusion

11 imaging.

12   Q   And you've checked it?

13   A   Yes, sir.

14   Q   Okay.

15   A   Those are talks, okay. You asked about

16 publications. Chapter 12 I think we talked about

17 C.T. perfusion. I put a question mark next to it.

18   Q   That's fine.

19   A   I think -- oh, yeah, it's because this is

20 probably from January.

21   Q   So you've got an additional one you think?

22   A   Yeah, a publication in JCAT. Anyway,

1   there's one more, but if -- I can send you that

2   reference if -- if -- if you all are interested.

3   I'm missing --

4   Q   All right, so you think something's

5   missing from the resume? What -- what's the

6   publication you believe is missing? We can check

7   later.

8   A   It's a publication on looking at different

9   types of dynamic contrast enhancement perfusion

10 imaging methodology in patients with high-grade

11 glioma and suspected recurrent neuroplasm.

12   Q   And where's it published?

13   A   Journal of Computed -- JCAT, Journal of

14 Computed Axial Tomography.

15   Q   Okay. And --

16   A   A term we don't use anymore.

17   Q   And when do you think you did that?

18   A   I think the official acceptance date was

19 somewhere around January-February.

20   Q   Okay, that's fine. Now I'd like you to

21 turn to page -- thanks. I'd like you to turn to

22 page 4 of your -- of your report.

1   A   Yeah, okay.

2   Q   And we've -- we've talked a little about

3   FDA approval, but you also -- you also say on the

4   second full paragraph on -- the second paragraph

5   on page 4, you say that, "Perfusion C.T.

6   examinations, and specifically the chosen data

7   processing methodology have not been FDA approved

8   and is not marketed for the evaluation of

9   cognitive function." Did I read that correctly?

10   A   Yes.

11   Q   All right, we've -- so I think we've

12 established the FDA does not regulate the practice

13 of medicine, but marketing does not control a

14 physician's practice of medicine either, does it?

15   A   No.

16   Q   And that's why, for instance, on all these

17 ads, it says check with your doctor whenever

18 they're advertising.

19   A   Right. At some institutions, the

20 privileging and credentialing bodies may provide

21 limitations on recommended practice. So right,

22 there's some things I'm not privileged to do, for

1 example, at my hospital, and state medical boards

2 do have an opinion on off-label usage of drugs and

3 devices and usually have statements regarding

4 such.

5   Q But those aren't controlled by marketing.

6   A No.

7   Q And then on page 5 --

8   A Of my report?

9   Q Yeah, your report.

10   A Okay.

11   Q "The use of perfusion C.T. to exclude

12 cognitive dysfunction is not considered as a

13 reasonable standard of care in clinical practice."

14 By who and where? What is that statement

15 referring to?

16   A That it's simply not done.

17   Q Anywhere.

18   A To my knowledge --

19   Q Okay.

20   A -- it's -- we didn't do it at UCSF, we

21 didn't do it at MGH, they don't do it at Stanford,

22 they don't do it at Penn.

1   Q   Got it.

2   A   They don't at University of Vermont.

3 George Washington University Hospital's diagnostic

4 report even with the -- I believe the indication

5 case for the study I believe -- well, actually, I

6 shouldn't guess. What was the indication given?

7 I believe it was -- I believe the interpreting

8 physicians were aware that this was a --

9   MR. PHILBIN: It's page 12 of Exhibit 2.

10 This is only one page.

11   THE WITNESS: Yeah, the indication

12 provided was cognitive, which I don't know if

13 additional information was given, but -- and I --

14 I would be making an assumption of what the

15 interpreting physicians were aware of, but to have

16 an outpatient, which is uncommon to do C.T.

17 perfusion on outpatients, it's very uncommon. I

18 don't even know if I've seen an outpatient in C.T.

19 perfusion in either a long time or ever, but -- so

20 this is an outpatient with nothing other than the

21 indication of cognitive, but if we look at the

22 conclusion of the report, thank you, the

1   conclusion is perfusion scan only without

2   accompanying non-con C.T. or CTA, which goes along

3   with my comment earlier that a diagnostic C.T.

4   scan was not performed, and i-RAPID C.T. perfusion

5   analysis documents are available in PACS for

6   review, and that's the conclusion of the study,

7   the conclusion, even though he's aware that -- or

8   again, I'm assuming was aware that this was an

9   outpatient for a cognitive evaluation, he doesn't

10   opine one way or the other.

11   He doesn't make a statement saying looks

12   good for cognitive purposes, looks bad for

13   cognitive purposes, and that is because it's not

14   considered a reasonable question.

15   MR. VECCHIONE: All right. I'm going to

16   label this Exhibit 4.

17   (Deposition Exhibit Number 4 was marked

18   for identification.)

19   BY MR. VECCHIONE:

20   Q All right, I have handed you a article

21   from Food and Drug Law Journal, volume 53, by

22   James M. Beck entitled "FDA Off-Label Use and

1   Informed Consent: Debunking Myths and

2   Misconceptions" by James M. Beck and Elizabeth D.

3   Azari. Do you know either of those folks?

4   A   I don't think so.

5   Q   All right, I'd like you to turn to page

6   80.

7   A   Here, 70 --

8   Q   Should be 80 on the upper left-hand --

9   A   Okay.

10   Q   Upper -- up left-hand corner is what I'm

11   using.

12   MR. PHILBIN: Counsel, just to be clear,

13   this is not an article that was cited --

14   MR. VECCHIONE: Correct.

15   MR. PHILBIN: -- or attached to

16   Dr. Filler's report.

17   MR. VECCHIONE: That is correct.

18   THE WITNESS: Okay, I'm on page 80.

19   BY MR. VECCHIONE:

20   Q   All right, and if you -- if you look at

21   this -- at this article, we've talked a little

22   about some off-label uses, but Mr. Beck says,

1 "Off-Label uses of medical devices and drugs

2 perform an important therapeutic role in many if

3 not most areas of medical practice." Do you agree

4 with that statement or disagree with that

5 statement?

6 　　A　I don't know.

7 　　Q　Okay, and examples of medical conditions

8 whose standard treatments involve or have involved

9 extensive off-label use include, he has a list of

10 things there, but the one I want to focus on is

11 spinal fusion surgery. Do you know whether that's

12 true or not?

13 　　A　No.

14 　　Q　Okay, but pediatric uses are all -- also

15 are mostly off label. Do you agree with that?

16 　　A　That tends to be the case, and the reason

17 for that is is the data necessary -- I'm

18 generalizing of course, but let's assume we're

19 talking about drugs, because I think this is

20 largely geared towards the prescribing patterns.

21 When you do your phase 3 trial of efficacy and

22 safety to submit to the FDA for an indication for

1   a specific diagnosis, it's expensive, and so just

2   looking at that clinical trial alone could easily

3   cost several million dollars, not to include all

4   the other costs of the phase 1 and the phase 2 and

5   the preclinical and -- and all the other things

6   with drug discovery, and so -- so you go through

7   that and you spend however million dollars and you

8   get your adult indication, and then oftentimes the

9   pharmaceutical companies are -- make a business

10   decision, and that they understand that they will

11   get off-label usage in the pediatric populations

12   without having to go through the expense of -- of

13   doing the actual study.

14   And so that's a unique scenario, but yes,

15   we -- we oftentimes borrow adult literature to

16   make inferences on what's reasonable to do, as we

17   talked about using cost-benefit analysis in

18   children.

19   Q Right, and off-label use can become the

20   standard of care, correct?

21   A I think that's reasonable in some

22   instances, yes.

1   Q You can put that aside. All right, so

2 your conclusion in your opinion is that the C.T.

3 in this case is not diagnostic of whether or not

4 Judge Newman has cognitive dysfunction; is that

5 correct?

6   A I do not have an opinion on whether she

7 does or doesn't have cognitive impairment because

8 I -- as we discussed, number one, I didn't

9 evaluate her. Number two, I'm not a specialist in

10 the -- the evaluation of cognitive function, and

11 additionally, the data provided to me should not

12 be used for the assessment of cognitive function

13 or dysfunction.

14   Q All right, and let's take a look -- I just

15 want to --

16   A What year is this article?

17   Q 1998, but Jim Beck will say that all the

18 time. Anyway, in any event, so let's take a look

19 at the 510(k) approval that's attached to your --

20 your opinion. Now I have to find it. All right,

21 I just want you to turn to page 5-2 of the 510(k).

22   A Got it.

1   Q And it says, "RAPID provides tools for

2   performing the following types of analysis."

3   MR. PHILBIN: Sorry, Counsel. Could you

4   point to where on --

5   MR. VECCHIONE: Oh, yeah, 5 -- on 5-2 of

6   511, there is RAPID revised tools for performing

7   the following types of analysis in the center of

8   the page.

9   MR. PHILBIN: Okay.

10 BY MR. VECCHIONE:

11   Q Okay? Do you -- are you with me, Doctor?

12   A Yes.

13   Q All right, so -- so selection of acute

14 stroke patients for endovascular thrombectomy, do

15 you agree that that's a use of this?

16   A Yes, that's the predominant use.

17   Q All right. Volumetry of threshold maps?

18   A Yes.

19   Q Do you agree with that? And what is that?

20   A So one of the decisions being made when

21 whether to pursue treatment in a setting of an

22 acute stroke is the volume at risk of infarction,

1   and so using the -- a series of algorithms, there

2   is quantitation of volume of region of brain that

3   falls below a certain threshold of whether blood

4   flow or mean time of transit or -- or -- or -- so

5   if -- I don't know if -- oh -- well, we --

6   MR. PHILBIN: Just answer the question

7   that --

8   BY MR. VECCHIONE:

9   Q Okay, and I'll ask -- time intensity plots

10 for dynamic time courses, do you believe it is a

11 tool for that?

12   A It -- it does make time intensity plots.

13   Q Okay, and how about measurements of

14 mismatch between labeled volumes on coregistered

15 image volumes?

16   A Yes.

17   Q And finally, large vessel density, does it

18 -- is it a tool for that?

19   A I don't think most of us turn that module

20 on. I'm not familiar with seeing maps related to

21 large vessel density. I do recall that it is one

22 of the processes. So when you set up your

1   individual server, right, we -- I -- I call

2   i-RAPID and I say hey, I want to -- I want to hire

3   you to be my processing method for this because

4   there's a variety of software on the market that

5   -- that are approved for use in the selection of

6   patients for acute arterial thrombectomy or in the

7   setting of suspected acute arterial stroke.

8   You can make some choices, including the

9   thresholded maps like whether, for example, it's

10   20 percent or 30 percent or 40 percent, and -- and

11   some of the coloration and things like that, and

12   then you can further tailor based upon the actual

13   methodology you use because there is some

14   variability in the actual C.T. perfusions used to

15   acquire C.T. perfusion source imaging data, and so

16   that's a module or an option that -- that I don't

17   believe is commonly used. I don't think we use

18   that, and I don't -- I didn't see process maps

19   that suggest that they use that either, but --

20   Q   They meaning in this --

21   A   George Washington --

22   Q   George Washington.

1   A   -- University Hospital in this case.

2   Q   All right.

3   A   They may use it in other cases, but --

4   Q   And I'd like you to go to 5-5 of 511, and

5   then it says under clinical characteristics,

6   "Primary users of RAPID software are medical

7   imaging professionals who analyze tissue using

8   C.T. or MRI images." Do you agree with that?

9   A   Yes, that's what it says.

10   Q   Do you agree with it though? Is that what

11   it's used for, or who it's used by?

12   A   No, I think that's too -- that's too

13   general of a statement, which isn't uncommon for

14   their -- for these type of documents, and so

15   generically stating medical imaging professionals,

16   so -- which could suggest a C.T. technologist or a

17   Ph.D. that does research, and that's not a primary

18   user. A primary user is a neuroradiologist and

19   usually a stroke neurologist or emergency room

20   physician. Those are your big population -- or

21   excuse me, and endovascular neurosurgeons and

22   neurointerventional radiologists, I guess which --

1   which five dollar word I use.

2   Q   And the next sentence is, "The images

3   generated by RAPID provide additional diagnostic

4   information, which is derived from the temporal,"

5   slash, "diffusion," slash, "density features of

6   the native C.T. or MRI images." Do you agree with

7   that?

8   A   Yeah, that's reasonable, and that refers

9   to what we talked about earlier in that the CTA

10   source images, the thin -- the thin raw data's not

11   intended to be diagnostically utilized in and of

12   itself. It's the processed data that is the --

13   that is the primary tool used in the assessment of

14   patients with suspected acute arterial function --

15   or acute arterial infarction of any arterial

16   circulation.

17   Q   Okay, and then on your -- in your report,

18   I'd like you to turn to grants and clinical trial

19   histories. I think you checked off some things

20   earlier there.

21   A   Yeah.

22   Q   And it says -- you see just the start of

1   it, grants, clinical trial histories, and I just

2   have a general question about these.

3   A   Yeah, sure.

4   Q   Did the FDA approve the devices used in

5   these trials for each of these uses?

6   A   So -- so if we start off with the study

7   related to quantitative imaging biomarker

8   prospective allegation of dynamic contrast

9   enhancement, MRI is a metric of orodental injury

10 after radiotherapy, these patients were all given

11 an informed consent and enrolled into a clinical

12 trial. So we were -- we applied for and had local

13 institutional review board approval that the risks

14 to these patients outweighed -- or the benefits to

15 science and/or the individual patients outweighed

16 the risk to the patient and society, and so the

17 Food and Drug -- Food and Drug approval is --

18 comes up into the methodology that we're using and

19 is discussed at the level of the institutional

20 review board.

21   So the short answer is is that we were --

22 we were looking at tissue that would not commonly

1 be used, but we weren't using a software package

2 to process this. So for example, what we didn't

3 do with the -- the MRI perfusion data acquired in

4 this case is we didn't run it through a processing

5 package that was intended to use for stroke,

6 because we used a more complicated research

7 methodology entitled for our purposes, and we

8 didn't have an intent to diagnose or treat these

9 individual patients because again, this was --

10 this was a research study.

11   MR. VECCHIONE: Okay. I have one exhibit

12 left. Do you want to take a ten-minute break

13 before I get to it?

14   MR. PHILBIN: Sure.

15   (Recessed at 11:14 a.m.)

16   (Reconvened at 11:29 a.m.)

17 BY MR. VECCHIONE:

18   Q Doctor, did you talk to anyone about your

19 testimony during the break?

20   A I chatted with Pat.

21   Q Do you have any other changes to any

22 testimony that you discussed?

1   A Yes, things I reviewed between originally

2   filing my report and being here today, I was

3   shared a copy of the judge's medical records, and

4   I forgot, I mentioned that. I looked at them

5   briefly. Given that I'm not here as necessarily a

6   medical expert -- or excuse me, as a -- her -- her

7   oncology records or hematology records and her

8   internal medicine records weren't necessarily

9   germane towards what I'm -- been asked, so it

10 slipped my mind, but I did -- I did get -- receive

11 a copy of her medical record, which I looked at

12 briefly.

13   Q And did any of those change the opinions

14 that are in your report or any of the opinions

15 you've revealed in today's deposition?

16   A No.

17   Q I'd like to enter what I believe is

18 Exhibit 5, which is one of your publications. I

19 believe it's number 15 on your -- Exhibit 5.

20   (Deposition Exhibit Number 5 was marked

21 for identification.)

22 BY MR. VECCHIONE:

1   Q   Doctor, do you recognize this document?

2   A   Yes.

3   Q   Can you state for the record what it is?

4   A   This is a publication that I was involved

5   with from MD Anderson Cancer Center, where we

6   looked at cognitive function in patients with

7   skull-based cancer after treatment. I believe it

8   was -- as I recall, I mean, this is a publication

9   about eight years ago. The two points were,

10   number one, is just trying to assess whether it's

11   reasonable to do a phone interview to get an idea

12   of a patient's cognitive status. In this

13   scenario, you know, somebody that had brain

14   radiation or -- and particularly skull base

15   receives a much higher dose of radiation than

16   other cancer above the clavicles, so it's

17   commonplace, if they survive long enough, that

18   they have some cognitive impairment, and then the

19   second one was to get a general idea of the

20   incidence. So I believe those were the two --

21   Q   The incidence of cognitive --

22   A   Yeah.

1   Q -- decline.

2   A To get a rough idea of, you know, is it in

3   one out of ten or five out of ten or --

4   Q Can you read the title and the date of

5   this publication?

6   A Yeah, "Cognitive Function and

7   Patient-Reported Memory Problems Following

8   Radiation Therapy for Cancers at the Skull Base:

9   A Cross-Sectional Survivorship Study Using the

10   Telephone Interview for Cognitive Status, TICS,

11   and the MD Anderson Symptom Inventory-Head and

12   Neck Module MDASI" dash "HN."

13   Q All right, and if I look down here, I see

14   Jason Johnson, M.D. with a 3 up there footnote,

15   and if I look down here, it says final approval of

16   the version to be published is what 3 means?

17   A No, that little 3 is my -- refers --

18   Q Oh.

19   A -- to the fact that I belonged to the

20   Department of Diagnostic Radiology --

21   Q Got you.

22   A -- at MD Anderson. All of the coauthors

1   -- all the coauthors have a role in those four

2   things.

3   Q   Okay, got it. Now -- now, as I understand

4   this article, it used this TICS to assess

5   cognitive dysfunction, correct?

6   A   As I recall.

7   Q   Which is a phone interview of a large

8   number of patients, correct?

9   A   Around a hundred I believe.

10   Q   Right.

11   A   122.

12   Q   And so if we look at the abstract on page

13   2 --

14   A   Okay.

15   Q   The background, using patient-reported and

16   objective assessment tools, what are objective

17   assessment tools?

18   A   Overt signs of dysfunction.

19   Q   "We sought to quantify cognitive symptoms

20   and objective cognitive dysfunction in patients

21   irradiated for skull-based cancer," correct? And

22   that's what you've just described. You have to

1   verbally respond.

2   A   I don't understand the question.

3   Q   Oh, okay.   "We sought to quantify

4   cognitive symptoms and objective cognitive

5   dysfunction in patients irradiated for skull-based

6   cancer."   That was the purpose of the study.

7   A   Yeah, yes.

8   Q   And then it says, "The methods.

9   Participants were assessed using telephone

10   interview for cognitive status, TICS."   That's how

11   it was done, correct?

12   A   Correct.

13   Q   And then in the conclusions, it says,

14   "Approximately one-third of the patients had

15   ambiguous results by TICS screening, for whom more

16   rigorous testing may be warranted," correct?

17   A   Yes, that's what it says.

18   Q   And then, "Moderate to severe levels of

19   patient-reported memory complaints on the MDASI,"

20   dash, "HN may have utility as a screening tool for

21   cognitive dysfunction in this population," and

22   that was the conclusion of the -- of the study?

1   A   Yeah, that's what's written here.

2   Q   All right, and do you know what was in the

3   -- what type of phone interview was done to assess

4   cognitive function?

5   A   No, not off the top of my head, but I

6   believe -- is it not here in the appendix?

7   Q   Maybe.

8   A   It's -- it's -- I believe it's a series of

9   questions, such as have you lost your keys.

10   Q   Got it.

11   A   Do you have trouble remembering

12 conversations you've recently had and questions --

13 questions like that.

14   Q   All right, and they -- they were

15 diagnostic of -- of cognitive decline if you

16 couldn't answer those questions.

17   A   Suggestive of an issue. I do not believe

18 the assertion was is that this should be used in

19 lieu of -- of appropriate -- or further

20 evaluation, and one of the -- Jeff Wefel, for

21 example, about the fifth author or sixth author

22 there on the third line of the author list --

1   Q   Uh-huh.

2   A   -- is a -- was -- well, I assume as far as

3   I know he still is the chief of neuropsychiatry at

4   MD Anderson and would have been supervising that

5   point of view, and I believe there should --

6   probably at least one more. We usually -- he

7   might be the only one on this one, but anyway, so

8   typically what would happen is they would screen

9   in for further evaluation, and it would be

10 referred to Dr. Wefel or his group for -- for

11 formal neuropsychological testing, and then

12 therefore, diagnosis, treatment.

13   So one of the things that we see, the

14 average age of patients with head and neck cancer

15 is roughly 60, and so Alzheimer's disease starts

16 having a reasonable prevalence as it does in the

17 natural population, so sometimes it's related to

18 the therapy, sometimes it's related to preexisting

19 probability that they were going to have a

20 cognitive dysfunction, and sometimes there's an

21 interaction in that a preexisting diathesis

22 towards receiving it is exacerbated by the

1 treatment, and so -- but in any of those cases we

2 did rely at MD Anderson on formal psychological

3 testing to assess the degree and then of course

4 what the appropriate treatment would be.

5   Q All right, and if you look at materials

6 and methods on page 3 --

7   A Okay.

8   Q That's the study design -- that describes

9 how the study was designed?

10   A Yeah, I'm just giving it a -- I haven't --

11   Q Yep.

12   A -- seen this in approximately eight years.

13 Actually --

14   Q Did you review it in preparation for this

15 deposition?

16   A No.

17   Q Okay, go ahead.

18   A It might have even been more than eight

19 years because -- yeah, it was received -- we would

20 have submitted it in 2016 or 2017, and then it was

21 -- formal publication date was '18, so it might be

22 more than seven years, but anyway -- okay, study

1   design. And you know, one of the things that's

2   worth mentioning here is that, you know, in the

3   first line of the study design, this study was

4   approved by the institutional review board for the

5   University of Texas MD Anderson Cancer Center.

6   Q   Uh-huh.

7   A   And part of that is that we're doing

8   something that's outside of standard of practice

9   at MD Anderson, and so we ask the institutional

10   review board for permission, as required by the

11   FDA, which I believe it's the FDA law that governs

12   institutional review boards, on whether or not

13   it's reasonable and safe to -- you know, as in

14   we're not going to -- we're not going to cause any

15   undue psychological stress and we're not going to

16   potentially make diagnostic interpretations of

17   something that's not considered a reasonable

18   standard of practice, and that, as I recall, in a

19   number of these studies is something the

20   institutional review board is looking at and

21   saying what are you going to do with this

22   information, and we say oh, we're going to turn

1   around and we're going to treat them as if this

2   was real -- you know, this is something we all

3   believe in, they're going to have more questions

4   for us.

5   Q   Right.

6   A   And so we usually do need to specify that

7   this is not for diagnostic or therapeutic

8   purposes, and so this was, as I recall, again, a

9   validation of whether or not this technique was

10   reasonable. It's a pretty high volume head and

11   neck cancer center, and so we want to do some

12   validation of the methodology that we use to

13   screen patients to understand, you know, for

14   example, if your -- had a low TICS score, if it's

15   reasonable that we maybe not send you to

16   neuropsychology for more testing, as opposed to is

17   it reasonable to put you through the cost and time

18   to bring you in for formal neuropsychological

19   testing if you did so -- so-called screen in.

20   Formal neuropsychological testing is very time

21   consuming, and therefore, can be considered

22   expensive, so --

1   Q   Right, and so in here, it has study

2   assessments, the TICS survey is a concise

3   standardized examination of cognitive function

4   designed to be delivered over the telephone,

5   correct?

6   A   Yes, that's what it says.

7   Q   And then they have scoring, what their

8   scoring practice is, correct?

9   A   Yes.

10   Q   All right, and then at the end -- well,

11 it's not fully the end, but the next thing on page

12 5 is results, and they go through how -- the

13 conclusions from doing this, correct?

14   A   Yes.

15   Q   All right. That's my only questions

16 there. I do have one question. Could you turn to

17 the first pie chart exhibit? I think it's on page

18 11.

19   A   Yeah.

20   Q   So from the -- from the phone screening,

21 about 56 percent of these patients were found to

22 be non-impaired?

1   A   That's what the -- yes, that's what the

2   graph suggests.

3   MR. VECCHIONE: Okay, all right. I'm

4   going to show -- I'm going to put in another

5   exhibit.

6   MR. PHILBIN: Are we done with this

7   exhibit?

8   MR. VECCHIONE: For now. I think he may

9   want to look back at it, but maybe not. This will

10   be Exhibit 6.

11   (Deposition Exhibit Number 6 was marked

12   for identification.)

13   BY MR. VECCHIONE:

14   Q   All right, let's look at what I've labeled

15   Exhibit 6. Do you recognize this document?

16   A   No.

17   Q   Okay. You said earlier that the -- that

18   you thought one of the appendix to the study would

19   be the TICS questionnaire. Does that look like

20   the TICS questionnaire to you?

21   A   That's what it's labeled as such.

22   Q   Okay.

1   A   Yeah, I don't -- I don't recall.

2   Q   Okay, and let's look at -- pull my

3   document out. So the first question on this

4   telephone interview for cognitive status, it says

5   "TICS" at the top. Does that refresh your

6   recollection at all?

7   A   No.

8   Q   Okay, and the first question is, "Please

9   tell me your full name."

10   A   Yes, that's what the first question is.

11   Q   And then there are questions such as what

12   year it is and what's today's date and that sort

13   of thing?

14   A   Yes.

15   Q   All right. Are you familiar with this

16   type of test in general?

17   A   It's -- yes, it's similar to other

18   screening examinations, such as the Mini-Mental

19   Status Examination or the Montreal Test of

20   Cognitive Impairment I believe is the title.

21   Q   Okay, and have you ever given a test of

22   this sort to any patient?

1   A Yeah, when I was a med student or an

2   intern, as somebody would suspect -- well, you

3   tended to do it on all neurology admissions, and

4   then in other non-neurology -- we actually also

5   did it on a lot of psychiatric admissions, and

6   then of course, other situations. It'd be an as-

7   needed basis. If a woman was in for pneumonia, I

8   wouldn't necessarily decide to take the time to

9   put her through a Mini-Mental Status Examination.

10   Q Okay, and I suppose -- so I'll just turn

11   to 7. Some of them are what's your home address

12   and you ask somebody what -- where they live and

13   what state they're in and zip code and that sort

14   of thing?

15   A Yes.

16   Q And then you read words I think in number

17   9 and you test memory?

18   A Yes.

19   Q All right, and -- and then there's some

20   math questions on 10, subtracting 7 from a hundred

21   and then keep subtracting?

22   A Yes.

1   Q All right, and then there's some word

2 association tests, what animal does wool come

3 from, what do people use to cut paper, that sort

4 of thing?

5   A Yes.

6   Q And is this considered a useful diagnostic

7 tool?

8   A No.

9   Q Why not?

10   A This would be a screening tool in a

11 population with a very high likelihood of having

12 cognitive impairment.

13   Q But in this test, we saw -- I think we've

14 seen that if you got a adequate score on this

15 test, they didn't send you for follow-up.

16   A That was the idea was is to help -- to see

17 if we could do this low-cost simple screening of

18 patients to assess. I don't know that they

19 actually acted on it. The -- the idea is -- is

20 neuropsych -- formal psychological testing would

21 be great in all patients ideally before we start

22 cancer treatment and then at some interval

1   afterward, but we don't have enough

2   neuropsychologists to reasonably offer that

3   service, and so the -- the intent of the study, as

4   I recall, was could you use a tool like this to

5   reasonably triage patients towards an

6   intervention, or at least formal diagnostic

7   testing.

8   So -- but that's already happening in

9   clinical practice. This was trying to formalize

10 some sort of strategem to -- so --

11   Q   My question is in this -- in this -- in

12 this program, if someone passed the TICS test,

13 were they sent for follow-up testing at all, do

14 you know?

15   A   I don't know.

16   Q   Okay, all right. So I want to turn to the

17 conclusions in Exhibit 5, so it's the previous

18 one, Exhibit 5.

19   MR. PHILBIN: Is this page 8 of Exhibit 5?

20 BY MR. VECCHIONE:

21   Q   Yep, yes.

22   A   Okay, got it.

1   Q   So conclusions here are detectible

2   cognitive impairment was observed in the minority,

3   but approximately one-third of the patients had

4   ambiguous result by TICS, for whom more rigorous

5   testing would be required to completely

6   characterize. So doesn't that imply that if you

7   pass the TICS test, no further testing was

8   required to completely characterize?

9   A   Well, that was the nature of the study,

10   was to assess whether or not in this institutional

11   review board-approved research study, whether you

12   could consider doing a methodology like this to

13   triage patients.

14   Q   The question -- the question, Doctor, is

15   doesn't the conclusion of -- the conclusion, but

16   -- that if there was ambiguous results, more

17   rigorous testing would be required to completely

18   characterize mean that if they passed the TICS,

19   they didn't need more testing?

20   A   I don't see where it says that.

21   Q   That isn't the implication of the first

22   sentence there?

1   A   The -- it states that there's a subset of

2   patients studied with certain results that they

3   felt did need further testing. It does not go on

4   to state or was it shown or was it the intention

5   of the study to state that if you did well on the

6   TICS, you would never need -- you wouldn't need

7   any additional evaluation at any point. So we've

8   got -- so the -- the inverse -- implying that the

9   inverse is also true is I don't think accurate in

10 this scenario.

11   Q   All right. Now, in reviewing Dr. Filler's

12 initial report, or the second report actually, the

13 reply as well, do you understand that Filler did

14 more than analyze just the C.T. screens?

15   A   Yes.

16   Q   Okay. You didn't look at any -- you

17 didn't form an opinion about any of those other

18 things.

19   A   No.

20   Q   All right, and you have no opinion at all

21 as to whether Judge Newman has experienced

22 cognitive decline or is mentally fit to continue

1   on the bench?

2   A No, I don't have an opinion on her

3   cognitive function.

4   MR. VECCHIONE: All right, I'm going to

5   confer with my colleagues. Other than that, I'm

6   done.

7   (Recessed at 11:51 a.m.)

8   (Reconvened at 11:57 a.m.)

9   MR. VECCHIONE: I have no further

10   questions at this time.

11   EXAMINATION BY COUNSEL FOR THE

12   JUDICIAL COUNCIL OF THE FEDERAL CIRCUIT

13   BY MR. PHILBIN:

14   Q Okay, just a few questions for us.

15   Dr. Johnson, if you could look at Exhibit 2, which

16   was Dr. Filler's report, and I think at one point,

17   Mr. Vecchione had asked you if it was plausible

18   that Dr. Filler didn't know where the hippocampus

19   was, but on the image that's on the front page of

20   his report, he's labeled two spots on this image,

21   one, high focal blood flow in the left hippocampal

22   region, and high focal blood flow in the right

1 hippocampal region. Do those arrows actually

2 point to the hippocampi?

3   A No.

4   Q Okay. Have you ever seen another

5 practitioner label an image like this, a C.T.

6 perfusion label where that's that red area and say

7 that's the hippocampus?

8   A No.

9   Q Or the blood flow in the hippocampus?

10   A No, I've never seen that.

11   Q Okay. I think Mr. Vecchione also asked

12 you, if you could go to page 11 of that --

13 Dr. Filler's initial report, there's a series of

14 gray images down the left side of that image, and

15 I think Mr. Vecchione asked you if you saw a gross

16 abnormality in the brain structure there. My

17 first question though is is this the sort of image

18 that you would use to look for an abnormality in a

19 brain structure?

20   A There's no -- you could use it as a tool

21 to exclude a very -- a very significant

22 abnormality, such as a big tumor, an area of brain

1   that was missing, hemorrhage, prior infarction.

2   So it's meant as a quality assurance tool to

3   understand what's going on with the color maps or

4   the -- the other four columns.

5   Q   Okay, and when you answered his question

6   earlier as to abnormality, was that any

7   abnormality, or are you limiting what you can say

8   about these images to a gross abnormality?

9   A   I'm -- I'm -- it's reasonable that there's

10   no gross abnormality, and if that's a -- that's a

11   challenging statement in a clinical context, to

12   tell one of my colleagues that your patient

13   doesn't appear to have a gross abnormality of

14   their brain because usually they need more detail

15   than that, so therefore, we would -- we wouldn't

16   rely on these.

17   Q   You wouldn't rely on these images --

18   A   No.

19   Q   -- to determine that.

20   A   No.

21   Q   Okay, I think at one point, we were

22   discussing earlier in these perfusion C.T. images

1   normalizing or pseudonormalizing the scale in

2   terms of colors being shown. I just want to ask

3   you a couple questions about that. So if you look

4   at the front of Dr. Filler's report, the first

5   image, the areas that he's pointed to that are

6   red, does the red coloration there indicate

7   something in terms of blood flow against an

8   absolute scale, something like a certain number of

9   milliliters per second or something like that?

10   A No.

11   Q And is that because the way the color is

12 applied is that this individual's perfusion C.T.

13 scan is taken, and the software takes sort of the

14 highest blood flow for this individual and assigns

15 it that -- the red color?

16   A That's correct.

17   Q And so then the colors are distributed

18 from red down to I guess blue just showing high to

19 low for this individual person's blood flow.

20   A Yes.

21   Q So does that mean that -- can you take a

22 blood flow image like this, perfusion C.T. scan

1 and blood flow image from one individual, match it

2 up to another individual or a group of individuals

3 and say see this area's red, they've got the same

4 blood flow as these other people?

5   A No, you shouldn't. That's not accurate.

6   Q And that's because it's not actually an

7 absolute measure. It's just sort of normalized to

8 the individual.

9   MR. VECCHIONE: Objection, leading.

10 BY MR. PHILBIN:

11   Q Well, why is it that you can't compare one

12 to the other, Doctor?

13   A It's normalized to the individual. So as

14 discussed, the highest blood flow is assigned the

15 red color, and the lower blood flows are -- the

16 lowest flood blows are assigned that darker blue

17 color seen in her frontal white matter regions,

18 and then everything in between is scaled

19 proportionally. So all C.T. perfusion maps

20 without significant vascular inflow abnormality

21 will qualitatively look like this.

22   Q Okay. I think at one point, Mr. Vecchione

1   asked you about a hypothetical, assuming that a

2   person could not have an MRI, then would it be

3   reasonable as an alternative to do a C.T. scan.

4   Do you remember that?

5   A Yes.

6   Q And was that referring to a C.T. perfusion

7   scan or a C.T. -- what I'll call a structural C.T.

8   scan?

9   A Referring to doing a structural C.T.

10 examination to -- to look for a possible

11 explanation of the cognitive disfunction that the

12 patient's being evaluated for, it would not be

13 reasonable to perform C.T. perfusion in that

14 scenario.

15   Q And would you -- I think you said that you

16 could do a structural C.T. Would you do a

17 structural C.T. to be determining whether the

18 person had a cognitive impairment?

19   A No.

20   Q So what would you be using the structural

21 C.T. to do?

22   A To help explain or to offer alternative

1   diagnostic possibilities for the patient's

2   presentation, such as an area of infarction,

3   significant microvascular ischemic changes, a

4   tumor. Big subdural hematomas are something we

5   sometimes see in this age that can present as,

6   quote unquote, cognitive impairment or

7   dysfunction. I think that that's what --

8   Q   So does that mean you -- the patient would

9   present as having cognitive impairment that would

10 be determined by some other means?

11   A   Correct.

12   Q   And then you'd be looking at a structural

13 C.T. to look for some anatomical -- I might not

14 use the words exactly correctly. Anatomical or

15 physiological explanation for why there was this

16 observed cognitive deficit?

17   A   Yeah, we use the anatomic, a non-contrast

18 C.T. of the scan ahead, as in this discussion,

19 does -- doesn't provide physiologic information,

20 and so the other one is -- it could provide some

21 degree of prognostication, such as -- and if there

22 were very severe cerebral atrophy, it could help

1   the neurologist or psychiatrist have a discussion

2   with the patient or family members about how well

3   they might likely do with possible treatments.

4   Q Okay. Then I'd like to go back to Exhibit

5   -- well, Exhibit 5 and Exhibit 6. Exhibit 5 was

6   the article. Exhibit 6 was the telephone

7   interview for the cognitive status. So on this

8   article, you are listed as one of many coauthors;

9   is that correct?

10   A Yes.

11   Q Looks like -- I'm guessing from this, but

12   looks like around 20 names potentially there? Is

13   that fair?

14   A More. The very first line is a -- is a

15   working group, and they're probably listed

16   somewhere in the appendix, but yes, at least let's

17   go with 20, at least 20 coauthors.

18   Q And is it fair to say that different

19   physicians working on this paper have different

20   roles --

21   A Yes.

22   Q -- in the paper? And was your role to

1   deliver the telephone interview for cognitive

2   status?

3   A   No.

4   Q   So did you have any occasion in relation

5   to this paper to see the telephone interview for

6   cognitive status or work on it?

7   A   No.

8   Q   And is it your specialty, apart from this

9   study, is it your specialty to be assessing

10   patients for impairment of cognitive status? Is

11   that what you do?

12   A   No, my role is not to diagnose or exclude

13   the possibility of neurocognitive impairment in

14   the setting of suspected or known cognitive

15   impairment. I may be involved in interpreting

16   diagnostic imaging to help understand the

17   presentation, but my role is not to -- to include

18   or exclude the diagnosis of cognitive impairment.

19   Q   And for this study, was it the intention

20   to be using the TICS to diagnose individuals?

21   A   No.

22   MR. PHILBIN: Okay. I don't have any

1   further questions.

2   MR. VECCHIONE: I have no follow-up.

3   MR. PHILBIN: All right, I think we're

4   done.

5   (Off the record at 12:07 p.m.)

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1   ACKNOWLEDGMENT OF DEPONENT

2   I, Jason M. Johnson, M.D., do hereby

3   acknowledge that I have read and examined the

4   foregoing testimony, and the same is a true,

5   correct and complete transcription of the

6   testimony given by me, and any corrections appear

7   on the attached errata sheet signed by me.

8

9   _____   _____

10

11   (DATE)   (SIGNATURE)

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1    CERTIFICATE OF SHORTHAND REPORTER - NOTARY PUBLIC

2         I, Karen Young, the officer before whom

3    the foregoing deposition was taken, do hereby

4    certify that the foregoing transcript is a true

5    and correct record of the testimony given; that

6    said testimony was taken by me stenographically

7    and thereafter reduced to typewriting under my

8    supervision; and that I am neither counsel for or

9    related to, nor employed by any of the parties to

10   this case and have no interest, financial or

11   otherwise, in its outcome.

12        IN WITNESS WHEREOF, I have hereunto set my

13   hand and affixed my notarial seal this 7th day of

14   June, 2025.

15   Karen Young

16

17   _____

18   NOTARY PUBLIC IN AND FOR

19   THE DISTRICT OF COLUMBIA

20

21   My commission expires:

22   September 14, 2029
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