

1 UNITED STATES PATENT AND TRADEMARK OFFICE
 2
 3 BEFORE THE PATENT TRIAL AND APPEAL BOARD
 4
 5 MEDTRONIC, INC., AND, MEDTRONIC VASCULAR, INC.,
 6 Petitioner,
 7 v.
 8 TELEFLEX LIFE SCIENCES LIMITED,
 9 Patent Owner.
 10 Case No. IPR2020-01341
 11 Case No. IPR2020-01342
 12 Case No. IPR2020-01343
 13 Case No. IPR2020-01344
 14 U.S. Patent No. 8,142,413
 15
 16 DEPOSITION OF DR. JOHN J. GRAHAM, MB ChB, MRCP (UK)
 17 VOLUME I, PAGES 1 - 118
 18 JUNE 30, 2021
 19
 20 (The following is the deposition of DR.
 21 JOHN J. GRAHAM, MB ChB, MRCP (UK), taken pursuant to
 22 Notice of Taking Deposition, conducted remotely and
 23 via videotape, commencing at approximately 7:55
 24 o'clock a.m., June 30, 2021.)
 25

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 21 EXAMINATION INDEX
 22 WITNESS EXAMINED BY PAGE
 23 Dr. Graham Mr. Morton 3
 24 Ms. Jonas 112
 25
 26 EXHIBIT INDEX
 27 DESCRIPTION PAGE
 28 Medtronic 1127 Article, Mani, "Novel Use of a
 29 Guide Extension Mother-and-Child
 30 Catheter for Adjunctive
 31 Thrombectomy During Percutaneous
 32 Coronary Intervention for Acute
 33 Coronary Syndromes," 6 pgs.
 34
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07:55:37 1 PROCEEDINGS
 07:55:37 2 THE VIDEOGRAPHER: We're on video.
 3 THE REPORTER: We are on the record.
 4 Before I swear -- Before I swear the witness I would
 5 like to state for the record it is my understanding
 6 there is no objection to swearing the witness
 7 remotely. Please speak up only if you have an
 8 objection.
 9 Hearing none; Dr. Graham, would you raise
 10 your right hand to be sworn?
 11 (Witness sworn.)
 12 DR. JOHN J. GRAHAM, MB ChB, MRCP (UK),
 13 Called as a witness, being first
 14 duly sworn, was examined and
 15 testified as follows:
 16 EXAMINATION
 17 BY MR. MORTON:
 07:56:23 18 Q. Good morning, Dr. Graham.
 07:56:26 19 A. Good morning.
 07:56:28 20 Q. Obviously you've had your deposition taken a
 07:56:30 21 couple times before, so I'm not going to go over
 07:56:33 22 everything that we've discussed in the past, but I do
 07:56:37 23 have a few things to discuss with you this morning.
 07:56:39 24 Do you have the documents that we shipped
 07:56:43 25 over?
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07:56:44 1 A. Yes. They just arrived last night, yes.
 07:56:47 2 Q. Okay. Good. Do you have your declaration
 07:56:52 3 handy?
 07:56:53 4 A. I've not opened the documents, so if I can
 07:56:57 5 -- Can I open it just now?
 07:56:59 6 Q. Yes, please.
 07:57:01 7 A. (Witness complying.) There was a Secure
 07:57:10 8 DocuShare sent yesterday evening, and I've just
 07:57:14 9 accessed that, and my declaration I saw was included
 07:57:17 10 in that.
 07:57:20 11 Q. Yeah, whichever is easier for you to look
 07:57:22 12 at. I'm looking at hard copies, so.
 07:57:40 13 A. Okay. Exhibit 2145. I have my declaration.
 07:57:56 14 Q. Okay. The first topic I want to cover is
 07:58:02 15 the -- your definition of an "interventional
 07:58:05 16 cardiology device," so that starts at paragraph 92 of
 07:58:09 17 your declaration, and you give your definition in
 07:58:15 18 paragraph 98.
 07:58:16 19 Are you with me?
 07:58:16 20 A. Intervention --
 07:58:26 21 Yes, I am there, 98.
 07:58:29 22 Q. Okay. So your definition of an
 07:58:31 23 interventional cardiology device is, "a device that is
 07:58:36 24 delivered beyond the end of the guide extension
 07:58:39 25 catheter to a location in the cardiac vasculature
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07:58:43 **1** requiring treatment, to provide treatment to that
 07:58:47 **2** location"; right?
 07:58:49 **3** **A.** Correct.
 07:58:51 **4** **Q.** And so the first topic I want to discuss
 07:58:53 **5** there is your inclusion twice of the word "treatment,"
 07:58:57 **6** okay?
 07:59:03 **7** **A.** Yes.
 07:59:05 **8** **Q.** So in your paragraph 95 you note that the
 07:59:09 **9** specification of the patents, you said, uses the terms
 07:59:15 **10** "cardiac treatment device," "interventional cardiology
 07:59:19 **11** treatment device," and "interventional cardiology
 07:59:23 **12** device" interchangeably. Do you see that?
 07:59:25 **13** **A.** I do, yes.
 07:59:27 **14** **Q.** Now two of those terms use the word
 07:59:30 **15** "treatment"; right?
 07:59:32 **16** **A.** Correct.
 07:59:33 **17** **Q.** And one does not, "interventional cardiology
 07:59:36 **18** device" does not say "treatment."
 07:59:37 **19** **A.** Correct.
 07:59:39 **20** **Q.** And that's the term that we are defining is
 07:59:42 **21** "interventional cardiology device," the one that does
 07:59:45 **22** not say "treatment"; right?
 07:59:49 **23** **A.** Could you be more specific? What do you
 07:59:51 **24** mean, that is the one we are defining?
 07:59:53 **25** **Q.** Well this whole section of your report is
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07:59:55 **1** about defining what an interventional cardiology
 07:59:58 **2** device is; right?
 08:00:02 **3** **MS. JONAS:** Object to the form.
 08:00:03 **4** **A.** Yes, the heading of Section VII on page 46
 08:00:08 **5** does say, under headline A, "Interventional Cardiology
 08:00:12 **6** Device."
 08:00:13 **7** **Q.** Right. So we're defining that term; right?
 08:00:18 **8** **A.** I am, yes.
 08:00:19 **9** **Q.** Okay. And you say there's three terms, I
 08:00:23 **10** just read them, that are used interchangeably. Two of
 08:00:26 **11** them say "treatment," and the one you're defining does
 08:00:28 **12** not say "treatment"; right?
 08:00:29 **13** **MS. JONAS:** Object to form.
 08:00:33 **14** **A.** So although heading A on page 46 under --
 08:00:38 **15** Subheading A, under heading VII,
 08:00:40 **16** "Interventional Cardiology Device," in paragraph 95
 08:00:44 **17** they are interchangeable. So a cardiac treatment
 08:00:49 **18** device, interventional cardiology treatment device and
 08:00:53 **19** an interventional cardiology device I think of
 08:00:55 **20** interchangeable, but heading "A" states
 08:00:59 **21** "Interventional Cardiology Device."
 08:01:02 **22** **Q.** Okay. And so you think they all require
 08:01:04 **23** treatment, even though two of them say "treatment,"
 08:01:07 **24** and one of them does not say "treatment"; right?
 08:01:10 **25** **A.** Well they not -- they probably don't require
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08:01:14 **1** treatment, they are providing treatment.
 08:01:17 **2** **Q.** So let's explore that a little.
 08:01:20 **3** So they don't require that the device
 08:01:22 **4** provides treatment?
 08:01:24 **5** **A.** That's not what you said. Sorry, you said
 08:01:26 **6** "they require treatment." You are implying that the
 08:01:29 **7** device would require treatment is what I was
 08:01:31 **8** understanding you to say, but the device is providing
 08:01:34 **9** treatment.
 08:01:35 **10** **Q.** Okay. So for two of these they explicitly
 08:01:39 **11** say the device provides treatment, "cardiac treatment
 08:01:42 **12** device" and "interventional cardiology treatment
 08:01:44 **13** device." Do you see that?
 08:01:46 **14** **A.** I do see that, yes.
 08:01:48 **15** **Q.** But the term you're defining,
 08:01:49 **16** "interventional cardiology device," does not use the
 08:01:52 **17** word "treatment," doesn't say the device has to
 08:01:56 **18** provide treatment; correct?
 08:01:58 **19** **A.** That is --
 08:01:58 **20** **MS. JONAS:** Object to the form.
 08:01:59 **21** **A.** That is correct.
 08:02:01 **22** **Q.** Okay. But nevertheless, when you define it,
 08:02:04 **23** you say it does require treatment, or providing
 08:02:07 **24** treatment.
 08:02:08 **25** **A.** So as you mentioned, in paragraph 95 there
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08:02:11 **1** are two explicit uses of the word "treatment," and the
 08:02:15 **2** final one, the "interventional cardiology device," I
 08:02:17 **3** -- I would think that a POSITA would accept that that
 08:02:23 **4** is an implicit requirement of using treatment.
 08:02:29 **5** **Q.** Okay. But given that it does not say
 08:02:31 **6** "treatment," while the other ones do say "treatment,"
 08:02:34 **7** wouldn't a POSITA reasonably infer that it may or may
 08:02:39 **8** not provide treatment if it's an interventional
 08:02:43 **9** cardiology device?
 08:02:45 **10** **MS. JONAS:** Object to form.
 08:02:46 **11** **A.** I don't agree with that.
 08:02:52 **12** **Q.** What's your basis for saying it's used
 08:02:54 **13** interchangeably, when two of them actually say
 08:02:57 **14** "treatment," and one of them explicitly does not?
 08:03:02 **15** **A.** So in the field of cardiology there are
 08:03:07 **16** phrases that are used that are --
 08:03:11 **17** So interventional car -- cardiology in
 08:03:14 **18** general, and interventional cardiology especially is a
 08:03:17 **19** global specialty, subspecialty, and at meetings there
 08:03:23 **20** are phrases that are used frequently that are
 08:03:26 **21** interchangeable. And I think that a POSITA would
 08:03:32 **22** accept that the three phrases are interchangeable.
 08:03:38 **23** Do I have an -- a dictionary definition that
 08:03:41 **24** says they're interchangeable? No. But a POSITA, I
 08:03:47 **25** would argue, would use these interchangeably globally.
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08:03:51 **1** Q. Okay. It's certainly true that there are
 08:03:55 **2** devices that are used in interventional cardiology
 08:03:57 **3** that do not provide treatment; right?
 08:04:00 **4** MS. JONAS: Object to form.
 08:04:04 **5** A. In any interventional cardiology procedure
 08:04:08 **6** there are things that are used in the procedure that
 08:04:11 **7** would not provide treatment. In my previous
 08:04:16 **8** deposition I mentioned the scrubs that I wear, they
 08:04:18 **9** are essential for the procedure for sterility, but
 08:04:22 **10** they do not provide treatment. So there are facets
 08:04:27 **11** and as -- and pieces of equipment that are essential,
 08:04:31 **12** but do not provide "treatment" as I'm defining in this
 08:04:36 **13** part of my declaration.
 08:04:38 **14** Q. Okay. Well let's set aside scrubs and talk
 08:04:42 **15** about devices inside the body.
 08:04:43 **16** There are certainly devices that are used
 08:04:46 **17** inside the body in interventional cardiology that do
 08:04:50 **18** not provide treatment; right?
 08:04:51 **19** MS. JONAS: Object to the form.
 08:04:55 **20** A. There are devices that are essential to the
 08:04:58 **21** procedure that do not provide treatment in the
 08:05:00 **22** coronary artery.
 08:05:02 **23** Q. Okay. Can you give some examples?
 08:05:05 **24** A. So when you start the procedure the first
 08:05:08 **25** thing that you do is place a sheath in an artery;

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08:05:14 **1** radial artery or femoral artery or whatever other
 08:05:17 **2** artery you're using, brachial or whatever. And that
 08:05:22 **3** is a te -- usually, typically, a 10 centimeter sheath.
 08:05:27 **4** And that goes nowhere near the heart, but it's in the
 08:05:30 **5** body, and it's essential for the procedure.
 08:05:34 **6** Q. Okay. Can you give me some more examples?
 08:05:43 **7** A. Okay. The guide catheter that we use is
 08:05:49 **8** advanced through the arterial system to the ascending
 08:05:52 **9** aorta and is engaged in the ostium of the coronary
 08:05:56 **10** artery, and that is essential for the procedure but is
 08:06:00 **11** not an interventional cardiology device. That guide
 08:06:04 **12** catheter is advanced over a large bore wire, usually
 08:06:10 **13** 35 or 30 thousandths of an inch, and that is essential
 08:06:15 **14** for the procedure but it does not provide treatment to
 08:06:19 **15** the lesion in question.
 08:06:21 **16** Q. Okay. Are there other devices used in
 08:06:24 **17** interventional cardiology that you would say are not
 08:06:29 **18** interventional cardiology devices?
 08:06:32 **19** MS. JONAS: Object to form.
 08:06:33 **20** A. There may well be. I -- I can go through my
 08:06:38 **21** declaration. I talk about devices that are
 08:06:42 **22** interventional devices, there may well be others, but.
 08:06:48 **23** I can go away and think about it and come back and
 08:06:52 **24** give you a list, which may not be exhaustive, but I
 08:06:56 **25** could do that.

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08:06:58 **1** Q. Yeah. I'm just looking to see if you have
 08:07:00 **2** any other examples based on your experience and the
 08:07:03 **3** many procedures that you've done.
 08:07:06 **4** A. Okay. So if you're doing a high-risk case,
 08:07:12 **5** a patient who has impaired ventricular function or is
 08:07:16 **6** very unwell or they have very complex anatomy such
 08:07:20 **7** that you think there is a risk of hemodynamic
 08:07:24 **8** cardiovascular collapse during the procedure, then you
 08:07:27 **9** can place a form of mechanical circulatory support
 08:07:32 **10** that would usually typically be an intraaortic balloon
 08:07:36 **11** pump which is placed in the aorta, by its name, or a
 08:07:41 **12** left ventricular assist device, which is commonly
 08:07:44 **13** called an impeller, which is placed through the
 08:07:47 **14** femoral artery into the heart itself. And in extreme
 08:07:52 **15** cases you would place someone in extracorporeal
 08:07:57 **16** membranous oxygenation, abbreviated to ECMO, and they
 08:07:59 **17** are very invasive interventional procedures using big
 08:08:05 **18** devices, but I would not classify them as an
 08:08:07 **19** interventional treatment device. Those devices are
 08:08:10 **20** used to stabilize the heart to allow treatment to take
 08:08:16 **21** place in the coronary artery that you're interested
 08:08:19 **22** in.
 08:08:30 **23** Q. All right. Do you have any other examples
 08:08:32 **24** that are used in, I guess I would say, more standard
 08:08:35 **25** interventional cardiology procedures that are devices

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08:08:41 **1** used in interventional cardiology, but are not
 08:08:43 **2** "interventional cardiology devices" according to your
 08:08:46 **3** definition?
 08:08:47 **4** MS. JONAS: Object to form.
 08:08:49 **5** A. I've given a few examples. I really would
 08:08:54 **6** have to go away and think about this. That wa -- They
 08:08:58 **7** were just three, four or five off the top of my head.
 08:09:04 **8** Q. Okay. Let's focus then on the word that you
 08:09:08 **9** used in your definition, of "treatment."
 08:09:14 **10** What does that mean, "provide treatment"?
 08:09:22 **11** A. Within my field of interventional
 08:09:25 **12** cardiology, "treatment" would be -- So I talk about
 08:09:32 **13** this in the background. The field of interventional
 08:09:35 **14** cardiology, as directed towards coronary artery
 08:09:40 **15** disease, is aimed at relieving a blockage in an
 08:09:45 **16** artery, so treatment would involve relieving that
 08:09:48 **17** blockage.
 08:09:53 **18** Q. Okay. Is another word --
 08:09:55 **19** I know a word you use a lot in here is
 08:09:58 **20** "therapy" or "therapeutic." Is it providing direct
 08:10:01 **21** therapy to a lesion or a blockage in an artery, is
 08:10:05 **22** that what "treatment" means?
 08:10:08 **23** MS. JONAS: Object to form.
 08:10:15 **24** A. Most people would say treatment --
 08:10:21 **25** I'm -- I'm thinking of a derivation of

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08:10:23 **1** treatment and therapy. I can't remember if they're
 08:10:26 **2** both related in their derivation.
 08:10:41 **3** I think in our field most people would say
 08:10:44 **4** "treatment," but "therapy" potentially could be used.
 08:10:47 **5** It would be quite unusual to use it.
 08:10:52 **6** **Q.** Okay. So just want to make sure I got it
 08:10:56 **7** right. Your -- Your definition of --
 08:10:59 **8** Your understanding of what it means to
 08:11:00 **9** "provide treatment" was provide relief for a -- a
 08:11:09 **10** lesion or a blockage in an artery; is that right?
 08:11:12 **11** MS. JONAS: Object to the form.
 08:11:13 **12** **A.** That may have been the wording that I said,
 08:11:16 **13** but to expand on that, it would be maybe not "relief,"
 08:11:21 **14** I said maybe "alleviate the blockage," but you would
 08:11:25 **15** want to -- to effectively open up a blocked artery,
 08:11:32 **16** whether it be 80, 90 or a hundred percent blocked.
 08:11:42 **17** **Q.** Okay. So I'll try to go with that.
 08:11:45 **18** "Treatment" is -- is alleviating a blockage or opening
 08:11:48 **19** up a blockage in an artery.
 08:11:54 **20** And so --
 08:11:54 **21** **A.** Usually -- When I say "artery," it could be
 08:11:58 **22** a vascular structure -- in the heart. We usually say
 08:12:03 **23** "artery," but it could be a bypass graft, which would
 08:12:07 **24** be venous usually, unless it was a mammary arterial
 08:12:12 **25** graft. So we conventionally say "artery," but it
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08:12:15 **1** could be a venous bypass graft.
 08:12:25 **2** **Q.** Okay. So if a device is used in
 08:12:31 **3** interventional cardiology, but that device itself is
 08:12:34 **4** not what's used to alleviate a blockage, then it's not
 08:12:40 **5** an interventional cardiology device; is that right?
 08:12:47 **6** **A.** So in this -- where did we say, paragraph
 08:12:53 **7** 98. So I would say that it's "a device that is
 08:12:59 **8** delivered beyond the end of the guide extension
 08:13:01 **9** catheter to a location in the cardiac vascular
 08:13:05 **10** requiring treatment, to provide treatment to that
 08:13:06 **11** location." And we've already agreed, when you asked
 08:13:10 **12** me earlier, that guide catheters and the introducer
 08:13:14 **13** sheath, and the long exchange-length wire are not
 08:13:19 **14** interventional cardiology devices, but from what you
 08:13:22 **15** just said there, the -- you made it sound as if any
 08:13:26 **16** piece of equipment we use in the procedure is an
 08:13:29 **17** interventional cardiology device, but I've already
 08:13:31 **18** said that that's not the case.
 08:13:34 **19** **Q.** Okay. So I think you mentioned three
 08:13:36 **20** things. You're saying the sheath is not an
 08:13:38 **21** interventional cardiology device?
 08:13:42 **22** **A.** Correct.
 08:13:44 **23** **Q.** And the guide catheter is not an
 08:13:47 **24** interventional cardiology device?
 08:13:50 **25** **A.** Agreed.
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08:13:51 **1** **Q.** And the full-length guidewire is not an
 08:13:53 **2** interventional cardiology device?
 08:13:55 **3** MS. JONAS: Object to the form.
 08:13:57 **4** **A.** The 035 or large-bore guidewire that you use
 08:14:03 **5** to put the guide catheter in is not an interventional
 08:14:06 **6** cardiology device for the reasons I state in 98.
 08:14:10 **7** **Q.** Okay. Are there other guidewires that you
 08:14:12 **8** think are interventional cardiology devices?
 08:14:16 **9** **A.** So within this, the devices that we say are
 08:14:21 **10** an interventional cardiology devices includes
 08:14:25 **11** guidewires, balloons, stents and stent catheters. So
 08:14:31 **12** coronary guidewires would be classified as an
 08:14:34 **13** interventional cardiology device.
 08:14:36 **14** **Q.** Okay. Well I'm just trying to figure out
 08:14:39 **15** where the line is.
 08:14:40 **16** So now it sounds like some guidewires that
 08:14:42 **17** are used in interventional cardiology are
 08:14:46 **18** interventional cardiology devices, but other
 08:14:48 **19** guidewires used in interventional cardiology are not
 08:14:52 **20** interventional cardiology devices. Is that right?
 08:14:55 **21** MS. JONAS: Object to the form.
 08:14:58 **22** **A.** That would be one way of describing it.
 08:15:01 **23** Again, as I said, there are pieces of equipment that
 08:15:05 **24** you must use in the procedure but it's not an
 08:15:08 **25** interventional cardiology device, and you -- you made
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08:15:13 **1** the distinction of a device that's placed into the
 08:15:15 **2** body, but there are numerous devices essential to the
 08:15:19 **3** procedure that don't go in the body. And again, there
 08:15:23 **4** are pieces of equipment that go into the body that are
 08:15:26 **5** not interventional cardiology devices.
 08:15:30 **6** **Q.** Okay.
 08:15:30 **7** **A.** And I actually just thought of a couple
 08:15:32 **8** more. So at the end of the procedure if you're going
 08:15:35 **9** the femoral arterial route, occasionally you may seal
 08:15:39 **10** the hole in the artery, in the femoral artery, with a
 08:15:43 **11** closure device; essential for the procedure, but goes
 08:15:46 **12** nowhere near the lesion needing treatment in the
 08:15:50 **13** coronary artery, does not go past it, so it is not an
 08:15:56 **14** interventional cardiology device, treat -- treatment
 08:15:59 **15** device, interventional cardiology device.
 08:16:04 **16** **Q.** Okay. So I'm understanding your definition
 08:16:10 **17** a little bit better. Devices that are used in cardiol
 08:16:14 **18** -- interventional cardiology that are essential for
 08:16:16 **19** the procedure but don't go beyond the guide catheter
 08:16:26 **20** are not interventional cardiology devices?
 08:16:29 **21** MS. JONAS: Object to form.
 08:16:31 **22** **A.** I don't think that's what I said. You may
 08:16:35 **23** have misheard me, or maybe I misspoke. But I think in
 08:16:44 **24** 98, paragraph 98 is delivered beyond the end of the
 08:16:49 **25** guide catheter to a location in the cardiac
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08:16:53 **1** vasculature requiring treatment, and to allow -- or to
 08:16:57 **2** provide treatment to that location.
 08:17:01 **3** **Q.** I understood that.
 08:17:03 **4** And my understanding of what you're telling
 08:17:05 **5** me is that there are all these devices that are
 08:17:08 **6** essential for an interventional cardiology procedure,
 08:17:13 **7** but they are not interventional cardiology devices,
 08:17:18 **8** under your definition, because they don't extend past
 08:17:22 **9** the guide catheter in the area of the lesion or the
 08:17:25 **10** blockage that requires treatment.
 08:17:28 **11** MS. JONAS: Object to form.
 08:17:29 **12** **Q.** Is that right?
 08:17:33 **13** **A.** So that is what I wrote in 98, yes.
 08:17:37 **14** **Q.** Okay.
 08:17:38 **15** **A.** So an interventional device is one that goes
 08:17:40 **16** beyond the end of the catheter to the lesion, to
 08:17:43 **17** provide treatment to the lesion.
 08:17:45 **18** **Q.** Okay. So if a -- if a device that's
 08:17:48 **19** essential for an interventional cardiology procedure
 08:17:52 **20** goes beyond the end of the guide catheter, then it
 08:17:58 **21** becomes an interventional cardiology device?
 08:18:02 **22** MS. JONAS: Object to form.
 08:18:04 **23** **A.** I'm sorry, that's not what 98 says.
 08:18:12 **24** **Q.** I know, but we've been talking about this
 08:18:14 **25** for awhile and I thought that's what you said, that's
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08:18:16 **1** the distinction you've been making. And I'm just
 08:18:21 **2** trying to find where that line is, where these devices
 08:18:24 **3** that are used in interventional cardiology get to a
 08:18:27 **4** point where they become interventional cardiology
 08:18:30 **5** devices.
 08:18:34 **6** MS. JONAS: Object to the form. Counsel,
 08:18:47 **7** is there a question pending?
 08:18:52 **8** MR. MORTON: Yes.
 08:18:52 **9** MS. JONAS: Okay.
 08:18:59 **10** **Q.** Do you understand the question, Dr. Graham?
 08:19:01 **11** **A.** I'm sorry, I did not get it. I didn't
 08:19:05 **12** realize it was a question. I do apologize, I'm sorry.
 08:19:07 **13** **Q.** Okay. You've given me a number of examples
 08:19:10 **14** of devices that are used in interventional cardiology
 08:19:15 **15** that you've said are not interventional cardiology
 08:19:18 **16** devices because they don't extend past the guide
 08:19:24 **17** catheter and -- and get out, you know, near a lesion
 08:19:29 **18** or a blockage for providing treatment; right?
 08:19:31 **19** MS. JONAS: Object to form.
 08:19:33 **20** **A.** In 98 that's what we say, beyond the guide
 08:19:38 **21** catheter to the lesion -- or to the location requiring
 08:19:41 **22** treatment, to provide treatment, yes.
 08:19:43 **23** **Q.** Right. And so this is how you've kind of
 08:19:47 **24** split the difference between a guidewire used to
 08:19:53 **25** insert the guide catheter you've said is not an
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08:19:57 **1** interventional cardiology device because it doesn't go
 08:20:00 **2** beyond the end of the guide catheter, but then other
 08:20:04 **3** guidewires that do go beyond the end of the guide
 08:20:07 **4** catheter, those become interventional cardiology
 08:20:11 **5** devices; right?
 08:20:13 **6** MS. JONAS: Object to form.
 08:20:15 **7** **A.** That's what I say in my dec -- in my
 08:20:18 **8** declaration, yes.
 08:20:19 **9** **Q.** Okay. And so that's what I'm trying to get
 08:20:22 **10** to understand.
 08:20:23 **11** So if you have a device that's important or
 08:20:26 **12** essential for an interventional cardiology procedure
 08:20:29 **13** and that device protrudes past the end of the guide
 08:20:34 **14** catheter, that's when it becomes an interventional
 08:20:38 **15** cardiology device under your definition.
 08:20:43 **16** MS. JONAS: Object to form.
 08:20:44 **17** **A.** Well every time I say my definition, you
 08:20:49 **18** then put it back to me by saying extends out the end
 08:20:54 **19** of the guide catheter, but then you omit anything
 08:20:57 **20** about the lesion needing treatment.
 08:21:04 **21** So my definition of an interventional
 08:21:06 **22** cardiology device is something that goes beyond the
 08:21:08 **23** end of the guide catheter down to the lesion, to
 08:21:11 **24** provide treatment to the lesion. It is not just
 08:21:14 **25** coming out the end of the guide catheter, because the
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08:21:17 **1** 038 wires come out the end of the guide catheter,
 08:21:21 **2** that's how they're safe, it avoids trauma to the
 08:21:25 **3** aorta, but they don't go into the coronary artery, and
 08:21:27 **4** they don't provide treatment to the coronary artery.
 08:21:32 **5** Everything else that I mention there provides
 08:21:34 **6** treatment to the coronary artery.
 08:21:40 **7** **Q.** Okay. So your definition of an
 08:21:43 **8** interventional cardiology device is a device that
 08:21:47 **9** extends past the end of the guide catheter and
 08:21:49 **10** provides treatment to a lesion.
 08:21:52 **11** MS. JONAS: Object to form.
 08:21:56 **12** **A.** Comes out the end of the guide catheter to a
 08:22:02 **13** location in the cardiac vasculature requiring
 08:22:04 **14** treatment, to provide treatment to that location, yes,
 08:22:08 **15** that is what I say.
 08:22:10 **16** **Q.** Okay. Let's talk then specifically about
 08:22:13 **17** the guidewires that are advanced past the end of the
 08:22:18 **18** guide catheter out near the lesion, okay?
 08:22:22 **19** **A.** Umm-hmm.
 08:22:28 **20** **Q.** You've testified previously that you've
 08:22:31 **21** never used a guidewire to provide treatment; right?
 08:22:34 **22** **A.** I --
 08:22:34 **23** MS. JONAS: Object to the form.
 08:22:35 **24** **A.** I think I said that I did, or I have done.
 08:22:41 **25** **Q.** All right. Well we can certainly check the
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