Q.

That's fine. That will help. 1 THE COURT: So right now, in order -- in 2 THE WITNESS: order for Mr. Jaffe to remain stationary, I can lean on 3 him and he resists. If I want to move him, I have to overcome his inertia, and I have to overcome the 5 stability inherent in him from his stance held there by So by pushing him, I make him move. 7 8 introduced a component of acceleration that he probably chose not to overcome, but it's overcomeable depending 9 on how hard you push. 10 11 And the same thing is true in terms of 12 inducing g's on yourself. When you plop down in a seat, you create roughly 2, 2 1/2 g's, on your system. 13 If I give him a slap on his back, that's about 3 q's. 14 So these are comparable accelerations that can be 15 imparted from depending on what you do. 16 17 BY MR. JAFFE: So then when you just pushed me and moved me 18 19 to my side, did you have to impose more than 1 g of force to do that? 20 2.1 A. Yes. So, in other words, to overcome my 22 Q. Okay. position, my standing --23 2.4 A. Yes.

-- more than 1 g has to be used. Otherwise,

2.4

less than a g, and I'm going to stay right where I am.

- A. Well, it's more complex than that, but simply speaking, that's true.
- Q. Okay. Is there a difference -- well, okay. You know what, thank you. Why don't you sit down, Doctor.

Let's put it in terms — some other terms.

So, for example, if we were going to be backing our car into a parking space and there's a car stop, and we know there's going to be a car stop at some point, but we hit the car stop and we're moving at 5 miles an hour —

- A. Right.
 - Q. -- would you explain the physics of that.
- A. So the car stop is very analogous to a barrier. It stops you and it stops you now. The car stop isn't going to be deformed, but you are going to feel a jolt. I mean, your tires might take it without deformation, but you're going to feel a jolt. And if you're backing up at 5 miles an hour and you suddenly get stopped, you've now incurred a 5-mile-an-hour change in velocity. Which it now goes to the same procedures that I indicated will be around on the order of -- we said 7 g's was 3 -- 7-miles-an-hour delta-v was 3 g's; 5-mile-an-hour change in velocity will be

Q.

around 2 1/2 g's, 2 to 2 1/2. -2 Okay. Now, do you have an opinion as to the 3 amount of g-forces imposed upon the plaintiff in the collision that we're here for? 5 A. Yeah. Roughly 3 g's, more or less. 6 0. Now, yesterday -- you know what, let's --7 let's go -- let's go to the next one. 8 Okay. Did you have an opportunity to compare 9 the damage of the plaintiff's vehicle versus the damage 10 in the IIHS and BRC crash test? 11 Α. Yes. I have already stated so, yes. 12 And does that damage comparison allow Q. Right. 13 you to draw an -- an analogous comparison to the forces on her? 14 15 Right, it does. Α. 16 Q. So were the forces that you just said, this 17 3 g's of force, consistent with the same type of test 18 performed at roughly the same speed as this accident 19 that was done by IIHS and BRC? 20 A. Yes, it did. 21 0. Now, let's take a look at the photographs. 22 You have got those in front of you. Are those the 23 photographs you have seen? 24 A. Yes.

And are those consistent with that same type

of barrier force? 7 (Clarification by the Reporter.) 2 3 Pole impact, p-o-l-e. THE WITNESS: This is a focal area of damage. It's not broadly distributed. 4 BY MR. JAFFE: 5 Now, sir, you're aware that Dr. Croft told us 6 that the plaintiff experienced between 14 and 25 g's of 7 force on her neck in this accident and between 18 and 19.5 g's on her back? Α. Yes. 10 11 Do you agree or disagree with that? Q. I disagree with that. 12 A. I told the jury in my opening 13 Q. statement that you were going to do an analysis 14 15 regarding q-forces in a plane crash. 16 Α. Yes. 17 Your Honor, we have disclosed in MR. JAFFE: our ninth supplement a videotape of a plane crash which 18 19 was measured in g-forces which we would like to show 20 excerpts of right now. 21 THE COURT: Any objection? 22 MR. CLOWARD: No. 23 MR. JAFFE: And I believe -- was the video 24 marked as an exhibit? 25 MR. SMITH: Yes.

1 I just want to move that exhibit MR. JAFFE: 2 into evidence, Your Honor. 3 THE COURT: Any objection to them admitting 4 into evidence? 5 MR. CLOWARD: No. 6 THE COURT: Do you know which exhibit it is? 7 MR. JAFFE: We're going to check it right 8 Well, it's what? now. M? 9 MR. SMITH: FF. 10 MR. JAFFE: FF? Double F? 11 MR. SMITH: Correct. 12 French fry? FF. MR. JAFFE: 13 THE COURT: Double F will be admitted. 14 MR. JAFFE: Thank you, sir. 15 (Whereupon, Defendant's Exhibit FF was 16 admitted into evidence.) 17 BY MR. JAFFE: 18 Now, tell us what we're about to see, Doc. Q. 19 Sometime in 2012 the Discovery Channel wanted 20 to do a -- demonstrate what happens during a crash test 21 of a Boeing 727. So they bought one instrumented with 22 various accelerometers, things that measure 23 acceleration, including a series of Hybrid III dummies 24 both in what would be the first class section and then 25. further back in the middle and in the -- way in the

1 back. And then they got a couple of pilots to take this up and had permission from the Mexican government 3 to land in some desert strip to crash it. And the Boeing 727, as you may know, has 4 5 that -- that staircase you can lower at the back end. So once the pilots had it on course, there was an accompanying plane that took over remote control of the plane, and the pilots bailed out via the stair step and 8 parachuted down. And now the plane's flying on its 10 own. This crash test was shown back in 11 12 October 2012 and aired many, many, many times. whole bunch of people have seen it and some of you 13 might have. 14 Go ahead, Greq. Let's play it. 15 MR. JAFFE: (Whereupon video deposition was played.) 16 17 THE WITNESS: So here's the companion plane you see in the background that is now remote control 18 19 steering the Boeing 727. MR. JAFFE: What happened? Hit it again. 20 21 (Whereupon video deposition was played.) 22 MR. CLOWARD: Judge, can we stop that? May 23 we approach? THE COURT: Pause it. 24 25 MR. JAFFE: Pause it.

7 THE COURT: Come on up. 2 (Whereupon a brief discussion was 3 held at the bench.) 4 THE COURT: Overruled. 5 MR. JAFFE: You want to finish playing it. 6 Because of the format it was in, it's just going to take a second to find the approximate spot it was in, Judge. Thank you. BY MR. JAFFE: 10 Q. While he's doing that, Dr. Smith, explain to 11 us -- explain for us, what is the significance of this 12 video? 13 A. Yeah. The video had instrumented dummies in 14 it that were doing measurements during the crash. 15 heretofore has not been done, and if the military has 16 done that, they never let the secret out. 17 crashing this plane, the producers of the program 18 wanted to show how high the q's can go and, also, what 19 g's are survivable in a crash like this. 20 MR. JAFFE: Okay. We have -- we have got the 21 spot now. So let's finish playing it. Go ahead. 22 (Whereupon video deposition was played.) 23 BY MR. JAFFE: 24 Q. Okay. Now, Doctor, did we -- did you want 25 to -- did you point out this video to illustrate what

Q.

Okay.

the amount of g-forces generally are? 1 Yes. Also, what is considered injurious and 3 what is considered essentially noninjurious. group of people in the tail section at about 6 g's which is, by my calculation, still twice what Ms. Seastrand received, as they pointed out, is no more than a minor fender bender that is essentially without 8 injuries. 9 Now, in light of this test, would you explain for us how it is that you -- well, what you believe --11 believe about Dr. Croft's analysis of the g-forces. Dr. Croft's analysis shows that he 12. Yeah. believes there were 14 to 25 g's at work on 13 14 Ms. Seastrand. That is more than twice -- at least the 25 g level, that is more than twice what the section in 15 16 first class saw in this Boeing 727 crash. And --17 Q. And as many as ---- it's not credible. 18 Α. 19 And as many as four times the forces of the 20 people in the rear? 2.1 Α. Correct, yes. 22 Q. Do you know how it is that Dr. Croft generated his 24 -- 14 to 25 and 18 to 19.5 g analysis? 23 24 A. Yes.

Now, I want to make sure that we



understand a particular term because it was thrown about yesterday, and I want to make sure that we all understand it.

So tell us what crash pulse is and why that is so important for this type of an analysis.

- A. The crash pulse is the contact phase that two cars have in a collision.
- Q. From the moment they make contact till the moment they disconnect?
- A. From the moment they make contact till the moment they disengage, that is the crash pulse. That's when the transfer of energy and forces takes place.
- Q. Now, when I was questioning Dr. Croft about this yesterday, I was asking him about crash pulse for the purposes of the exact same computer program that you relied on PC-Crash and MADYMO. That's M-A-D-Y-M-O.

So how does crash pulse apply when it comes to using those programs to determine the forces a person experiences in an accident?

A. We don't -- just a small correction. We don't use PC-Crash because it's too easily manipulated, but we know how it is supposed to be used.

The PC-Crash program needs to have input parameters. It needs to have velocities of vehicles, and it needs to be assigned a contact phase or crash

The creators of the PC-Crash program in a paper 1 referenced by Dr. Croft written by a fellow named 3 Steffan and some other folks, state in their paper quite clearly that the crash pulse needs to be selected 4 from between 60 to 140 milliseconds or, on average, 100 milliseconds, which is about the crash pulse of 7 many ordinary collisions, including staged ones. 8 Your Honor, at this time, I would MR. JAFFE: 9 like to move into evidence Exhibits CC and BB. BB, the PC-Crash operating manual, a portion that was disclosed 10 11 on February 4, 2012. And D -- CC being a paper by the 12 Society of Automotive Engineers regarding -- entitled 13 "Validation of the Coupled PC-CRASH - MADYMO Occupant 14 Simulation Model." 15 MR. CLOWARD: Object as to foundation. 16 MR. JAFFE: Your Honor, those were disclosed 17 February 4, 2012, defense supplement 9 without 18 objection. 19 THE COURT: Come on up for a minute, guys. 20 (Whereupon a brief discussion was 21 held at the bench.) 22 MR. JAFFE: Your Honor, at this point, I will 23 reserve moving those two documents into evidence. 24 THE COURT: Thank you. 25 /////

25

A.

Q.

That's correct.

= BY MR. JAFFE: 2 Dr. Smith, now, with respect to those two Q. documents, Dr. Croft testified yesterday that it is the 3 systems that generate the crash pulse not a number that 4 5 is put in; is that correct? That's not correct. 6 And the documents that you are relying on to 7 Q. 8 say that he's wrong, is one of them the PC-Crash 9 operating manual? That's correct. 10 Α. The actual manufacturer and designer of the 11 Q. program, their own operating manual. 12 That's correct. 13 Α. 14 Q. The other one, is that from the Society of Automotive Engineers? 15 That's also correct. 16 A. Now, let's talk about the relationship of the 17 Q. crash pulse, because what was the crash pulse that he 18 19 used? He used 13 milliseconds. 20 21 Now, that means that the -- does that mean Q. that under his scenario, the vehicles were only 22 touching for 13 milliseconds? 23

Where the -- the literature says you should

A.

That's correct.

1 use 60 to 140. That's why you used 100 as the 2 midpoint. 3 Α. That's correct. If they're touching for a longer period of 4 Ο. time, what does that mean? 5 It lowers -- it lowers the accelerations. 6 A The longer you can stretch out the contact phase, the 7 lower the accelerations become. 8 Now, reverse. If you use a shorter contact 9 Q. phase, what does that mean? It increases the accelerations because 11 A. they're inversely related. So, in other words, does that mean the other 13 vehicle would had to have been going a lot faster to 14 produce only 13 milliseconds of contact? 15 Even that won't do it. You cannot 16 Α. shorten the contact phase because of crush. It takes 17 time to crush metal. 18 So then, by 13 milliseconds, does that 19 20 produce the inordinately high g-forces? Exactly. 21 Α. And when you ran this program and your 22 Q. 23 engineers ran this program, you used the midpoint of that recommended by the manufacturer? 24

1 And -- and what were the g-forces that you Ō. 2 came out with? 3 We came down to 3 g's. A. And that is consistent with what the Society 4 0. 5 of Automotive Engineer recommends as well? Α. Correct. 6 7 Now, let's talk about a couple of other Q. Dr. Croft yesterday talked about a concept of 8 rebound and restitution. 9 Would you explain what that is and how that 10 11 plays into the overall picture. So restitution is defined for the 12 A. Right. cars. We run the car into a fixed barrier, it bounces 13 back some, that is a restitution. If you run two cars 14 15 into each other, there's a crumple zone, and then the crumple zone expands and the cars separate, that is a 16 So it's -- it's a rebound of a car 17 restitution. 18 effect. Coefficient of restitutions for low-level 19 rear-end collisions like these run anywhere between .3 20 and .4.21 Now -- I'm sorry. Did I interrupt you, sir? 22 Α. No. 23 So then understanding what restitution is, Q. what I'd like you to do is this: Can you explain for 2.4

us, tell us, in an accident involving 10 miles an hour,

3 g's of force, whatever it may very well be, what happens to our spines from the point of contact until everything comes to rest?

A. Right. That was published in a paper by BRC back in 1995. But it comes down to this: When the individual in the struck vehicle is seated looking forward and the striking car causes the struck car to move forward, the individual begins to push or begins to get pushed by the cushion of the seat until there is engagement and intercept by the headrest. And then from that, as the car slows, it will relax and come forward.

Two things that happen to the spine. The neck is straightened until it's intercepted by this headrest. It can't go any further. But also, there is uncoiling of the thoracolumbar spine. The thoracolumbar spine is also S curved. And as the cushion pushes the torso forward, that spine also straightens out. Okay.

So this all happens in less than a blink of an eye. A blink of an eye is 300 milliseconds. This all occurs in about 100 milliseconds. When the uncoiling of the thoracolumbar spine occurs, it pulls on the ligaments and muscles of the paraspinal musculature, and that can induce a sprain or a strain.

3

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That is the low back.

When the neck straightens out, it also creates a pulling on the ligaments and the musculature in the paracervical soft tissues, and that is — can create a sprain or strain. So that's what we are getting out of this event in terms of soft tissue injuries.

- Q. In the world of biomechanics where you combine the medicine and engineering, is there a term called "mechanism of injury"?
 - A. Yes.
- Q. Would you explain to us what mechanism of injury is, sir.
- A. The mechanism of injury in the context of what I have just described is that the forces on the muscles exceeded the tolerance value of the muscles to resist it. The tolerance value when you exceed it, results in injury. That is the mechanism of injury.
- Q. Does the same principle apply to other anatomic features of the spine such as our disks and our facets?
 - A. Yes, it does.
- Q. Now, have you and has BRC studied within these types of accidents a mechanism of injury and whether there are mechanisms of injury to the various

1 spinal elements? 2 A. Yes, we have. 3 Doctor, do you have an opinion as to whether Q. in the accident we're here for, there was a sufficient 4 5 mechanism of injury to produce an injury to the 6 cervical or lumbar disks? 7 I have made an opinion on that. And what is your opinion? 8 Q. And there is insufficient forces to overcome 9 Α. 10 the threshold value for the tolerance to injury by the 11 disk or by the bony vertebral bodies. 12 Q. Sir, is that stated to a reasonable degree of 13 probability within your fields of expertise? 14 That is correct. Α. 15 MR. JAFFE: Your Honor, may I approach? 16 THE COURT: Sure. 17 (Whereupon a brief discussion was -18 held at the bench.) 19 THE COURT: You know what, folks, when you 20 guys do this, sometimes the attorneys need to do that 21 too. We're going to take a quick break. 22 You're instructed not to talk with each other 23 or with anyone else, about any subject or issue connected with this trial. You are not to read, watch, 24 25 or listen to any report of or commentary on the trial

by any person connected with this case or by any medium 1 of information, including, without limitation, 3 newspapers, television, the Internet, or radio. You are not to conduct any research on your own, which 5 means you cannot talk with others, Tweet others, text others, Google issues, or conduct any other kind of 6 7 book or computer research with regard to any issue, party, witness, or attorney, involved in this case. 8 You're not to form or express any opinion on any 9 subject connected with this trial until the case is 10 finally submitted to you. 11 I need a break, too, so take about ten 12 13 See you back. minutes. THE BAILIFF: All rise. 14 15 (Whereupon jury exited the courtroom.) 16 THE COURT: We're outside the presence. 17 need to put anything on the record now? You want to 18 take a break and come back? I know, Harry. I want to make 19 MR. JAFFE: sure if you need to use the men's room, go ahead, but I 20 want to make sure, don't come over and talk with us. 21 You're still on the stand. 22. 23 THE WITNESS: All right. 24 Nothing else outside the THE COURT: 25 presence?

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1
              MR. CLOWARD:
                            No, Judge.
 2
              MR. JAFFE:
                          No, I don't think so right now,
 3
   sir.
 4
              THE COURT:
                          Off the record.
 5
                   (Whereupon a short recess was taken.)
 6
              THE BAILIFF: Ready for the jury?
 7
              THE COURT:
                          Yes.
 8
              THE BAILIFF: All rise.
 9
                   (Whereupon jury entered the courtroom.)
                          Go ahead and be seated. Welcome
10
              THE COURT:
11
   back, folks. Back on the record, Case 636515.
12
              Parties stipulate to the presence of the
13
   jury?
14
             MR. JAFFE:
                         Yes, Judge.
15
             MR. CLOWARD:
                            Yes, Judge.
16
                          I apologize, folks.
              THE COURT:
                                                That was my
17
   fault.
            I had an emergency back in chambers dealing
18
   with a different case, so sorry that break was a lot
19
   longer than I told you it was going to be.
20
   hopefully we can get Dr. Smith done today.
21
             MR. JAFFE:
                          Thank you, sir.
22
              THE COURT:
                          Doctor, just be reminded you're
23
   still under oath.
                       Okay?
24
             MR. JAFFE:
                          Thank you, sir.
25
             THE COURT:
                          Go ahead, Mr. Jaffe.
```

Okay.

1	BY MR. JAFFE:
2	Q. Dr. Smith, in looking at photographs in this
3	case, did you happen to see a picture which had a foam
4	bar that was broken?
5	A. Yes.
6	Q. Do you have an opinion as to whether this
7	accident caused that bar to break?
8	A. I do have an opinion.
9	Q. And what's your opinion?
10	A. To a reasonable degree of engineering
11	certainty, that did not occur in this crash.
12	Q. Why do you say that?
13	A. The nature and the fracture of the expanded
14	polystyrene is in the wrong direction. The hook is a
15	horizontally based structure.
16	MR. CLOWARD: Judge, can we approach?
17	Objection. It's late.
18	THE COURT: Come on.
19	(Whereupon a brief discussion was
20	held at the bench.)
21	THE COURT: Overruled.
22	BY MR. JAFFE:
23	Q. Let's put the picture of it up, and this is
24	Exhibit I either 30 or 31. I forgot which one.
	-

Go ahead, sir.

2.4

- A. So this is a vertically oriented fracture as opposed to a horizontally oriented fracture. If anything, the EPS, the expanded polystyrene, should have been compressed. There's no evidence of compression. This occurred likely upon removal from the inside of the bumper.

 Q. And is that stated to a reasonable degree of
- Q. And is that stated to a reasonable degree of probability, sir?
 - A. Correct.
- Q. Okay. Now, let's talk for a moment about the medical records that you reviewed and how those affect your biomechanical causation opinion.

Sir, have you had an opportunity to consider the plaintiff's prior medical condition as relates to your causation opinion?

- A. Yes.
 - Q. And what is your opinion in that respect?
- A. In that respect, the prior medical history shows that Ms. Seastrand had chronic neck and back pain as far as back as 2004 is concerned. This is contained in the records of the Summerlin Hospital.

She also, during a workup in May of 2005 at MountainView Hospital, came with chest and left arm pain. Now, if I see a patient with chest and left arm pain, first thing I'm going to do is a cardiac workup,

and that was done on her too. It was negative. It was felt that it probably was from another origin, and that would be most likely the cervical spine. Also, in Dr. Horan's notes or synopsis of 5/17/05, he indicates she had two significant cervical spine injuries in the past.

And so that and records through '07 and '08 — '07 is mostly medical issues different from the neck. '08 we're coming into, again, cervical spine with spondylotic changes which is degenerative. In '08, again there are numbness and tingling in the arms bilaterally.

So she had a number of cervical spine issues, going on well before the '09 incident. And with the -- the analysis of the '09 forces, there was no contribution from that to any of her existing chronic cervical issues.

Q. Well, yesterday Dr. Croft told us that your reference to daily lifestyle activities, genetics, that it was misplaced and flawed, and that studies of monozygotic twins prove that you're wrong.

Do you have a response to that?

A. Sure. Studies he references are not produced. I have papers, especially the Michael Modic paper, after whom were named the Modic changes, in

doing the various autopsies on cadavers has found that most of these degenerative changes that he found are likely related to lifestyle, genetic makeup, and so there's — and that's just one example.

Q. Well, yesterday Dr. Croft also told us that you misapplied the Modic standards in your reading of the MRIs.

Now, I know he's a chiropractor and you're a board-certified radiologist, and radiologists read films, right?

- A. Correct.
- Q. What's your response to that, sir?
- A. Well, the standard for or the criteria for determining the Modic 1, Modic 2, and Modic 3 changes were set by Dr. Modic in his in his 1985 paper on imaging of the degenerative spine or degenerative disk. The Modic Type 1 is characterized by low T2-weighted MRI, MRI spin echo images, and high intensity on the T2-weighted echo spin images.

When the clinical radiologist reads

Ms. Seastrand's MRI, says it's a Modic Type 1 change,

Dr. ViaBlanco looks at the MRI and says it's a Type 1

Modic change, and I look at it as a Type 1 Modic

change, and it meets the criteria set by Dr. Modic, I

think you get the picture.

Q. Well -- and Dr. ViaBlanco, I will tell you, will be here testifying tomorrow, and he'll talk to us about the radiology and show us the images and exactly what he means by that.

But, sir, for the purposes of causation analyses and — and that's really why you're here, right?

- A. Right.
- Q. For the purposes of causation analyses, why are those films and why are those prior records important and why are all these studies important?
- A. Well, they point to chronicity and a continuation of same or similar issues of degenerative spine disease that starts well before our rear-end collision and continues right after.

Yes, she has an episode of sprain or strain in her neck and back that is created by the crash. No doubt about it. Now, most sprains and strains, simple ones, may go away in three to five weeks. Some can last as six to nine months. And so the pain from a sprain or strain can last a considerable period of time as a function of not only the initial insult but also of how you reaggravate it with your everyday living activities. There are certain things you can do to make the sprains heal, and there's certain things you

can do to aggravate them and -- and keep on having the pain. It's still soft tissue pain. Can last a long time sometimes.

- Q. Now, one of the things I've been asking the plaintiff's treating doctors about and let's talk about this because I want to make sure we understand this from an injury causation analysis perspective and a biomechanical perspective is this: Can somebody have a sprain or strain in a traumatic event like a car accident yet independently have compromised disks, and answer that one first.
 - A. The answer's yes.
- Q. Okay. Just because there's a sprain and strain, does that necessarily mean it's going to affect that previously compromised disk?
- A. It can if the collision and forces are high enough. But for low ones such as analogous to everyday living activities, it isn't.
- Q. Well, were the forces high enough in this accident to affect those disks?
 - A. No.
 - Q. Why not?
 - A. Because they were too low. First of all --
- Q. What would you need to see in order to make that to say that it was caused?

1 Right. Ã. Disks at virtually every level of 2 aging are stronger than the adjacent bone. 3 intend to rupture the disk in a car crash, it has not been known to occur without also fracturing adjacent bone. There's none of that here. 6 MR. CLOWARD: Your Honor, I'm going to 7 object. I'm going to approach -- ask to approach. 8 THE COURT: Okay. Come on up. 9 (Whereupon a brief discussion was 10 held at the bench.) 11 THE COURT: Overruled. 12. BY MR. JAFFE: 13 Dr. Smith, in your report, did you discuss 14 the difference between a spine injury and a spinal soft 15 tissue injury? 16 A. Yes. 17 Q. When you talked about a spinal soft tissue injury versus a spine injury for the purposes of 18 19 accidents like these, is that what you were just explaining about, you know, disk and bone? I mean, is 20 21 that part and parcel of that opinion? 22 The soft tissue injury are sprains A. Right. 23 and strains from muscles and ligaments. The spinal 24 injury involves bone and disks. That did not occur in

this case. We had soft tissue injury.

And, Doctor, was that concept raised in your 1 Q. first report in this case? 3 A. It was. And, in fact, in your report, did you 4 specifically state that the forces encountered were far 6 below the threshold level for spinal injury? A. Correct. 8 Q. Were you deposed in this case? 9 A. I was. 10 Were you given an opportunity to be asked Q. about those opinions? 11 It was discussed in my -- in my deposition. 12 A. 13 Now, Doctor, I want to wrap this up because 14 we've been going -- we've been going for a while, but I 1.5 want to ask one other thing. 16 Plaintiff's been making a big point of the 17 fact that, well, she was fine the day before this accident. How is it that all of a sudden she's set in 18 motion and headed in a course toward two surgeries if this accident isn't what caused it? What's your 20 21 answer? 22 Well, the answer lies in the premedical Α. 2.3 records which suggest that she is not just fine. If 24 the records indicate that she had chronic neck and back

pain, then that doesn't square with her position that

there was nothing wrong with her before the crash.

Now, the crash induced pain in her. I agree. But it wasn't the kind of pain that she was having all along, which is — was one of degenerative — the degenerative disease which continued right on marching. And that never gets better. You see, you never get younger, and aging is closely related to degenerative changes.

- Q. Doctor, to a reasonable degree of probability, as a -- with all the credentials that you've given us today, did this accident cause Margaret Seastrand to suffer injuries in her neck and back?
- A. She suffered injuries to the tune of sprains and strains.
- Q. And that is a causation analysis that you make based upon all the testing and the data and the records and everything that you've reviewed?
- A. It's based on the medicine and the engineering that I have analyzed.
 - Q. And that is your causation analysis, sir?
 - A. That is my injury causation analysis.
- Q. And is that to a reasonable degree of probability?
- A. That's to a reasonable degree of medical and engineering probability.

1	Q. And, sir, did this accident cause the need
2	for either her cervical or her lumbar fusion?
3	A. It's a different question. It depends on how
4	you evaluate the advances of her degenerative spine.
5	If a degenerative spine begins to show neurological or
6	functional deficits, or the threat thereof, then
7	certainly surgery is indicated. On the basis of pain
8	alone, the promise of surgery is but 50 percent
9	effective.
10	Q. Did this accident cause the need for her
11	surgery, sir?
12	MR. CLOWARD: Judge, we need to approach.
13	Objection.
14	(Whereupon a brief discussion was
15	held at the bench.)
16	THE COURT: Objection's sustained. The prior
17	question and answer I guess just the prior question
18	will be stricken.
19	MR. JAFFE: I will I'll withdraw it, Your
20	Honor.
21	BY MR. JAFFE:
22	Q. Did this accident cause any abnormality in
23	the cervical C5-6 disk?
24	A. No.
25	Q. Did this accident cause any abnormality at

<u>1</u>	the L4-5 or the L5-S1 level?
2	A. No.
3	Q. Did this accident cause any disruption to her
4	neurologic system?
5	A. It did not.
6	Q. Are those opinions stated to a reasonable
7	degree of probability, sir?
8	A. They are.
9	MR. JAFFE: May I have a moment, Your Honor?
10	THE COURT: Okay.
11	MR. JAFFE: Thank you. I have no further
12	questions for Dr. Smith at this time.
13	THE COURT: Cross.
14	MR. CLOWARD: Yes, Your Honor.
15	Can I get the ELMO?
16	Judge, may I approach the witness?
17	THE COURT: You may.
18	MR. CLOWARD: Hi. Just one moment, with the
19	Court's indulgence. Just have one
20	
21	CROSS-EXAMINATION
22	BY MR. CLOWARD:
23	Q. How are you today, Doctor?
24	A. Real fine. You?
25	Q. Good. Thank you for being here today.

1	Doctor, can you tell me who Darryl Bay is?
2	A. Darryl Bay is one of the BRC engineers that
3	assisted me on this case.
4	Q. Okay. Did Darryl in fact do the calculations
5	for the for the forces you used in this?
6	A. Darryl Bay did the analysis, especially of
7	the IIHS tests and the correlations between that and
8	the damage of Ms. Seastrand's Honda. The calculations
9	as such were also generated from that.
10	Q. Okay. So it's fair to say this memorandum
11	contained in your report from Darryl Bay to you is
12	Darryl Bay's the one that did the calculations?
13	A. It's done at my direction. I check his
14	calculations. But yes, that's correct.
15	Q. So Darryl Bay did the calculations?
16	A. He did the legwork, yes.
17	Q. Okay. And the upper limit of the
18	calculations with delta-v of 7, correct?
19	A. I think he said less than 7, correct.
20	Uh-huh.
21	Q. But that would mean up to 7.
22	A. Yeah, anything less.
23	Q. Okay. Thank you.
24	Now, Doctor, you've talked a little bit about
25	your your company. It's BRC?

1	A. Yes.
2	Q. Okay. You agree with me that the majority of
3	the work that you do is for defendants like Mr and
4	defense attorneys like Mr. Jaffe.
5	A. As compared to the plaintiff's side, that's
6	correct.
7	Q. Okay. And defendants like Mr. Khoury, they
8	pay you money, correct?
9	A. The company charges for my time.
10	Q. Sure.
11	A. Yes.
12	Q. But they pay they ultimately pay BRC,
13	correct?
14	A. They send a check, I presume, to BRC, yes.
15	Q. Okay. And if if jurors accept your
16	opinions, then you save Mr. Khoury people like
17	Mr. Khoury money, right?
18	A. Well, who knows? I mean, I don't know if I
19	do or not. Nor is that my objective.
20	Q. Sure. No, I I understand that, but I
21	mean, the ultimate effect of if the jurors accept your
22	opinions, then you would save Mr. Khoury money, right?
23	A. You would have to ask him because I don't
24	know that.
25	O Okay You don't agree with that general

1	premise?	
2	A.	It's a premise that implies that I'm out to
3	save peop	le money, and that's not what I'm here for.
4	Q.	Okay.
5		MR. CLOWARD: Judge, can I turn on the little
6	TV there?	
7		THE COURT: Yep.
8	BY MR. CL	OWARD:
9	Q.	Now, you agree that Ms. Seastrand was
10	injured.	
11	A.	Yes.
12	Q.	Okay. Just just not as significantly as
13	she says t	that she was.
14	A.	Correct.
15	Q.	And her doctors.
16	A.	Because they agree with her, yes, uh-huh.
17	Q.	Okay.
18		MR. CLOWARD: Just just a little graphic
19	here that	I you know, be like if I drew a
20		MR. JAFFE: Well, no, I don't Judge. No,
21	I'm object	ting to you showing that.
22		MR. CLOWARD: Well, I'll just write it, then,
23	if you wor	n't let me show those, then.
24		MR. JAFFE: Go ahead and write it. Go ahead.
25	11111	

is that reputable?

BY MR. CLOWARD: 1 2 Okav. So let's talk about BRC. The majority Q. of the work that BRC does is for defendants like 3 Mr. Khoury, right? 4 Correct. 5 A. All right. Now, let's talk about those 0. 6 papers that you referenced. How many papers have you actually published 8 9 on the subject of whiplash or traumatic injury? Peer 10 reviewed. Oh, about two or three to include a book 11 Α. 12 chapter. Okay. So two or three. Do you know how many 13 articles Dr. Croft has published on the subject, peer 15 reviewed? You mean self-published? I don't know. 16 Α. 17 Well, Doctor, you know, there was a big point of that, but I actually checked your references in your 18 paper, and there's some of the references to the same 19 20 journals that Dr. Croft has authored. So let me just go through a list and tell me whether these are 21 22 reputable sources or not because they're in your report. 23 The American Journal of Orthopedic Medicine, 24

Ī	A.	Sure.
2	Q.	Okay. Journal of Neuromusculoskeletal
3	System, i	s that reputable?
4	A.	Don't recognize it offhand, but if it exists,
5	it probab	ly is.
6	Q.	What about Spine?
7	A.	Spine is reputable.
8	Q.	What about neurologists?
9	A.	Neurology, yes, uh-huh.
10	Q.	What about Medical Science Monitor?
11	A.	I don't recognize that so much.
12	Q.	What about Journal of Biomechanics?
13	A.	Journal of Biomechanics is.
14	Q.	What about Clinical Neurology and
15	Neurosurg	ery?
16	A.	Probably.
17	Q.	So those are all reputable?
18	A.	Sure.
19	Q.	Dr. Croft has published reports in all of
20	those, ha	sn't he?
21	A.	I don't know that.
22	Q.	Well
23		MR. CLOWARD: Your Honor, may I approach the
24	witness?	
25		THE COURT: Sure.

1	BY MR. CLOWARD:
2	Q. I've highlighted them for your reference.
3	Can you just review those for me, Doctor.
4	A. Sure.
5	Yeah. With the exception of the Medical
6	Science Monitor, that I don't recognize, the others
7	appear to be
8	Q. Okay.
9	A respected journals.
10	Q. Okay. Thank you.
11	Now, let's let's talk about the the
12	BRC. Okay? So this is I had a little illustration
13	I was, you know
14	MR. JAFFE: Objection. Your Honor, I object
15	to any illustrations being shown that have not been
16	disclosed. Has to be taken down.
17	MR. CLOWARD: Judge, he he's done this the
18	entire time with these PowerPoint slides.
19	THE COURT: It's okay. It's overruled. Go
20	ahead.
21	MR. CLOWARD: Okay. May I may I show
22	this? It's just like if I drew it out.
23	THE COURT: I don't care.
24	BY MR. CLOWARD:
25	Q. Okay. So I want to talk about this this

1 Biodynamic Research Corp., BRC. You're an owner of 2 that, right? 3 A. Among 25 others, yes. 4 Q. Okay. And these reports -- let's first talk 5 about these two seminal reports. Let's talk about the 6 first one. 7 Can you pull out the report "Comparison of 8 Human and ATD Head Kinematics During Low-Speed Rearend Impacts." 10 A. Yes. 11 THE COURT: Are you going to talk about this 12 thing that's on the screen, or are you just going to 13 leave it there while you talk about other things? 14 MR. CLOWARD: I want to leave it there, if 15 that's okay. 16 THE COURT: Let's talk about it when we get 17 to it. 18 MR. CLOWARD: Okay. 19 THE COURT: Or let's put it up there when you 20 get to it. 21 MR. CLOWARD: Okay. Fair enough. 22 BY MR. CLOWARD: 23 Now, you testified earlier that there -- that 24 the occupants in that test were actually employees of 25 BRC.

1	A. First set of series was, yes, uh-huh.
2	Q. Okay. Well, this this specific test, they
3	were actually employees of your company.
4	A. Correct.
5	Q. And those employees were screened
6	radiologically, meaning they X rays were taken of
7	them to make sure that they didn't have any issues,
8	right?
9	A. By me.
10	Q. And matter of a fact, not only were they
11	were they screened, but there was a history taken, and
12	it was made sure that they didn't have any health
13	issues, right?
14	A. Sure.
15	Q. They were healthy subjects.
16	A. They were healthy over 50-year-old males.
17	Q. Okay. Over 50-year-old males. Let's get to
18	that, because I don't think the the report says
19	that.
20	Does the report say that?
21	A. These are my these are my partners. I
22	know how old my partners are.
23	Q. So you and who else?
24	A. Well, it was Jim Raddin, Jim Benedict. It
25	was Charlie Hatsell, and Richard Howard.

A.

So now, I just want to make sure. 1 Q. Okav. You're an owner of BRC. Defendants like Mr. Khoury hire you. You and your other co-owners are doing tests on whether or not people like Mr. Khoury actually injure folks, correct? 6 It's not for the purpose of the advancement A. 7 of science, not to support a case. 8 Doctor, in this study, all three occupants were actually injured, were they not? 10 A. Sure. You testified earlier you had no injuries. 11 Q. Well, not injuries beyond the sprain or 12 A. 13 strain. That's not what you said earlier, though, is 14 Q. it? 15 What did I say? 16 A. 17 You said there was no injuries. 18 Oh, I'd like to have that read back, then. 19 I'd like to hear that again. Because the -- anytime 20 you're involved in a low-level rear-end collision, you 21 run the risk of a sprain or a strain. That's -- that's 22 just a fact. So my question is just simply: Were you 23 Q. injured or were you not? 24

I believe I had some discomfort in the base

1	of my neck and that was it.
2	Q. And how long did that last?
3	A. About an hour.
4	Q. Okay. Now, Doctor, let's go on to the next
5	study. The next one is "Analysis of Human Test Subject
6	Kinematic Responses to Low Velocity Rear-End impacts."
7	That, again, was by BRC, correct?
8	A. Right.
9	Q. And how many how many people were selected
10	for that one?
11	A. The same five that were in the article we
12	just discussed because one followed the other.
13	Q. Okay. I know that you're the you're the
14	author, and so I don't mean to you know, I don't
15	there were actually four, right? It wasn't five. It
16	was four.
17	A. I thought there were five.
18	Q. You want to just pull that for me and just
19	take a look.
20	A. (Witness reviewing document.)
21	Guess we only used four for this one.
22	Q. Okay. Now, again, there was some X rays
23	taken of the people who were involved, right?
24	A. Right. Well, actually, it was the same
25	X rays that was done for the same study. These are

1 different analyses. 2 But the -- the X rays that were taken, Q. 3 there were no significant issues -- or there were 4 actually no findings on the MRIs in this test, right? A. 5 There are no MRIs of this test. 6 Q. Per the X rays, no degenerative findings. 7 A. Right. 8 Were there injuries in this? Q. 9 Probably nothing more than a sprain or a A. 10 strain. 11 But there were injuries, correct? Q. 12 Α. Of course. 13 Q. There were, in fact, injuries to three of the 14 four occupants, correct? 15 I haven't read this lately, but if your Α. 16 reading is correct, then of course that stands. 17 Q. Okay. You don't know as you sit there? 18 A. I don't remember as I sit here. 19 In fact, you indicated in this study that 20 the -- the test subjects were robustly healthy, 21 correct? 22 A. Sure. 23 Q. Okay. 24 I think -- well, I'm one A. I don't state that. 25 of the coauthors, so I -- I agreed to that statement,

yes. 2 Well, do you have any -- any reason to 3 disagree with that statement? A. No, I don't. 4 5 All right. Doctor, let me ask you about this Q. 6 test, because you indicated that from a clinical standpoint, a delta-v of 5 is the threshold of injury. 8 Do you agree with that? 9 It would appear to be. Α. 10 Q. And so if delta-v of 5, that's the threshold, 11 that's where you -- according to this study, you say 12 under 5 people don't get hurt, but over 5, that's when 13 the threshold comes in, right? 14 That's where the threshold for sprains and 15 strains come in, yes. 16 Q. So injury occurs above 5. Sprain or strain injury occurs. 17 A. 18 Okay. Okay. And you indicated in this test Q. 19 that -- at the very end, you said that "Additional 20 testing should be done to include a wider variety of 21 test subjects." 22 Right. Α. 23 Q. Why is that? 24 Well, when you take five males over 50, Α. 25 that's a good study to start with. You're not biasing

against older people. You're using older people. But
you're not including any women and you're not including
any younger people. So we recommended that more
studies be done to see how things would vary if we
included a larger spectrum of people. And that has
been done since then to the tune of 5-, 600
participants.

- Q. And, Doctor, that's because people are different, right?
 - A. Sure.

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- Q. Like if you and I were to go outside and have a tackle football game, chances are -- I know I'm not the healthiest guy, but chances are, you'd probably get hurt before I would.
 - A. Well, I'm 72. You tell me.
- 16 Q. I don't know.
 - So, Doctor, you also indicate in this paper that there were other things that were important to consider.
 - A, seating position.
 - A. Sure.
- 22 Q. And B, riding posture.
- 23 A. Right.
 - Q. Those weren't considered in your study?
 - A. Not in the first study.

1	Q.	Okay. I'm going to get to the third one.
2	The third	one, it actually was studied, right?
3	A.	Correct.
4	Q.	And that's the study "Human Head and Neck
5	Kinematics	5. ¹¹
6	A.	Yes.
7	Q.	Now, again, these are employees from your
8	BRC, right	:?
9	A.	That's right.
10	Q.	And they're between 39 and 59 years or 32
11	and 59?	
12	A.	Right.
13	Q.	And of those folks, they are healthy,
14	correct?	
15	A.	Right.
16	Q.	Fully informed?
17	A.	Right.
18	Q.	And you and they did a pretesting medical
19	history ar	nd physical evaluation.
20	A.	Right.
21	Q.	Okay. Also some cervical spine radiology
22	studies	<u>-</u>
23	A.	Correct.
24	Q.	right?
25		Now, in this case, there were injuries,

25

Α.

Q.

Exactly.

1 correct? 2 Yes. A. Tell us about Subject No. 2. What's unique 3 Q. about him? 4 Subject No. 2, if I'm correct, we had him 5 A. 6 turn his head to the left or right prior to being struck from the rear, and that created more sprain-strain than normally sitting looking forward. 9 So there's a difference as to how you hold your head, whether you will bias more injury to one side or the 11 other. 12 In fact, this report says, "This was reported Ο. to be a subjectively much more stressful exposure," 13 14 correct? 15 That's how we put it in the paper, yes. Α. 16 And that person "developed an uncomfortable, Q. 17 predominantly right sided, anterior and posterior lower 18 neck muscle strain later that evening and was asked not 19 to participate on day 3 of the test series, " correct? 20 That's correct. A. 21 So the guy that had his head turned, he Q. 22 got -- he got hurt, and his symptoms were subjectively much more stressful, correct? 23

So he was asked not to participate.

1	A. Well, you don't want to reaggravate it,
2	that's right.
3	Q. Okay. And, Doctor, you indicated in the
4	papers that even though you tried to take out the
5	awareness factor, it was still it was still part of
6	the test.
7	A. The awareness is part of the test because
8	that's what these people are there for.
9	Q. Sure. They know that they're about to get
10	hit by, you know, a truck rolling down a hill.
11	A. Sure.
12	Q. So now, Doctor, do you believe that there
13	are do you believe that me and you have the same
14	risk factor for injury?
15	A. Probably not. If you're considerably younger
16	than I am, I probably am the guy at highest risk.
17	Q. And Dr. Croft Dr. Croft put this study
18	we had poster on it, but I don't know where it went.
19	He did this poster for us and he had all of these
20	studies here, okay, about known risk factors.
21	Do you agree that the female sex increases
22	the risk of injury?
23	A. For certain collisions, yes.
24	Q. For rear-end impacts specifically.
25	A. Well, for certain magnitude, meaning severity

Q.

Okay.

1 of rear-end collisions, yes. 2 Okay. So just a yes-or-no question: The 3 female gender has a higher risk or likelihood of injury in the rear-end collision, correct? 4 5 MR. JAFFE: Objection. It depends on the -- on the 6 THE WITNESS: 7 severity of the crash. You have to, first of all, exceed the threshold in order to get the sprain or 8 9 Once you exceed the threshold, women tend to 10 get more of them than men, that's true. 11 BY MR. CLOWARD: 12 Okay. Doctor, you agree -- you agree that Q. 13 increasing age is a risk factor --14 A. It is. 15 Q. -- true? 16 You agree that initial degenerative changes seen on radiographs is a risk factor, true? 17 18 Well, degenerative changes by themselves are Α. 19 By the time you see them radiographically, they've pretty well progressed, that is on the plain 20 2.1 films. And that is likely to be true. I don't know 22 who did that study, but it's likely to be true. 23 More likely than not to be true? 0. 24 A. Well, I don't know that.

So we will -- we will put a question

till. mark there. Loss of -- loss or reversal of cervical 2 3 lordosis, does that increase the risk of injury? Α. No. 4 So you don't -- you disagree with that 5 Q. Okay. one? 6 7 A. Right. What about foraminal stenosis? 8 Q. 9 Preexisting foraminal stenosis can be a risk A. 10 factor, yes. Nonawareness of the impending impact? 11 Q. 12 No, has nothing to do with it. A. So, Doctor, if I'm -- well, let me ask this 13 Q. then: Why was it in the papers that you went about and 1.4 you talked about being aware versus nonaware and you tried to take that factor out of it? 16 You can't take it out. But it has no effect 17 Α. 18 on how the body reacts. So if I know -- you mean to tell me if I know 19 that Mr. Jaffe's going to run toward me and tackle me 20 from behind, it has no effect of the way I'm going 21 to -- going to react versus if I see him coming right 22 at me? 23 Yeah. That is different than being 24 Yeah. involved in a rear-end collision, because you have an 25

2.2.

opportunity, perhaps, to brace yourself against an impending assault. But that's different than a rear-end collision in a car which takes place in a tenth of a second. When — when and if Mr. Jaffe tackles you, it's over generally a longer period of time than just a tenth of a second. The body has no known mechanism to react consciously to a one-tenth-of-a-second event.

Q. Doctor, I understand. And let's -- let's -- I want to keep on task here, okay, because I understand what you're saying.

You're saying when an impact happens, the person doesn't have the opportunity, because it's so fast, to tense up. What I'm talking about is when somebody looks into the rearview and they see a car coming, brakes are screeching, they're sliding toward them, in that moment, they have an opportunity to tense up, do they not?

- A. Well, they do. And if their head is turned, as looking in the rearview mirror, then they're setting themselves up for an enhanced injury as was our subject, too, in the third in the third crash test or in the third paper anyway.
- Q. Doctor, let me just ask this question. Okay?
 Two people. Hypothetical. One person is sitting

25

Α.

Q.

Correct.

there -- let's just say they're both looking forward. 1 You take all other variables out, exact same crash, 2 exact same people, exact same everything. Okay? One 3 person is looking ahead. They're not looking in the rearview. They have no idea they're about to be hit, 5 and they're hit. Okay? 7 Compare that now, with the guy or the -- the 8 girl, whatever the subject is, they're looking in the rearview and they see somebody coming, and so they 9 get -- they tense up, they tighten up. 11 Who has a greater likelihood of being injured in those two scenarios? 12 13 If you keep them both the same except one tenses up and the other one doesn't, makes no 15 difference. Okay. Now, Doctor, I want to talk about 16 Q. another couple of things. You -- you did this -- well, 17 first off, just so that I'm clear, you agree that a 18 19 sprain or a strain can take nine months to -- to get 20 better. 21 A. Sure. 22 You believe that Ms. Seastrand's problems Q. 23 were limited to sprain or strain.

Okay. Dr. Schifini and Dr. Siegler, they

So you disagree with Dr. Muir, 1 agree with you. correct? 3 A. Yes. You disagree with Dr. Belsky, correct? 4 Q. 5 A. I do. 6 Q. You disagree with Dr. Gross, correct? 7 A. Right. 8 Q. You disagree with Dr. Grover, correct? 9 A. Yes. 10 You disagree with Dr. Croft, correct? Q. 11 A. Right. 12. Q. You disagree with Dr. Khavkin, correct? 13 Α. I don't recall -- oh, Khavkin, yes. 14 Q. You disagree with Dr. Lurie, correct? 15 Α. Correct. 16 Q. You disagree with Dr. Olmstead, correct? 17 And that too. A. 18 Q. You never performed a spine surgery, correct? 19 Α. I've assisted but not performed one as -- as 20 a lead surgeon, no. 21 When was the last time you assisted? Q. 22 Α. Oh, about 35 years ago. 23 Okay. Now, let's talk about for a moment --Q. 24 would you mind coming off the stand for just one 25 second. That would be helpful.

Α.

Go ahead. 1 THE COURT: 2 BY MR. CLOWARD: 3 This Allen study that you cited about the Q. chair plopping and so forth --5 Α. Mm-hmm. -- can you just show me what it is to chair 6 plop. I don't even know what that is. 7 8 I could give you my interpretation. know what Allen had in mind when he did his study. A 10 chair flop. This. That's a chair flop to me (witness 11 indicating). 12 And what were the g-forces on the chair flop? 13 About 2 1/2 g's. A. 14 So that right there is the same force that Q. Ms. Seastrand would have had? 16 Well, she's probably a little higher, up to A. 17 3. 18 Now, Doctor, you testified earlier that to Q. 19 determine injury, it's to determine whether the -- the 20 muscles are taken -- just hold on for one second. 21 want to show you -- I have something else -- is to 22 determine the elasticity of the tissues and determine 23 whether they're taken out of their natural range of 24 motion, right?

It's to assess the threshold of sprain or

strain which does not have to go to how far did you 1 stretch but how rapidly did you stretch. So it's the speed of stretching. 4 Q. So can you show the jurors -- can you show us, how was Ms. Seastrand positioned at the time of the crash? Α. Her testimony is that she is seated looking 8 forward. 9 Q. And how are her arms and so forth? 10 Α. Well, she's waiting for traffic to pass. 11 don't know if she tells us necessarily. The way I'm 12 sitting, I've got my hands on the wheel and my foot on 13 the brake. 14 Q. Thank you, Doctor. Just wanted to know that. 15 A. You done? 16 Q. Yeah. Thank you. I appreciate it. 17 A. Mm-hmm. 18 Q. Thanks for indulging me. 19 Doctor, can I ask you a question: Was there 20 ever one time in medical school -- you also were a 21 professor of medical school too, right? 22 Α. I was an assistant clinical professor, yes. 23 So you did rounds? Q. 24 A. An assistant clinical professor teaches 25 people either in his practice or by coming to the

Q.

medical school and giving lectures but not doing rounds 1 Certainly not in radiology you don't do 2 as such. 3 rounds. Was there ever one time in your 4 Q. Okay. 5 history of doing your training, ever one time, in your training where when you were evaluating a patient that 7 you asked the patient, hey, before I determine whether you're hurt or not, I got to go look at your car? That's not the role of the physician, no. 9 Α. 10 The treating physician, no. 11 So the answer is yes, you've never done that. Q. 12 The answer's correct, I have not done that. A. 13 Q. Okay. You were an ER physician for about ten 14 years, right? 15 A. Nine years, yes. 16 Ever one time as an ER physician, did you Q. 17 ever once ask your patients to go out and look at their 18 car to determine whether they were really hurt? 19 A. No. 20 Now, Doctor, this Allen study that you Q. 21 testified to, here's this little graphic, you testified 22 that jumping off of a $7 \frac{1}{2}$ -foot step is equal to an 23 8.2 q-force --24 Α. Correct.

correct?

So remembering that video that we just saw of 1 2 that plane crash. 3 A. Right. So you're saying that the same 4 Q. Okay. 5 q-force, 8 -- around 8 q's is the -- is the equivalent -- if I were to stand up 7 feet and jump 7 off, that that's equivalent of that plane crash? 8 A. Seven feet? 9 Q. Yeah, 7.5 feet. 10 A. That 7.5-inch step. 11 So you're saying -- you're saying -- so Q. Qh. you're saying a 7 1/2-inch step off, just like that, is 12 13 the same as that plane crash? 14 A. It's the striking of the heel that sends the spike up the spine that can amount to 8.2 g's. 16 Q. So it's 8.2 g's, 7 1/2 inches, Okay. 17 correct? Right. 18 Α. 19 Q. And how fast was that plane going, just out 20 of curiosity? Do you know? 21 Α. That plane at impact is probably running 22 below flying speed. So it's doing less than 250 miles 23 an hour. And that is the horizontal speed. The down speed, I don't have a handle on it. It's dropping 24

fast, but I can't tell you how fast it is dropping.

1	Q. Safe to say it's going faster than 5 miles an
2	hour?
3	A. Well, yes.
4	Q. Okay. Doctor, between 1985 through 2009, are
5	you aware of one visit, a single visit for the primary
6	purpose of neck pain for Ms. Seastrand?
7	A. Oh, I thought you were talking about me.
8	What did I say about prime medical records?
9	You said '85?
10	Q. Yeah. So basically, Doctor, the chief
11	complaint you know, the reason that brought her to
12	the to the physician, are you aware of a single
13	visit between '85 and 2009?
14	A. For the primary complaints of neck pain?
15	Q. Yeah, chief complaint, No. 1 thing she's
16	there for.
17	A. She comes in for other reasons.
18	Q. Thank you.
19	What about between 1985 and 2009, a single
20	visit for the primary chief complaint of lumbar spine?
21	A. Don't have a record for the primary reason
22	for the visit being that.
23	Q. Thank you, Doctor.
24	Let me
25	Margie, would you come up here for me for a

ays
avs
-1-
P
she's
may
rding
don't
to."

- 1	
1	BY MR. CLOWARD:
2	Q. Ms. Seastrand said that this event
3	significantly changed her life. So, Doctor, my
4	question for you is: Is she mistaken that this
5	automobile crash caused her to have significant and
6	serious pain? Is she mistaken about that?
7	A. No. I've told you the pain of sprains or
8	strains can be significant. I don't know disagree with
9	that.
10	Q. Okay. You agree that the chiropractic care
11	was was appropriate?
12	MR. JAFFE: Objection, Your Honor. He's not
13	here to offer opinions as to a propriety of care.
14	THE COURT: Sustained.
15	MR. JAFFE: Thank you.
16	BY MR. CLOWARD:
17	Q. Doctor, you agree that that sprains and
18	strains are often treated by chiropractic care, right?
19	A. Sure.
20	Q. Okay. Are you aware of the cost of the
21	chiropractic care in this case?
22	A. No idea.
23	Q. Okay.
24	MR. CLOWARD: No further questions.
25	THE COURT Redirect

1	MR. JAFFE: Briefly.
3	REDIRECT EXAMINATION
4	BY MR. JAFFE:
5	Q. Do you still have Dr. Croft's CV there, sir?
6	A. Well, I have his list of references.
7	Q. Publications and all?
8	A. Right, uh-huh.
9	Q. To scan through those and all the dozens and
10	dozens or whatever it is, what's the common word that
11	appears in in all of those publications, the vast
12	majority of them, the overwhelming majority of them?
13	A. Well, it's from the American Chiropractic
14	Association.
15	Q. "Chiropractic," right?
16	A. Yeah.
17	Q. A lot of them almost all of them are
18	chiropractic publications?
19	MR. CLOWARD: Judge, I'm going to object as
20	leading.
21	MR. JAFFE: Not leading, Your Honor.
22	THE COURT: That question was. Sustained.
23	BY MR. JAFFE:
24	Q. Are they overwhelmingly chiropractic
25	publications?

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1 MR. CLOWARD: Same objection, Judge. 2 THE COURT: Overruled.

> MR. JAFFE: Thank you, Your Honor.

Yeah, it appears that way. From just a scanning here, a lot of chiropractic publications.

BY MR. JAFFE:

- Okay. Now, let's -- let's talk something, Q. first off, about the 7 1/2-inch step. In your report it doesn't say stepping off it. It says jumping off of it, right?
 - Right, uh-huh. Α.

THE WITNESS:

- Q. Now, explain the action of jumping off a 7 1/2-inch step and how it creates 8 g-forces.
- Jumping off the -- off these steps were done A. in particular by landing on the heel. And when you land on your heels, you send, for lack of a better word, a shock wave up to your spine. This can be as high as 8 g's or 8.2 g's, according to Alan Weir and others. And it is -- it can be, from time to time, creating some pain.

Now, the actual threshold for a vertebral body fracture is about 18 g's when it's done in the same manner. And that was done at the pilot ejection studies.



	Q.	Now,	in	your	re	port	whe	ere	that	was	taken
from,	, were	e you	giv	ring	an	examp	ple	of	diffe	erent	=
activ	vities	s of o	dail	ly li	.vi.r	ıg?					

- A. That's correct.
- Q. And what are the amount of g-forces typically experienced in our daily living?
- A. Well, they range all the way from 2 g's, to the 8 g's.
- Q. So that's pretty much the high end of forces we would experience?
 - A. That's the high end.
 - Q. Going about our daily lifestyle activities?
 - A. That's correct.
- Q. Okay. And you're certainly not hiding behind that in any way, are you, sir?
- 16 A. No.
 - Q. Okay. Counsel asked you some questions about the concept of awareness when you're performing crash tests.

Would you explain the whole concept of awareness and how that plays into the testing and your results.

A. Awareness has to do with the brain and nothing to do with the muscles. The muscles don't know whether you are aware of something or not. The brain

only is. When you're in a rear-end collision, the sudden impulse from the rear of 100 milliseconds, the muscles are going to react in very similarly or samely whether you were consciously aware of them or not. The brain is not in your muscles. It's — it's up here.

- Q. Okay. Hypothetically, Doctor, if you wanted to to conduct crash tests and take the awareness factor out of it, how do you think the community would receive you if you went around San Antonio striking people stopped at lights just so you could measure them so that they're you could test when they're not aware?
- A. Well, the human use committee will never approve that.
 - Q. How about the police force?
- A. Yeah, they would not approve of that either. So that's -- that's not doable.
- Q. Now, let's talk about some of these issues regarding risk factors. Okay? And in particular, counsel raised as a risk factor preexisting degenerative changes.

Explain to us why preexisting degenerative changes are not considered a risk factor or how they weigh into risk factors when it comes to causation analysis for injuries of people involved in minimal

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1 impact rear-end collisions.

A. If you're -- if you're over 20 years old, you have begun degenerative changes in your spine.

Actually, in more than just your spine, but that's what we're talking about here.

If you are a 90-year-old grandmother who has lost most of her muscle mass who is bent over and you put her in a car seat — in the seat of a car, she's going to be at much greater risk for injury where you and I can walk away from it. And I think that's intuitive because she has very little with which to resist any forces. The threshold for injury on her is enormous.

For the ordinary individual between 20 and 70, or even 80 now, or over 70, it's fairly — it's fairly unusual to be so advanced in degenerative disease that you've lowered your threshold to injury.

Technically, there should be some, and maybe for some conditions other than low-level rear-end collisions it might be true. We do know that for automobile collisions that occur, say, in the 25- to 30-, 35-mile-an-hour range, when the older person gets hit with the air bag, there tends to be more pain and suffering because — associated with that than if it's a 20 year old. True. The 70 year old will have more

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rib fractures. That's true. But in a low-level rear-end collision, no.

We all have, over 20, the beginnings of degenerative disease in our disks as is demonstrated by Dr. Modic's research. The fissuring begins by derangement of the endplate's junction with the disk, and it is — it is — it is seen at three early stages. The fissuring is what eventually becomes known as tears. That starts way early. And when a 47-year-old person is involved in a low-level rear-end collision, those tears have been there for a good number of years and have been — have been growing.

So this — this risk based on degeneration must be taken very carefully, and it's only at the — the ends of the extremes that it becomes more important as a risk factor.

- Q. Now, in this particular case, you've had an opportunity to review Ms. Seastrand's films and records; isn't that correct?
 - A. Correct.
- Q. You've had an opportunity to see where she had preexisting degenerative conditions relative to her spine, correct?
 - A. Correct.
 - Q. Did she have a preexisting degenerative

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interrupted by fissuring.

Q.

condition at the C5-6 disk? 1 She does. 2 A. Any other structures than C5-6? 3 She has the so-called Modic Type 1 Α. changes, which are a stage of degenerative disease that 5 appears with certain characteristics on the MRI. the uninitiated, frequently mistaken for bone It's not what they are. They're Modic 8 contusions. changes based on degenerative disk disease. So that 10 was noticeable at the C5-C6 vertebral space. And then there are -- there are spurring, the 11 osteophytes, also hallmarks of degenerative disease. 12 It takes years to grow a spur. Years. Those don't 13 come about overnight. And then there's thinning of the disk space 15 itself from hydration losses. Those are all marks of 16 age-appropriate degenerative changes. 17 Would the same be true at L4-5 and L5-S1? 18 Q. 19 A. There as well, yes. Would that also -- is there any indication of 20 degeneration as relates to the annular fibers? 21 Well, yes, because the annular fibers of 22 Α.

the -- of the annulus fibrosis are the ones that become

Now, knowing what the plaintiff's preexisting

1	degenerat.	ion was and based on the studies that you
2	performed	, the testing that all of the data that
3	you've ac	cumulated over these years, was there a
4	mechanism	of injury and sufficient force to produce any
5	injury to	the C5-6 disk, the L4-5 disk, or the L5-S1
6	disk?	
7	A.	No, there was not.
8	Q.	And is that statement made to a reasonable
9	degree of	probability?
10	A.	It is.
11	Q.	The same as the rest of your testimony.
12	A.	Correct.
13	Q.	Is there anything that Mr. Cloward showed you
14	or discus	sed which in any way changed your opinions in
15	this case	?
16	A.	No, it does not.
17		MR. JAFFE: Thank you, sir. I have nothing
18	further.	
19		THE COURT: Mr. Cloward.
20		MR. CLOWARD: Yeah, just one quick question.
21		
22		RECROSS-EXAMINATION
23	BY MR. CL	OWARD:
24	Q.	You've work for with Mr. Jaffe for a lot
25	of years,	right?



1	A. Off and on through the last I guess he
2	corrected me about 20 years, yes.
3	Q. Okay. Have you ever known Mr. Jaffe to
4	represent plaintiffs?
5	MR. JAFFE: Your Honor, this is beyond the
6	scope of redirect.
7	THE COURT: It is. Sustained.
8	BY MR. CLOWARD:
9	Q. Doctor, did you actually look at the studies
10	that Dr. Croft cited?
11	MR. JAFFE: Your Honor, beyond the scope of
12	redirect.
13	THE COURT: Overruled.
14	MR. CLOWARD: It goes to risk factors.
15	THE COURT: He talked about the studies.
16	MR. JAFFE: Okay.
17	BY MR. CLOWARD:
18	Q. It was overruled.
19	A. Sorry. I didn't hear that.
20	No, I didn't look up his references.
21	Q. Would you look at them just real quick.
22	A. Oh, it's not that I haven't seen them before,
23	but I didn't look I didn't look for this case, no.
24	MR. CLOWARD: Can I approach?
25	

1	BY MR. CLOWARD:
2	Q. I circled them for you.
3	A. Yeah.
4	Q. Are those reputable sources?
5	A. These sources here?
6	Q. Yeah. IRCOBI?
7	A. You'd almost have to read them to me.
8	Q. I-R-C-O-B-I?
9	A. Yeah, I know what IRCOBI is. IRCOBI
10	certainly is a reputable organization.
11	Q. You actually cited to the same organization
12	when you wrote your paper, right?
13	A. Oh, yes.
14	Q. Same thing with Injury. You cited to that
15	when you wrote your paper too, huh?
16	A. Sure.
17	Q. Okay.
18	MR. CLOWARD: Nothing further, Judge.
19	THE COURT: Mr. Jaffe.
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21	FURTHER REDIRECT EXAMINATION
22	BY MR. JAFFE:
23	Q. Does the fact that Dr. Croft may have cited
24	to some reference of the same organization that you
25	happen to cite in any way have have anything to do

1.	with the opinions you've cited and the references you
2	specifically cited with respect to this case?
3	A. No.
4	MR. JAFFE: Nothing further. Thank you, sir.
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6	FURTHER RECROSS-EXAMINATION
7	BY MR. CLOWARD:
8	Q. You didn't actually look at the risk factors,
9	did you?
10	A. I have times in the past. I know what they
11	are.
12	Q. But you didn't look at the risk factors
13	MR. JAFFE: Your Honor, this
14	BY MR. CLOWARD:
15	Q in this case for Ms. Seastrand.
16	MR. JAFFE: beyond the scope of my re,
17	re
18	THE COURT: You guys can't talk at the same
19	time. You can't keep talking when he's trying to make
20	an objection.
21	MR. JAFFE: Beyond the scope, sir.
22	THE COURT: I don't think it is. I'm going
23	to allow it. It's overruled.
24	BY MR. CLOWARD:
25	Q. You didn't look at the risk factors that

1	Ms. Seastrand had, did you?
2	A. I took them into account. I didn't have to
3	look at them.
4	Q. You did not put a single risk factor that you
5	evaluated in the report, correct?
6	MR. JAFFE: Your Honor, I don't know where I
7	even discuss risk factors in talking about the IRCOBI.
8	But this is beyond the scope.
9	THE COURT: Overruled.
10	BY MR. CLOWARD:
11	Q. Correct?
12	A. Yeah, risk factors were not mentioned in my
13	report.
14	MR. CLOWARD: Thank you.
15	THE COURT: Anything else?
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17	FURTHER REDIRECT EXAMINATION
18	BY MR. JAFFE:
19	Q. Does any of that change your opinion?
20	A. No, it doesn't.
21	Q. Was it necessary to look at those specific
22	risk factors?
23	A. No, it wasn't.
24	MR. JAFFE: Nothing further.
25	THE COURT: Mr. Jaffe?

MR. JAFFE: I'm Jaffe. 20 MR. CLOWARD: I'm done. 2 3 Ladies and gentlemen, any THE COURT: questions? We have at least one. 4 5 THE BAILIFF: Excuse me. Anyone else? (Whereupon a brief discussion was 6 7 held at the bench.) THE COURT: All right. Doctor, I have a few 8 questions for you. First page I actually have three 9 questions. 10 How does Dr. Smith define chronic First one: 11 pain in Ms. Seastrand's medical record? 12 THE WITNESS: Chronic pain, the common -- the 13 common definition of chronic pain is any pain that 14 lasts more than six months. 15 Okay. Next question: How do the 16 THE COURT: sufficient g's required to rupture a disk change if the 17 subject disk has prior damage? I.e., how weak does a 18 disk have to be for 3.1 g's to rupture it? 19 20 THE WITNESS: A 3.1 g, which is the low end 21 of everyday living activities, is, by experience, not going to do it. Because in that case, since all of us 22 23 have degenerative disk disease to one form or another, there would be a lot of people herniating their disks 24 just sitting around. So we know that doesn't happen at 25

1 the 3.1 g level. Now, as to what the actual threshold is in 2 3 terms of at what level of disease will a certain threshold rupture the disk, I don't think that is known. Okay. Next question: THE COURT: 6 7 clarification, did Dr. Smith review MRIs/X rays of Ms. Seastrand that were taken prior to her crash? THE WITNESS: No. Those were not available. 9 10 THE COURT: Okay. Thank you. We'll mark that Court's next in order. 11 12 Next question: Wouldn't the Honda absorb more energy due to the fact that the Infiniti tow hook 13 14 is mounted to the frame and is not part of the energy absorbing bumper system? Wouldn't the resulting damage 15 16 be more like the pole crash study? 17 THE WITNESS: Yes, I believe that's what I The pole crash study is similar to the tow 18 indicated. hook in that both are -- both, first of all, have a rounded surface and they become more focal. 20 And yes, the Honda did absorb more energy 21 22 than the Infiniti. The Infiniti has some other damage, 23 other than what's related to the tow hook. 24 THE COURT: Okay. Thank you. Mark that 25

Court's next in order.

Mr. Jaffe, any follow-ups? 1 2 MR. JAFFE: Yes, sir. 3 4 FURTHER REDIRECT EXAMINATION 5 BY MR. JAFFE: The question regarding 3.1 g's and the impact 6 7 on the -- on a degenerated disk, you've seen the MRIs 8 of this disk, correct? 9 A. Yes. And they were taken three weeks after the 10 Q. accident? 11 12 A. Correct. Based on the degeneration that you saw in 13 this disk -- actually, all three disks, C5-6, L4-5, and 14 L5-S1, why is that you -- well, first of all, do you 15 believe that 3 g's would have in any way changed the 16 17 condition of those disks further? 18 A. No. 19 Why not? Q. Because it's insufficient. The forces are 20 Α. 21 just not there. Besides -- besides, as I indicated 22 earlier, in order to rupture the disk, the adjoining vertebral body will yield, will fracture. 23 And, sir, the pole crash study, when we 24

talked about the Honda absorbing the energy, what part

of the Honda would be absorbing the energy, and how does that affect the driver?

A. Yeah. The bumper absorbs virtually all the energy because it's an energy absorbing bumper by design made for 5-mile-an-hour collisions. By the time the absorbtion -- absorption is a bad word -- it's dissipated because energy is neither created nor destroyed. It gets dissipated.

By the time that translates forward to the driver who sits a good bit away from the seat — from the impact, by the time that gets modulated through the suspension system of both the vehicle and the car seats, there's virtually nothing left for the driver in the seat.

Now, the CG of the Honda is what one calculates the g's for. And usually in a Honda like this, the engine sits up front, so the CG of the Honda is biased towards the front, generally close to and to the midline of the driver's. So the two can't be compared.

- Q. Now, you've seen the plaintiff's deposition testimony where she said that she was sitting flush against the seat looking forward; is that correct?
 - A. That's correct.
 - Q. In light of that testimony especially, how

1	much of that energy would she then have been impacted
2	with and how would that relate to her disks, those
3	three disks?
4	A. Not to confuse energy with forces, but
5	Q. Define forces.
6	A. That's all right. But that's why we say
7	3 g's or less, because it is not calculable how far
8	below that can go.
9	Q. Thank you.
10	MR. JAFFE: I have nothing further, sir.
11	THE COURT: Mr. Cloward.
12	MR. CLOWARD: Yeah.
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14	FURTHER RECROSS-EXAMINATION
15	BY MR. CLOWARD:
16	Q. Yes or no, you never spoke to Ms. Seastrand
17	to determine what she meant by chronic pain, right?
18	A. No.
19	Q. She didn't define that in the deposition
20	either, right?
21	A. Not that I recall.
22	Q. Okay. Now, if you don't know the threshold
23	for what it takes to cause an injury in something, how
24	can you say that she was either hurt or not hurt?
25	A. We know the limits of the threshold, meaning

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at what point do we exceed the threshold for a particular tissue.

- Q. We're talking --
- A. In this case --
- Like to know the disk specifically. Q.

Your Honor, I object. I ask that MR. JAFFE: Dr. Smith be allowed to finish his answer.

It did -- he said "in this case," THE COURT: yeah, and I think he probably needs to be allowed to answer.

BY MR. CLOWARD:

Go ahead, Doctor.

Thank you, sir. MR. JAFFE:

THE WITNESS: Certainly the threshold for injury to the cervical muscles and the lumbar muscles were exceeded to give it the sprain or strain because those are rather low-threshold structures.

The threshold for the disk is established by the adjacent bone. If the bone doesn't fracture, then the disk didn't get ruptured in the same -- for the same forces. So we have a -- we have a check on it. 22 We may not know a number of the threshold, although the bone, by the way -- I gave that in my deposition -- the compressive strength of bone is about between 1,000 and 1200 pounds. Well, that is not happening in this

crash.
BY MR. CLOWARD:
Q. Okay. Doctor, you just testified that the
threshold for the disk is unknown, correct?
A. For her specific disk, yes, that's true.
Q. Okay. You have also testified or in these
reports that you wrote, you've also indicated that head
motions are easily measured on human subjects, true?
A. Right.
Q. But neck forces are not? True? Yes or no?
True?
A. Neck forces can be determined, yes.
MR. CLOWARD: Can I may I approach?
THE COURT: You may.
BY MR. CLOWARD:
Q. Can you just read that for me.
A. "Head motions are easily measured on human
subjects while neck forces are not."
Q. Thank you.
MR. CLOWARD: No further questions.
THE COURT: Mr. Jaffe.
FURTHER REDIRECT EXAMINATION
BY MR. JAFFE:
Q. Just because the neck forces are not easily

measured, does that mean that it's impossible to 1 measure them? 2 3 That's the point. You can still do it. A. In your experience, do doctors sometimes take 4 Q. 5 the way patients describe their presentation of pain and they -- the period of time for which they've had it 6 7 and apply medical terms to them such as chronic? Judge, outside the scope. 8 MR. CLOWARD: 9 THE COURT: You talked about chronic pain. 10 Overruled. 11 Yes, by the definition I gave. THE WITNESS: 12 BY MR. JAFFE: 13 While -- and I just want to follow up. Q. 14 While the threshold for the disk -- for 15 further disruption or alteration of the disk may be 16 unknown, are there limits below which we know it's not 17 going to occur? 18 Yes, there are. Including the -- the abnormal disks in the 19 Q. plaintiff. 20 That's correct. 21 Α. 22 Did she reach that threshold from the forces Q. 23 in this accident? She did not. 24 Α. 25 Is that stated to a reasonable degree of Q.

1 probability? 2 A. It is. 3 Q. Same as all your other testimony. That's correct. 4 Α. 5 MR. JAFFE: Nothing further. 6 Nothing further, Judge. MR. CLOWARD: 7 THE COURT: Thank you, Doctor. Appreciate 8 your time. You're excused. 9 Can we have the attorneys come up for just a 10 second and talk about schedule. 11 (Whereupon a brief discussion was 12. held at the bench.) THE COURT: All right, folks, we're going to 13 14 start tomorrow morning at 9:00 o'clock. Hopefully we 15 won't keep you late tomorrow, but we'll start early. 16 During you're break tonight, you're 17 instructed not to talk with each other or with anyone 18 else, about any subject or issue connected with this 19 You are not to read, watch, or listen to any 20 report of or commentary on the trial by any person 21 connected with this case or by any medium of 22 information, including, without limitation, newspapers, 23 television, the Internet, or radio. You are not to 24 conduct any research on your own, which means you

cannot talk with others, Tweet others, text others,

Google issues, or conduct any other kind of book or 1 computer research with regard to any issue, party, 3 witness, or attorney, involved in this case. You're 4 not to form or express any opinion on any subject 5 connected with this trial until the case is finally 6 submitted to you. 7 See you tomorrow morning. 8 THE BAILIFF: All rise. 9 (Whereupon jury exited the courtroom.) 10 THE COURT: All right. We're outside the 11 presence of the jury. Is there stuff we need to take 12 care of? You want to make your Rule 50 motion? 13 MR. JAFFE: You know what, Judge, I'll do it 14 tomorrow. I may -- I can do it anytime at the close of 15 the plaintiff's case. 16 There are a couple of other things, Judge. 17 Obviously, there's -- in looking over those 18 interrogatories that were admitted in evidence, I think 19 there's a few things we're going to need to redact. 20 THE COURT: I agree. 21 MR. JAFFE: I -- I know Mr. Smith's going to 22 go over to get the disc from Mr. Cloward. I don't know 23 if maybe we can try and resolve that, work those out 24 tonight. Otherwise, we're going to have to work that 25 out tomorrow, or unless you want us to just, you know,

7 look at them tonight, see what we need to redact out 2 and go from there. 3 THE COURT: However you guys want to work it out's fine. 4 5 Okay. Second thing, Judge, is we MR. JAFFE: 6 would like to provide some supplemental requested jury instructions from defense. We want to give them to you now so that everybody has the opportunity tonight to 8 9 take a look at them. THE COURT: That's fine. 10 11 MR. JAFFE: What we've got right now is just 12 the ones with citations. We'll bring ones without 13 cites tomorrow in electronic form. 14 THE COURT: That's fine. Anything else? 15 MR. JAFFE: Um -- oh, yeah. Judge, are you going -- you indicated you would let us know at the end 16 of the day -- by the end of the day today if you're 17 going to let us have the jury inspect Mr. Khoury's car. 18 19 I don't think so. THE COURT: I think 20 it's -- it's more trouble than it's worth. I don't see 21 that there's any real benefit to it based on the fact 22 that we have accident reconstruction experts from both 23 sides, biomechanical experts from both sides, and we 24 have photographs of the vehicles. I don't think it 25 adds anything, and I think it just creates problems,

creates additional expense and time in a trial that 1 we're trying to conserve time. 3 MR. JAFFE: I understand. THE COURT: So I'll just say no. 4 5 MR. JAFFE: Okay. Oh, the -- the two 6 documents, BB and CC, those two articles, Judge, I don't know if you want to take a look at them. They're They're one or two pages apiece. I would 8 very short. like to move those into evidence. THE CLERK: BB and? 10 11 MR. JAFFE: And CC. 12 THE COURT: B, as in boy? Yes, double B, as in boy, 13 MR. JAFFE: 14 double C, as in Charlie. 15 They were disclosed in our ninth supplement to disclosure in February of 2012 as a 16.1(a) (3) disclosure, and they were never objected to. Dr. Smith 17 18 did testify about them. They go directly to the testimony from Arthur Croft regarding application and 19 20 use of the computer programs. We ask they be admitted. 21 THE COURT: Mr. Cloward? 22 MR. CLOWARD: Judge, the same -- the same 23 It's cumulative. The Court does have a things. 24 safekeeping task, you know. So even if -- even if it 25 is found that those objections, foundation, relevance,

were waived, the Court still can exclude those. It's cumulative. Dr. Smith talked about it on the stand. There's really no reason for them to get in.

It's going to confuse the jury. There's a lot of other things that the jury already have to go through in addition to those two documents. It's just one more thing that really doesn't have anything to do with anything.

MR. JAFFE: Your Honor, No. 1, it goes directly to Dr. Smith's testimony as well as Dr. Croft's; No. 2, cumulative is not an appropriate objection because if that was the case, we would never get any medical record when a doctor already talks about a surgery or the symptoms or anything else that's already contained within them.

THE COURT: All right. Here's the deal,

Guys: Whether the objection to these was waived or not because it was not an objection to the production, I don't like the idea of producing a one- or two-page thing that I don't think is probably a complete representation of whatever this is supposed to be. It looks like it's part of something else. I don't know — I don't like the foundation for it, without having somebody here that says, yes, this is — I'm with SAE and this is part of our document. The

PC-Crash operating manual, I mean, I quarantee you the 1 2 PC-Crash operating manual is not just one page. 3 I'm going to say no. I think your expert talked about them, and I think he probably got in 4 whatever you need to from the document. I don't think 6 it's something that the jury needs to see. 7 MR. JAFFE: Okay, sir. 8 THE COURT: Okay? 9 MR. JAFFE: Yes, sir. 10 THE COURT: Anything else? 11 MR. CLOWARD: Thanks, Judge. 12 MR. JAFFE: Nothing, sir. 13 THE COURT: See you in the morning at 9:00. 14 Let me just put on the record, Mr. Jaffe, are 15 you paying for the overtime tonight? 16 MR. JAFFE: Yeah, I think it's probably 17 appropriate. 18 THE COURT: Okay. Thank you. 19 Off the record. 20 (Thereupon, the proceedings 21 concluded at 5:26 p.m.) 22 23 24 25

CERTIFICATE OF REPORTER

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STATE OF NEVADA 3

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COUNTY OF CLARK

I, Kristy L. Clark, a duly commissioned Notary Public, Clark County, State of Nevada, do hereby certify: That I reported the proceedings commencing on Tuesday, July 23, 2013, at 1:01 o'clock p.m.

That I thereafter transcribed my said shorthand notes into typewriting and that the typewritten transcript is a complete, true and accurate transcription of my said shorthand notes.

I further certify that I am not a relative or employee of counsel of any of the parties, nor a relative or employee of the parties involved in said action, nor a person financially interested in the action.

IN WITNESS WHEREOF, I have set my hand in my office in the County of Clark, State of Nevada, this 5th day of May, 2014.

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1	CASE NO. A-11-636515-C Electronically Filed 05/04/2014 06:13:12 PM
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	MARGARET G. SEASTRAND,)
10	Plaintiff,)
11	vs.
12	RAYMOND RIAD KHOURY, DOES 1) through 10; and ROE ENTITIES)
13	11 through 20, inclusive,
14	Defendants.
15	
16	REPORTER'S TRANSCRIPT
17	OF
18	JURY TRIAL
19	P.M. SESSION
20	BEFORE THE HONORABLE JERRY A. WIESE, II
21	DEPARTMENT XXX
22	DATED TUESDAY, JULY 23, 2013
	DATED TOESDAI, UULI 23, 2013
23	
24	REPORTED BY: KRISTY L. CLARK, RPR, NV CCR #708, CA CSR #13529
25	

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1	tac mecac ammana watty oo oolo.
	LAS VEGAS, NEVADA, TUESDAY, JULY 23, 2013;
2	1:01 P.M.
3	
4	PROCEEDINGS
5	* * * * * *
6	
7	THE BAILIFF: All rise.
8	(Whereupon jury entered the courtroom.)
9	THE COURT: Go ahead and be seated. Welcome
10	back, folks. Back on the record, Case No. 636515.
11	Parties stipulate to the presence of the
12	jury?
13	MR. JAFFE: Yes, sir.
14	MR. CLOWARD: Yes, Judge, we stipulate.
15	THE COURT: All right. Ms. Seastrand is
16	still on the stand, and it is time for
17	cross-examination.
18	You're still under oath. Just be
19	remembered just be reminded. Okay?
20	Go ahead, Mr. Jaffe.
21	MR. JAFFE: Thank you. May I proceed, Your
22	Honor?
23	THE COURT: You may.
24	
25	1////

1	CROSS-EXAMINATION
2	BY MR. JAFFE:
3	Q. Mrs. Seastrand, do you accept that there are
4	rules in life in which we all must live?
5	A. Yes.
6	Q. Do you agree that we all have to accept and
7	live by those rules of society whether we like them or
.8	not?
9	A. Yes.
10	Q. Do you agree that when you file a lawsuit,
11	you accept the responsibility of following the rules of
12	the court and what they require of you?
13	A. Yes.
14	Q. And do you agree with the rule that it is
15	imperative to be completely honest with your doctors
16	and those providing you with medical care at all times?
17	A. Yes.
18	Q. Have you done that?
19	A. To the best of my knowledge, I have.
20	Q. You testified that when this accident
21	occurred well, actually, let me back up.
22	You've used various different terms at
23	various different times in describing the effect of
24	this accident on you and the impact. For example,
25	jolted.

1	You agree with that?
2	A. Yes.
3	Q. Whipped back and forth?
4	A. Yes.
5	Q. Shocked?
6	A. Yes.
7	Q. Hurt so bad you could not think or breathe?
8	A. Yes.
9	Q. Even though I know it's it probably should
10	have said shaken up, but shooken up in at least one
11	medical record?
12	A. I can't remember the medical record, but I'm
13	sure if it's on there, I did.
14	Q. Okay. And that's a that is a point. When
15	a doctor creates a medical record representing what you
16	have told them, you don't remember as you sit here, for
17	example, what you told the doctor in 2005 to say that I
18	didn't say that or did say that.
19	Would that be fair to say?
20	A. Some things I might remember, but it's a long
21	time ago.
22	Q. You certainly don't take issue with or in any
23	way suggest that any of your doctors at any time have
24	attributed comments or statements to you that they
25	that you did not make, do you?

Q.

Ma'am -- okay.

So you don't know.

1 Do you know if Dr. Shah would make something 2 up and attribute something to you that you did not say? 3 Well, I think there were some errors in Dr. Shah's records, and we talked about them. 5 Q. For example, the issue about you Okay. saying that you heard screeching tires? 7 A. Right. You don't know where Dr. Shah got that? 8 Q. It was a long time ago, so I'm not sure 9 A. exactly -- I'm -- we could have talked about it, but I 11 don't remember hearing tires screeching. And so maybe 12 he left out the "not," that I did not or something. I'm not responsible for the accuracy of it. 13 14 Q. Ma'am, I'm just asking you --15 Α. Yeah. 16 -- it's really a simple question. Q. 17 Do you have any reason to believe that Dr. Shah would have made anything up and intentionally 18 19 misrepresented comments attributed to you in his 20 medical records? Do you think he would do that intentionally? 21 22 Α. I don't know Dr. Shah well. I only saw 23 him --Do you think Dr. Khavkin would have done 24 Q. 25 that?

1	A. I know Dr. Khavkin better, no.
2	Q. You don't believe he would have
3	misrepresented what you've said.
4	A. If he understood and we communicated well, I
5	think he would have definitely reported it well.
6	Q. Do you believe that Dr. Lurie would have
7	misrepresented statements made by you in his medical
8	records?
9	A. I don't know Dr. Lurie well. I can't say. I
10	can't make a judgment on that.
11	Q. Dr. Lurie has no stake in this in a
12	lawsuit, right?
13	A. In a lawsuit? I don't know.
14	Q. In this lawsuit.
15	A. Oh, I don't think so, but I don't know. I'm
16	not part of Dr. Lurie. I don't know of anything with
17	Dr. Lurie.
18	Q. Dr. Shah has no stake in your lawsuit, right?
19	A. Not that I know of.
20	Q. Okay. Do you believe Dr. Muir would
21	intentionally misrepresent things that you've told him
22	when attributing comments to you in his medical
23	records?
24	MS. BRASIER: Your Honor, I'm going I'm
25	going to object. Calls for speculation. He's asking

her what Dr. Muir would do. 1 2 I'm asking for her impressions, MR. JAFFE: 3 Your Honor. THE COURT: He's asking if she has any reason 4 5 to be believe that. Overruled. 6 MR. JAFFE: Thank you, Your Honor. 7 BY MR. JAFFE: Would you like the question read back? 8 Q. 9 A. Yes, please. 10 Do you want me to restate it, MR. JAFFE: 11 Judge, or --Why don't you restate it. 12 THE COURT: 13 BY MR. JAFFE: 14 Q. Do you have any reason to believe that Dr. Shah would have intentionally misrepresented 15 16 statements made by you when preparing his medical records? I meant Dr. Muir. I'm sorry. I don't --17 18 Oh, yeah, I was --Α. 19 Do you have any reason to believe that Ō. 20 Dr. Muir would have intentionally misrepresented comments made by you when preparing his medical 21 22 records? Intentionally misrepresented? 23 A. I don't see 24 that he would have done that. No, I don't think so. 25 Q. Do you believe Dr. Kermani would have?

1	A. No. But I don't know Dr. Kermani well enough
2	and
3	Q. So he might have? You just don't know?
4	A. No. I just can't make a judgment on
5	something like that.
6	Q. Okay. Now, you testified in your deposition
7	when this accident happened, the officer was mean to
8	you?
9	A. He was. I felt.
10	Q. How so?
11	A. When I when I was when he talked to me,
12	and I think I was on the the stretcher, I just
13	remember him just being really rude to me and making me
14	cry. I don't remember everything he said, but I
15	remember crying and saying, I'm hurting. I want to go
16	to the hospital.
17	Q. Was there anything else the officer did that
18	was mean to you?
19	MS. BRASIER: Objection, Your Honor. Can we
20	approach?
21	THE COURT: Sure.
22	(Whereupon a brief discussion was
23	held at the bench.)
24	BY MR. JAFFE:
25	Q. Now, your your attorney showed you

24

25

Q.

for admissions?

7 requests for admissions that we served in this case. In fact, moved them into evidence while you were on 3 direct testimony. Do you remember that? 4 5 Was that the first document? Α. 6 0. Yes, Exhibit JJ. Ż A. I remember that. 8 MR. JAFFE: Your Honor, would the Court advise the jury as to what a request for admission is so that I can address those now? 10 11 THE COURT: Sure. Requests for admissions are -- it's a discovery tool that attorneys can use, 12 each side can use it to ask the other -- ask the other 14 side to admit or deny certain things. And an 15 interrogatory, you've heard reference to that as well. 16 Interrogatories have to be signed under oath by the 1.7 party who -- who is responding to them. Requests for 18 admissions do not need to be responded to under oath. 19 That's one difference. But a request for admissions that you've heard reference to, there's either an 21 admission or a denial to each request. 22 BY MR. JAFFE:

Are you aware that as lawyers, we're entitled

to rely upon the answers that are provided to requests

13

1	A.	Is that common practice? I mean, is that
2	·	THE COURT: He's just asking whether you know
3	that.	
4		THE WITNESS: I did not know that, but
5	BY MR. JA	FFE:
6	Q.	Now, you mentioned that these requests for
7	admission	s, you never saw them before; is that correct?
8	A.	I saw them yesterday, I think it was, or the
9	day before	e she showed that.
10	Q.	That was the first time?
11	A.	I don't remember seeing them before then.
12	Q.	Well, because they were signed and dated
13	August 30	, 2011. Why don't you turn to the exhibit.
14	It's JJ.	
15	A.	Is that right in here, the one I just folded
16	up?	
17	Q.	It may very well be. I didn't see what you
18	took out,	ma¹am.
19		MR. JAFFE: Your Honor, may we have access
20	for our co	omputer?
21		THE WITNESS: I oh.
22		MR. JAFFE: Actually, I will tell you what,
23	before we	go to the requests for admissions, Greg,
24	let's do 1	this.
25		Your Honor, I'd like to put a timeline of

1	some pertinent events out there.
2	BY MR. JAFFE:
3	Q. Your accident occurred on March 13th, 2009,
4	correct?
5	A. Correct.
6	MR. JAFFE: Now, Greg, do you need a moment?
7	Okay.
8	BY MR. JAFFE:
9	Q. Your cervical fusion surgery occurred on
10	January 25, 2010; isn't that correct?
11	A. I believe so.
12	Q. Your lumbar fusion surgery occurred on
13	May 12, 2010, correct?
14	A. I believe so.
15	MR. JAFFE: Your Honor, I would ask the Court
16	to take judicial notice of the fact that this lawsuit
17	was filed on March 9, 2000 March 8, 2011. We filed
18	as a court exhibit a copy of the complaint.
19	THE COURT: Is there any dispute to the date,
20	Mr. Cloward?
21	MR. CLOWARD: No.
22	THE COURT: Okay. The Court will take
23	notice.
24	MR. JAFFE: Your Honor, we've also filed
25	with as a court exhibit a copy of the summons served

1 on Raymond Khoury indicating he was served with this 2. lawsuit on June 1, 2011. 3 THE COURT: Okay. Would the Court take notice of MR. JAFFE: 4 5 that? I have it in front of me, but I THE COURT: 6 7 have no reason to dispute it. Thank you, Your Honor. 8 MR. JAFFE: And I would also ask the Court to take notice 9 that our answer, our initial answer was filed with the 10 court and served on June 21, 2011. I would ask the 11 Court take notice of that. 12 13 THE COURT: Okay. MR. JAFFE: So June 21, 2011, is when I 14 entered the case as the attorney for Mr. Khoury. And 15 then we served these requests for admissions, and these 16 were answered on August 30, 2011, so just two months 17 after we got into the case. Okay? I -- since these 18 are now admitted in evidence, Your Honor, I would like 19 to publish the requests for admissions to the jury. 20 21 As long as there's nothing in THE COURT: 22 there that would be otherwise objectionable. I'm actually just -- instead of 23 MR. JAFFE: 24 showing the actual ones, sir, I'm just going to -- I've got slides created of the particular admissions that I 25

want to reference. 1 2 THE COURT: That's fine. 3 BY MR. JAFFE: Ma'am, would you please turn to the third 4 Q. page. And you will confirm -- please confirm for the jury, what date were those answered. I'm sorry? A. 8 What date were these signed? Q. 9 A. Do you mean down at the bottom? Yes, please. 10 Q. 11 A. The 30th day of August. And who signed them? 12 Q. 13 A. Richard Harris. 14 Q. Your attorney? 15 Α. Yes. Now, with respect to Request for Admission 16 Q. No. 11, what we asked you to admit was the following: 17 18 "In approximately 1981, you were in a 19 rollover auto incident in which you suffered 20 injuries to your neck, mid back, and lower 21 back." 22 You see that? 23 A. Yes. 24 Q. You don't -- you admit that, right? 25 A. No.

1	Q. You no, no. In this courtroom, right
2	now, you admit that fact, right? You admit that in
3	1981, you were in a rollover auto accident in which you
4	injured your neck, your mid back, and your low back?
5	A. No. I can explain
6	Q. Ma [†] am
7	A if you'd like me to.
8	Q hold on. It's a yes-or-no question.
9	So I want to make sure I got this right
10	because the response to this was "Deny."
11	A. Correct.
12	Q. Okay. So you believe that that that is an
13	accurate answer.
14	A. I do.
15	Q. We're going to come back to that in a moment.
16	A. I can explain, too.
17	Q. Ma'am, I'm Mr. Cloward will ask for any
18	explanations. Please
19	A. I'm sorry.
20	Q this is going to go a lot easier if you
21	just let me ask my questions and answer them. Okay?
22	A. I'm sorry. Okay.
23	Q. Let's turn to Request for Admission No. 12.
24	The question was:

"Prior to the subject accident -- meaning

1 the one we are here for -- you were in a 2 head-on auto accident in which you suffered 3 injuries to your neck, mid back, and lower back." 4 5 Do you see that? 6 (Witness nods head.) A. 7 Q. Do you today admit that that is accurate? 8 A. No. 9 So then the response of deny you believe is Q. 10 an accurate answer. 11 A. It is. 12. Let's turn to No. 15. Request No. 15 said, 13 You experienced intermittent neck pain prior to the 14 subject accident; is that correct? That's what it 15 says? 16 Yes, that's what it says. Α. 17 Q. Do you admit that today? 18 Occasional. A. 19 Okay. So if occasional was a -- changed for 20 intermittent, then you would admit this, but you wouldn't admit it as intermittent? 21 22 A. Well, if they mean the same thing, then I would say, yes, I had occasional back pain. 23 24 This is neck pain. Q. 25

I mean, neck pain, yes.

Α.



1	Q.	Okay. So the response was "Deny"; isn't that
2	correct?	
3	A.	To intermittent
4	Q.	Neck pain
5	A.	neck pain.
6	Q.	prior to this accident.
7	A.	It was deny.
8	Q.	And and when in Request No. 16 we asked
9	you to adm	nit that you experienced intermittent low back
LO	pain prior	to the subject accident, do you today admit
L1	that you d	lid?
12	A.	Occasional back pain.
L3	Q.	So if occasional was substituted for
4	intermitte	ent, you would admit that but not
L5	intermitte	ent.
L6	A.	I would admit that that I had occasional
L7	back pain.	If you asked me the question today, I would
L8	do that, d	lefinitely.
L9	Q.	What about intermittent low back pain?
20	A.	Low back pain, I would admit that, yes, I do
21	have di	d have occasional.
22	Q.	Yet on August 30, 2011, the answer was
23	"Deny," co	prrect?
24	A.	Well, I did not see this document.
25	Q.	So it's your lawyer's fault?

<u>x</u>	A. I don't know what that means as far as fault.
2	Q. Mr. Harris signed these, right?
3	A. Yes.
4	MR. JAFFE: Your Honor
5	BY MR. JAFFE:
6	Q. I want to go back now. We're going to talk
7	about No. 11 and 12, because in 11 and 12, you said you
8	would still deny that in 1981 you were in a rollover
9	accident in which you suffered injuries to your neck,
10	mid back, and upper back. Okay?
11	MR. JAFFE: So, Your Honor, at this time, I
12	would like to publish plaintiff's Exhibit 9 which has
13	been admitted into evidence and page 7. Just takes a
14	moment. Got to change over the system.
15	THE WITNESS: Am I supposed to have
16	something?
17	THE COURT: He's going to show it to you on
18	the screen.
19	THE WITNESS: Okay.
20	THE COURT: You want to just use the ELMO?
21	MR. JAFFE: Greg, and
22	Okay. Your Honor, I'll use the ELMO.
23	BY MR. JAFFE:
24	Q. I'm going to show you a portion of your
25	medical record, and this is from Dr. Lurie's initial

1	examination of you on March 20, 2009.
2	A. Can I put this away so I can move those
3	out
4	Q. Actually, you you're going to have it on
5	the screen anyway, but I'd like you to keep
6	A. It just cuts off the bottom. I need to just
7	move this.
8	Q. I see, but
9	A. Okay. That's all right.
10	Q. If you want to move here, would you like
11	me to move those for you?
12	A. No, I'm fine. Thank you.
13	Q. Oh, okay. Now, you'll see that on there,
14	this is March 20, 2009, so one week after the accident
15	for which we're here.
16	Do you see that?
17	A. Yes.
18	Q. Now, in Dr. Lurie's note, what it says, and
19	I'm pointing I'm referring right here if you can see
20	my pen point.
21	A. I cannot.
22	Q. You see the pen point on where my pen was
23	pointing on the screen?
24	THE COURT: The way it shows up on the
25	screen, I can't see it either.

A.

No.

Okay. Greg, how we doing with MR. JAFFE: 1 2 it? If you move it over to the right, THE COURT: 3 4 now she can see it. The whole -- okay. 5 MR. JAFFE: Just zoom it out one. THE COURT: 6 If it's off the TV a bit, but --7 MR. JAFFE: 8 okay. BY MR. JAFFE: I'm going to read this. Now, bear in mind, 10 the request for admission that No. 11 was, In 11 approximately 1981, you were in a rollover auto 12 accident in which you suffered injuries to your neck, 13 mid back, and lower back, which is what you denied and 15 still deny. Yet what this says, She stated she was in a 16 motor vehicle collision rollover approximately in 1981 17 and was treated and released with no evidence of 18 residual difficulties. She recalls injuries to her 19 neck, mid back, and lower back. 20 Is that what you told Dr. Lurie? 21 This -- I have no memory --22 A. Is that -- it's a yes or no, ma'am. Do you 23 Q. remember telling that to Dr. Lurie or not? 24

1 Q. Do you know where Dr. Lurie would have gotten that information? 3 A. Not about my mid back. O. And just below it, and look at Request 4 Okav. 5 No. 12, it says, Prior to the subject accident, you were in a head-on auto accident in which you suffered injuries to your neck, mid back, and lower back, which 8 today -- to this day you still deny. 9 A. About my mid back. 10 Q. What was in this record is, She also stated 11 she was involved in a motor vehicle collision in 12 approximately 1985 which she described as a head-on 13 collision. She stated that recall injuring her neck, 14 mid back, and lower back as well. 15 A. I'm sorry. I don't know where you are. 16 Q. It's actually just lower --17 Α. Are we over here, you mean? 18 Yeah. Q. 19 A. I'm sorry. 20 It's just below where that pencil mark is on Q. 21 that sheet. 22 A. I see that, uh-huh. 23 She recalls -- she also stated she was Q. 24 involved in a motor vehicle collision in approximately

1985 which she described as a head-on collision.

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stated	d that	: re	ecall	in	juri	.ng	her	neck,	mid	back,	and
lower	back	as	well.	,	She	sta	ated	•			

Are you -- is it your allegation that Dr. Lurie made this up?

- A. I just don't have any memory of telling him about my mid back because I don't have any memory of that having an injury.
 - Q. Okay. So Dr. Lurie's record is wrong.
 - A. In that, yes, he is.

MR. JAFFE: Now, Greg, can we go back and put up that --

May we have the computer again, Your Honor?

I want the timeline.

Okay. What's not on there, of course, is that our answer was served on June 21, 2011.

16 BY MR. JAFFE:

- Q. Now, we can agree that when Dr. Muir operated on your neck on January 25, 2010, it changed the condition of your back, right? He removed your disk, he fused the disk, and he put hardware in your neck; is that right?
 - A. My neck or my back?
- Q. Your neck, January 25, 2010.
 - A. Can you repeat the question?
 - Q. Sure. When Dr. Muir operated on your neck --

Right. 1 A. -- he altered the condition of your neck. 2 Q. 3 A. Of my neck? 4 Q. Yes. 5 A. Yes. It was not the same as it was after 6 Right. Q. 7 the surgery as it was before the surgery and after the 8 accident, correct? 9 Α. Correct. The disk was now changed. You had hardware 10 Q. 11 in your neck and a fusion, right? 12 A. Right. When Dr. Khavkin operated on your low back in 13 May 2010 at two disk levels, he did the same thing as 14 relates to your low back, right? He altered its 15 condition. 16 17 A. Yes. Both Dr. Khavkin and Dr. Grover, obviously, 18 Q. 19 since it was Grover who testified not Khavkin. 20 changed your back and in a way that could not be put 21 back the way it was before because that's what you wanted, right? 22 23 Α. I'm sorry. Could you --Bad question. I'll restate it. 24 Q. 25 Once they operated on your back, it changed

25

Α.

Yes.

the condition of your back forever; is that right? 1 was altered. A. Yes. So the way your back was as of May 13th, 5 2010, was different and not the same as it was right after the accident; isn't that correct? May -- would you repeat that one more time so I know get the -- what you're talking about exactly. As of May 13th, 2010, the condition of your 10 back no longer reflected the way it was as of March 14th, 2009. The day after the accident versus the day after the surgery, it no -- the day after the 12 13 surgery, your back was no longer in any way in the condition as it was right after the accident, right? 14 .15 Because the disks were changed. 16 In the two areas are you talking about? Α. 17 In the lumbar spine. You -- when Dr. Khavkin operated on your back, he altered the condition of the 19 disks in your lumbar spine, true? 20 A. Of those two? 21 Q. Right. 22 Α. Yes. 23 They were no longer in the same Q. Right.

condition as they were prior to that fusion.

Α.

-- you said?

1 Q. When Dr. Muir operated on your neck, your symptoms changed. 3 A. Yes. When Dr. Khavkin operated on your low back, 4 Q. 5 your symptoms changed. 6 A. Yes. 7 0. Now, I didn't come into this case until June 21, 2011, more than a year after you had those surgeries. We can agree that if I wanted to have a 10 doctor examine you, there is no way he could have 11 possibly examined you to see your disks, your back, 12 your symptoms, and your presentation as they were prior 13 to having had those fusions; is that correct? 14 Say it one more time so I got it 15 right. 16 If -- after June 21, 2011, when I became 17 involved in this case, right, if I now wanted a doctor 18 to examine you, there's no way he would be able to examine your back and perceive, understand from you 20 yourself how you were feeling given the symptoms, given the condition of your back, the pain. 21 They were all 22 changed because of the surgery, right? 23 Α. To perceive from me --24 Q. Yes.

Α.

1 you're saying? 2. I'm saying if he wanted to evaluate you Q. 3 personally in a physical examination with your symptoms, your -- the way you may have walked differently or acted differently or moved differently, 5 anything about your presentation that was affected by 6 your spinal conditions, that opportunity was lost the 7 minute you had your surgeries; isn't that correct? 9 Α. I'm not a doctor, so I don't know how to answer that. If that opportunity -- I don't know what 10 11 they need to make assessments, and --12 Q. Okay. -- I'm not there -- I'm not medically trained 13 like that to know what they need. 14 15 Q. We can agree --MS. BRASIER: Your Honor, can we approach? 16 THE COURT: 17 Come on up. (Whereupon a brief discussion was 18 19 held at the bench.) BY MR. JAFFE: 20 21 We can agree that a doctor in 2011 could not Q. 22 have examined your back and your neck as it existed prior to the surgeries that you underwent; isn't that 23 24 correct?

I'm not a medical doctor, so ...

```
Now, after this accident occurred, you
1
        Q.
              Ôkay.
   indicated that you were in -- I want to make sure I
2
3
   have it right -- that you were -- that you were hurting
   really bad. Basically that you were in severe pain,
   constant pain every day in your neck and low back.
                                                          So
 5
   intense pain every day in your neck and low back
 6
 7
   constantly; isn't that right?
 8
        A.
              When?
              After the accident.
 9
        Q.
10
        A.
              Yes.
              Now, the accident happened on March 13th,
11
        Q.
   2009.
12
13
        A.
              Right.
              You went to the emergency room on March 13,
14
        Q.
   2009, correct?
15
16
        A.
              Right.
              But you didn't see another doctor for another
17
   week despite that intense daily pain in your neck and
18
19
   back --
20
        A.
              Right.
              -- is that right?
21
         Q.
22
         A.
              Right.
              And then you went to see Dr. Lurie?
23
         Q.
              I did.
24
         Α.
              And who referred you to Dr. Lurie?
25
         Q.
```

1	A.	My I was given some options.
2	Q.	By who?
3	A.	By Richard Harris's office.
4	Q.	You did have a personal physician at that
5	time, tho	ugh, correct?
6	A.	Dr. Kermani, yes.
7	Q.	We can agree, and it is true, that you did
8	not conta	ct Dr. Kermani to go see him during that
9	period of	time.
10	A.	I did not.
11	Q.	You did not make an appointment to go see
12	him.	
13	A.	I don't know if I made an appointment, but I
14	did not g	see him at that time that week.
15	Q.	And you did not call Dr. Kermani's office
16	asking if	they would have a doctor to refer you to?
17	A.	Dr. Kermani is a GP, and he was I just
18	didn't fe	el competent that he would know who to
19	recommend	me to.
20	Q.	Did you ask for a recommendation in the
21	emergency	room?
22	A.	I wasn't thinking about anything in the
23	emergency	room. I was on drugs, and I wasn't thinking
24	about that	t kind of stuff at all.
25	Q.	Your husband was there, correct?

1	A.	Yes.		
2	Q.	And in the referral paperwork, Dr. Fredosian		
3	even said	there was a referral to a Dr. Ashman; isn't		
4	that corr	ect? Do you remember that?		
5	A.	I don't remember it from the time.		
6	Q.	Did you ever go see Dr. Ashman?		
7	A.	No.		
8	Q.	Now, the interrogatories were moved by your		
9	counsel i	nto evidence. I would like you to turn to		
10	Exhibit I	I.		
11	A.	Is that in the same		
12	Q.	It's in the same book.		
13	A.	same binder?		
14	Q.	It's one before. II.		
15	A.	Okay.		
16	Q.	Please turn to page 16 of those		
17	interrogatories.			
18	A.	(Witness complies.)		
19	Q.	And I would like to direct your attention to		
20	Interrogatory No. 16.			
21	A.	Yes.		
22	Q.	We can agree that you have verified the		
23	authentic	ity and accuracy of these interrogatories,		
24	correct?			
25	A.	Yes.		

Õ. Question No. 16 asked:

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For each and every prior or subsequent accident or injury, whether caused by motor vehicle or work-related injury or otherwise, provide the nature of each injury and the date and location of accident.

You see that?

- Α. Yes.
- And Response No. 1 was: Q.

Motor vehicle accident. Date and Type: location: Approximately 1981, Idaho. of injury: You put, Plaintiff does not recall?

- A. Hmm?
- 0. So that was an accurate and honest answer?
- Well, maybe at the time I was in a lot of Α. pain and maybe I didn't recall, and I was on painkillers.
- Q. Now, when you verified the authenticity of these answers which were served on me on September 29th, 2011, did you know that what -- that you had hurt your neck and low back in 1981 in that accident?
- Α. My neck and low back, yes, I did. probably didn't read these all the way through accurately. I probably just wasn't as thorough as I

Α.

May I have the plaintiff's 1 MR. JAFFE: 2 deposition, please. 3 Your Honor, may I approach the witness? 4 THE COURT: You may. 5 BY MR. JAFFE: Ms. Seastrand, here's a copy of the 6 deposition transcript. What I'd like to do is ask you 7 this now: Do you remember when you came to my office for your deposition that it was videotaped? 10 Α. Yes. 11 And you were placed under oath? Q. 12 A. Yes. And you knew that you were testifying the 13 Q. same as if you were testifying in front of a judge and 15 jury --16 Α. Yes. 17 Q. -- in court. You remember that? 18 19 A. Yes. 20 And I asked you about that? Q. 21 Α. Yes. And I also gave you the option, if you 22 Q. wanted, to within 30 days after the transcript was 23 24 completed to review it and change answers if you would 25 like, knowing that I would be able to use the original

1	and the changed answers later on.
2	A. Yes.
3	Q. Now, you did testify honestly that day?
4	A. To the best of my ability.
5	MR. JAFFE: Your Honor, I'm looking at I
6	want to refer to page 127, lines 15 to 23. Now and
7	I'd like to play the clip of the testimony, Your Honor.
8	It was a duly noticed videotape deposition.
9	(Whereupon video clip was played.)
10	MR. JAFFE: Greg, this is the wrong one.
11	It's Clip sorry. Here's the right one.
12	THE WITNESS: What page are you on,
13	Mr. Jaffe?
14	MR. JAFFE: 127 lines, 15 through 22.
15	(Whereupon video clip was played.)
16	UNIDENTIFIED SPEAKER: Can you describe the
17	intensity impact for me.
18	MR. JAFFE: Greg, we're 0 for 2. We're oh
19	for two. Wrong one.
20	BY MR. JAFFE:
21	Q. Let's just read it. The question I asked you
22	was:
23	"What about your low back and prior
24	injuries, problem, or treatment to your low
25	back?"

And your answer was:

"I'm -- I'm -- I'm pretty careful. I don't, you know, play tennis or any bungee jumping or anything silly. I'm careful with that. So I never had any problems with that since, you know, I went through that physical therapy in 1985. I've had babies. You know, I've never had any -- anything that would slow me down."

So you indicated that even before the accident, because I was asking about prior low injuries, treatment in your low back, you didn't even play tennis and you gave up bungee jumping, right —

- A. Right.
- Q. -- is that correct?

But you did go Sea-Dooing, you did go rappeling. That's your testimony?

- A. I went rappeling one time.
 - Q. One time. And the Sea-Dooing --
 - A. With my girls. My kids.
 - Q. that wasn't a regular thing, was it?
- A. We don't have any Sea-Doos or a boat, but I love to do it.
 - Q. In fact, you said you did it -- your testimony was that you did it rarely; is that right?

1	A.	Uh-huh.
2	Q.	Yes?
3	A.	Yes. Uh-huh.
4	Q.	Rarely?
5	A.	Rarely.
6	Q.	So it wasn't something you were out doing
7	once eve	ry week or once a month or maybe even once a
8	summer?	
9	A.	No. No, I'd go whenever we were invited to
10	go.	
11	Q.	Okay.
12	A.	But it wasn't every summer.
13	Q.	Now so before this accident, you were
14	careful r	not to engage in aggressive activities because
15	of your h	back; is that right?
16	A.	I was careful, but not I just did whatever
17	we we	did.
18	Q.	Now, you have not had any physical therapy
19	since Jar	nuary 2011; isn't that correct?
20	A.	I don't remember the date when I ended that,
21	so	
22	Q.	Was Matt Smith Physical Therapy the last time
23	you went	for physical therapy?
24	A.	On Nellis?
25	Q.	I don't know where it was.

1	A. I think that was the one.
2	Q. Well, I will tell you what we've got is we
3	don't have any medical records since January 2011 of
4	physical therapy.
5	Are you aware of any?
6	A. No.
7	Q. We're not aware of any medications that you
8	refilled since July 2011 relative to these injuries.
9	Are you aware of any?
10	A. Since July 2011?
11	Q. Yes.
12	A. No, I'm not aware of any.
13	Q. Now, you mentioned earlier that two days
14	before Christmas in 2008, you went to a doctor for a
15	stress test; is that right?
16	A. I'm sorry. Would you say the date again.
17	Q. Two days before Christmas in 2008.
18	MS. BRASIER: Objection, Your Honor.
19	Misstates prior testimony.
20	MR. JAFFE: Your Honor, her testimony was
21	that she was there two days before Christmas because
22	she was concerned that she wouldn't be out, that it
23	might ruin Christmas.
24	MS. BRASIER: Her testimony was that she was
25	hospitalized, and I don't know that that's when she had

7 the stress test. BY MR. JAFFE: 3 Q. Okay. You were hospitalized two days before Christmas in 2008; is that right? 5 A. Just trying to make sure that was the right year, and -- yes, uh-huh. Yes. 7 We haven't been provided or seen any medical 8 records from you being in the hospital in 2008. Where was this? 9 The hospital for my heart --10 A. 11 Q. Two days ---- in 2008? 12 A. 13 Q. -- before Christmas. 14 A. The -- the -- angiogram they did? 15 Q. Where was it? 16 A. Oh, I think it was Sun -- it was St. Rose Siena I believe. But it was for my heart. 17 18 Q. Two days before Christmas. 19 Α. The angiogram was on the 24th, the morning of the 24th. 20 2.1 Q. We haven't seen or been provided with any records from that day. Have you seen any? 23 Α. Me? Have I seen any of those records? 24 Q. Yeah. 25 Α. I don't -- I don't recall seeing any of those

A.

1	records.				
2	Q. Dr. Grover testified on Thursday that after				
3	you were discharged from your lumbar fusion, you were				
4	given postoperative instructions.				
5	Do you recall that?				
6	A. No. I don't recall anything much.				
7	Q. You didn't get any post-op instructions on				
8	what to do and what not to do?				
9	A. I just don't remember. I was on drugs, pain				
10	medication.				
11	Q. Even when you left the hospital?				
12	A. Yes.				
13	MR. JAFFE: May I have a moment, Your Honor?				
14	THE COURT: Sure.				
15	MR. JAFFE: Thank you, Your Honor. I have				
16	nothing further.				
17	THE COURT: Redirect.				
18					
19	REDIRECT EXAMINATION				
20	BY MS. BRASIER:				
21	Q. All right. Margie, the request for				
22	admissions that you were shown, you admit, deny, admit				
23	deny, did you did you ever see those before they				
24	were prepared?				

Not that I recall.

1	Q. Okay. And after those were prepared, did			
2	did you have a deposition with Mr. Jaffe?			
3	A. What was the date on their preparation?			
4	Q. I'll just save some time. I'll they were			
5	prepared in August of 2011. Was your deposition after			
6	August of 2011?			
7	A. You'd have to look on the date. I don't			
8	remember the date.			
9	Q. Okay. If I tell you the date was May 20th of			
10	2012, last summer, do you remember that?			
11	A. I do remember the deposition. I just don't			
12	remember the date.			
13	Q. And how long was your deposition?			
14	A. I was there from 8:00 o'clock in the morning,			
15	and we left at 6:00.			
16	Q. And during your deposition, did Mr. Jaffe ask			
17	you questions about prior accidents and injuries that			
18	you'd had?			
19	A. Yes.			
20	Q. And did you give him honest testimony about			
21	those accidents and injuries?			
22	A. To the best of my ability that day.			
23	Q. And have you lied in any of your responses			
24	that you've given?			
25	A. No.			

1 MS. BRASIER: Court's indulgence. 2 BY MS. BRASIER: 3 And, Margie, do you remember signing verifications for different sets of interrogatories? 5 Not just the one that we've been talking about. 6 Α. I don't have a specific memory for signing things, but if my signature is on there, I'm sure I 8 signed it. 9 If I represent to you that there's at 10 least three different verifications that you've done of 11 different sets, would -- do you remember that? 12 Α. As I said, I'm sure I did if my signature is 13 on there. 14 Q. Okay. 15 MS. BRASIER: Nothing further, Your Honor. 16 THE COURT: Anything else, Mr. Jaffe? 17 18 RECROSS-EXAMINATION 19 BY MR. JAFFE: 20 Would you agree that I have the right to rely 21 on you being honest in all phases of your providing 22 information in a lawsuit, whether it be -- would you 23 agree that I had the right to rely on the fact that you had an obligation to be honest in answering questions 24

whether they're on paper or in a deposition as long as

1	it was within that lawsuit?
2	A. Would I agree that
3	Q. Would you agree that I had the right to rely
4	on you being honest in answer providing discovery
5	responses?
6	A. Do I agree that you have the right to rely on
7	me being honest; is that correct?
8	Q. Yes.
9	A. To the best of my ability, at the time, I
10	would say I think I was honest.
11	Q. Do you agree that I have the right to trust
12	that the answers that you give me are intended to be
13	given to me as honest answers?
14	A. They were they were intentionally honest
15	and to the best of my ability at the time.
16	Q. My answer is my question is this: Do you
17	agree that I have the right to trust that those are
18	intended as honest answers?
19	A. They were intended as honest answers, yes.
20	Q. And I can I have the right to trust that?
21	A. I don't know what you have the right to do.
22	MR. JAFFE: Great. Thank you.
23	I have nothing further, Your Honor.
24	THE COURT: Anything else?
25	MS. BRASIER: Yes, Your Honor.

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FURTHER REDIRECT EXAMINATION

3 BY MS. BRA	SIER	
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- And if you could look at the exhibits for me, Q. Margie. What's the date on the request for admissions It's Exhibit JJ. signature?
- 7 MR. JAFFE: Your Honor, this is -- this is asked and answered already, and it's beyond the scope. 8
 - THE COURT: I don't know if it's beyond the I'm going to allow it for a minute. scope.
- Where would I find that, 11 THE WITNESS:
- 12 Allison? In the back?
- BY MS. BRASIER: 13
 - If you just look on the last page of Q. Exhibit JJ, there should be --
- The 30th day of August 2011. 16 A.
- Okay. And what's the date on the Ο. 18 interrogatory responses? That's Exhibit II.
- 19 A. On the last page?
 - Q. Yes.
- 21 29th of September 2011. The one up on top, Α. Certificate of Service, is that the one you 22 right?
- 23 want?
- So the interrogatories were signed about 24
- 25 30 days later.

1	A. This one was the 30th day of August and this
2	one was the 29th day of September, so yes.
3	Q. And the interrogatories are the ones that you
4	helped prepare; is that right?
5	A. Yes.
6	MS. BRASIER: Okay. That's all I have.
7	Thanks.
8	THE COURT: Mr. Jaffe?
9	MR. JAFFE: Nothing further.
10	THE COURT: Ladies and gentlemen, any
11	questions? We have at least one. Okay.
12	THE BAILIFF: Thank you. Anyone else? No?
13	(Whereupon a brief discussion was
14	held at the bench.)
15	THE COURT: All right. Ms. Seastrand, the
16	question we have from a juror is: Which shoulder did
17	you hurt as a result of the accident on 3/13/09?
18	THE WITNESS: This one, my right.
19	THE COURT: Okay. Mark that Court's next in
20	order.
21	Mr. Cloward, any follow-ups based on that
22	question? Or, I'm sorry, Ms. Brasier?
23	
24	///// ////
25	////

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1	FURTHER REDIRECT EXAMINATION
2	BY MS. BRASIER:
3	Q. Margie, how long how long did your
4	shoulder injury last or pain?
5	A. I don't know how long, but I wasn't even
6	thinking about that for very long. I was just thinking
7	about my neck and my low back.
8	Q. Thank you.
9	THE COURT: Mr. Jaffe?
10	MR. JAFFE: Nothing, sir.
11	THE COURT: Thank you, ma'am.
12	THE WITNESS: Thank you.
13	THE COURT: Appreciate your time. You're
14	excused.
15	MR. CLOWARD: Can we approach?
16	THE COURT: Sure.
17	(Whereupon a brief discussion was
18	held at the bench.)
19	THE COURT: All right, folks, we're going to
20	take a quick break for a few minutes.
21	During our break, you're instructed not to
22	talk with each other or with anyone else, about any
23	subject or issue connected with this trial. You are
24	not to read, watch, or listen to any report of or
25	commentary on the trial by any person connected with

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this case or by any medium of information, including, without limitation, newspapers, television, the Internet, or radio. You are not to conduct any research on your own, which means you cannot talk with others, Tweet others, text others, Google issues, or conduct any other kind of book or computer research with regard to any issue, party, witness, or attorney, involved in this case. You're not to form or express any opinion on any subject connected with this trial until the case is finally submitted to you.

Take ten minutes.

THE BAILIFF: All rise.

(Whereupon jury exited the courtroom.)

THE COURT: Just put it on the record really quick. We're outside the presence of the jury.

Mr. Cloward requested permission to call Mr. Harris as a witness as it relates to the request for admissions. The fact that Mr. Harris was never listed as a witness on the witness list and the fact that he's been here during the trial, and that's an exception to the exclusionary rule because Mr. Jaffe withdrew his prior subpoena, I've ruled that that's not appropriate. So he won't be allowed to testify.

Anything else we want to the put on the record about that?

MR. CLOWARD: Yeah, actually.

MR. JAFFE: No, sir.

MR. CLOWARD: You know, if you think about the turn of events, the way that it happened — and this is just for the purposes of the record — Mr. Jaffe subpoenaed Richard Harris so that he could use Rick to talk about the fact that the — the verifications and talk about the process. He — he withdrew the subpoena, saying, well, if you verify it, you know, I'll go ahead and — and — you know, I'll withdraw the subpoena if Ms. Seastrand will — will just verify it. And then once we do that, then he does the exact same thing he was planning on using Rick for, he uses the request for admission to impeach Ms. Seastrand.

And so he lulls us into, you know, signing the verification so that he can use that to impeach her. And then once we do that, then he withdraws the subpoena and — and uses the — you know, this — this unverified document to impeach her for 20 minutes. And for us to now not be able to use Mr. Harris to rebut that, that's prejudicial to my client.

THE COURT: It's actually the same thing that happens in I'd say at least 50 percent of trials where a request for admission is used to impeach a witness.

And — and the response is, I didn't have anything to do with preparation of that, it's signed by a lawyer, it's not signed by me, which is what she said. And we don't usually call the lawyers to talk about it.

MR. JAFFE: If I may, Your Honor.

THE COURT: Okay.

MR. JAFFE: For the purpose of the record, I did subpoena Mr. Harris solely to verify because I did not have a verification, could not find a signed verification. The night before trial, we e-mailed them asking if they could send us over a copy, and that's when they told us to go pound sand. So I subpoenaed Mr. Harris since we only had his signature on it. I made it very clear to the court, Mr. Harris, Mr. Cloward, everybody ,all I wanted was some acknowledgment. I said they could even make it as an oral representation in court and I would vacate the subpoena, which is precisely what I did.

And as for the request for admissions, they're the ones who moved it into evidence as part of their direct case and asked their client about them before I even got up to question. She put them in this morning and said I never saw these before. I don't know who answered these.

So, obviously, they presume that that's where

1 I was going to be going anyway and tried to steal the thunder by putting that out there before -- before I 2 3 even got up to cross-examine. I think it's important to note, THE COURT: 4 5 too, that I never said I was going to allow Mr. Harris to testify for Mr. Jaffe because he hadn't been included on any witness list for him either. That's just something that got resolved prior to the need to 8 call him because there is an agreement that there was 10 just going to be a signed verification on the 11 interrogatories. 12 MR. JAFFE: Thank you, Your Honor. 13 THE COURT: Off the record. 14 (Whereupon a short recess was taken.) THE BAILIFF: 15 All rise. 16 (Whereupon jury entered the courtroom.) Go ahead and be seated. 17 THE COURT: Welcome back, folks. Back on the record, Case No. 636515. 18 19 Parties stipulate to the presence of the 20 jury? 21 MR. JAFFE: Yes. 22 MR. CLOWARD: Yes, sir. 23 THE COURT: Mr. Cloward, does the plaintiff 24 have any additional witnesses? 25 No, Your Honor. MR. CLOWARD:

1 THE COURT: Plaintiff rests? 2 MR. CLOWARD: Yes. 3 THE COURT: That means it's the defendant's 4 turn. So, Mr. Jaffe, defense may call its first witness. 6 MR. JAFFE: And, Your Honor, for ease of time, we may want to the make a Rule 50 motion at some 8 point, but I'll -- if I can hold off on that --9 THE COURT: Just preserve it to the next 10 break. 11 Thank you, sir. Your Honor, at MR. JAFFE: this time, defense would like to call Dr. Harry Smith. 12 13 THE BAILIFF: Dr. Smith. 14 THE COURT: Dr. Smith, if you want to come up 15 on the stand next to that chair. You can put down your 16 stuff if you'd like. Remain standing and raise your right hand, please. 18 THE CLERK: You do solemnly swear the 19 testimony you're about to give in this action shall be 20 the truth, the whole truth, and nothing but the truth, 21 so help you God. 22 THE WITNESS: I do. 23 THE CLERK: Please state your full name and 24 spell it for the record, please. 25 THE WITNESS: Harry Lincoln Smith.

1	THE COURT: It's not spelled any strange way,
2	is it?
3	THE WITNESS: No, sir. It's S-m-i-t-h.
4	THE COURT: All right. Try to talk into that
5	microphone there. You're kind of a soft-spoken
6	gentleman.
7	
8	DIRECT EXAMINATION
9	BY MR. JAFFE:
10	Q. Good afternoon, Dr. Smith.
11	A. Good afternoon.
12	Q. Would you please tell us, sir, what do you do
13	for a living?
14	A. I'm a physician as well as an engineer, and I
15	practice consulting in injury analysis between those
16	two.
17	Q. Sir, where do you practice?
18	A. I practice in San Antonio, Texas.
19	Q. What is the name of the company you work
20	with?
21	A. It's called Biodynamic Research Corporation.
22	Q. And, sir, do you have an ownership interest
23	in Biodynamic Research Corporation?
24	A. I do.
25	Q. Would you please tell us, what is Biodynamic

Research Corporation? Tell us what the company does.

- A. The company is consisted of consultants like myself who are engineers as well as physicians. We have a few are straight engineers and we have a few who are straight physicians who make a specialty of determining how injuries are created. And we've been doing this since before 1986 when we got large enough to form a company.
- Q. Okay. And, sir, tell us about the types of injuries that you -- that Biodynamics Research analyzes.
- A. Almost any kind of injury that a person can get is what we look at when asked to. Whether these are simple slips and falls or whether these are car crashes that generates injuries or whether it's a power craft that goes topsy-turvy and bounces people on the water and they get injuries from that or if it's an injury that comes from a plane crash. We cover the entire spectrum because an injury is always analyzable by at least two methods. One of them is the physics or engineering of the event and the other one is the medical part.
- Q. So since you're an engineer and a medical doctor, do you actually bring both of those two methodologies together?

1 That's correct. A. 2 Now, one of the things that I indicated is Q. 3 that Biodynamic Research and that you've been involved with has even done testing for NASA and various military outfits? 5 6 A. Yes. 7 And I don't know how far you can go in Q. 8 talking about that, but can you tell us the types of 9 issues and conditions that you've analyzed in that 10 regard? Couple that we got involved with --11 A. Sure. 12 (Clarification by the reporter.) 13 BY MR. JAFFE: 14 Harry, you've got a -- and I've known you for a long time, haven't I, sir? About 20 years on and 15 16 off? 17 A. Yes. 18 Q. Okay. If I slip and call you Harry instead 19 of Dr. Smith, you'll forgive me? 20 That's all right. A. 21 Q. Dr. Smith, you've got an accent. Where are 22. you from? 23 A. Yes. I was born and raised in the 24 Netherlands and that gives a little guttural sound to

my voice and sometimes it's not always picked up.

- 1 2 3

- Q. So please go back and tell us. What -- what types of things has Biodynamic Research Corporation done?
- A. We've done a couple of things for agencies of the United States Government. Mostly been involved with the Air Force, and the Air Force has had problems in high G aircraft such as fighter aircraft, whereby very tight turns and loops are made by the pilots, and sometimes that exceeds their capacity to keep their heads straight on their neck on their body. In other words, the neck muscles begin to strain. And in order to help with that, we designed a system that would aid stabilization of the head during high G roll maneuvers, and the the Air Force adopted that.

The other one we did — or at least that's one of the ones we did for the United States Air Force, in about, oh, six, seven years ago, NASA asked us to look at the Columbia reentry mishap from back in '01 or '02. And that — that was prompted by the community at NASA which did not want to do their own analysis. They're all smart people up there, but their main question to us was, How did the astronauts die? They wanted us to make an assessment of that.

And with BRC, we have a variety of different specialties including high-altitude physiologists. And

then a couple of us — all of us, in fact, were at one point in our career flight surgeons for the military.

I was, and we have a few pilots in our group, so they understand what the — what the risks are for high-altitude flying. And we made that analysis, and although I cannot give you details on that, that's the — under wraps, after about a year and a half of looking at pathology slides, imaging studies that were done, we came to a reasonable conclusion that NASA could both accept and agree with.

Q. Okay. Now, before we get a little further into some more germane aspects of BRC's work as relates to motor vehicle collisions, let's talk about you personally.

Would you give us the benefit of your academic credentials?

- A. Yeah. After high school, I started college and acquired a bachelor's degree in engineering, civil, followed by a master's degree, followed by a PhD in engineering.
 - Q. Where were those degrees awarded?
- A. The first two are at Michigan State University, and the last one was at Texas A&M University.
 - Q. Okay. And what are those engineering degrees

1 in, what fields?

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- A. Civil and nuclear.
- Now, after finishing your doctorate in 0. nuclear engineering, did you go on for any additional schooling and training?
- Yes, I did. I had a four-and-a-half-year hiatus, called active duty with the Army, and then I came back, requested a release from active duty to go to medical school. So then I acquired an M.D. degree, and then followed by residencies for specialization.
 - Q. Okay. And in what area do you specialize?
- Well, I have basically four areas of Α. specialization. For the military, I'm a flight Or I'm now retired, so I don't do that surgeon. On the civilian sector, I have anymore. specializations in emergency room medicine, radiology, which is imaging now, and nuclear medicine.
- Q. Okay. Are you board certified in any particular area?
- I'm board certified in the last two, that is radiology and nuclear medicine. Of course the military does its own certifications for flight surgeons.
 - Q. And did you conduct any fellowship work, sir?
- Α. No fellowship as such. I did not need to 25 take.

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- Q. Okay. For how long have you been working with combining your engineering and medical training?
- A. Combining those two for the last roughly 35 years.
- Q. And do you rely upon the radiologic as well as the emergency room aspect of your training when it comes to analyzing situations such as motor vehicle collisions?
 - A. Yes.
- Q. Now, let's talk about BRC's work when it comes to motor vehicle collisions. Okay, sir?
 - A. Sure.
- Q. Would you please tell us the type of work that Biodynamic Research Corporation has done.
- A. Well, it can be categorized in some broad categories. Consulting in injuries primarily rests with the type of crash we're analyzing or the type of mode. By that, I mean is it not that it happens a lot, but is it criminally related in which case it's a criminal case, or is it just a civil litigation related such as we are here for today? And and within the context of motor vehicle crashes, I think that would pretty much be it.
- Q. We've heard the term "crash testing." Has Biodynamic Research Corporation conducted any of its

A.

Yeah.

The series of rear-end -- low-level

rear-end collisions that BRC performed back in the early '90s, I was a subject. I was in the seat, and somebody else would strike the car I was in from the rear. And I would have sensors on me that would measure forces, expressed as accelerations, for us to determine whether what was happening was injurious.

- Q. Were you physically injured in any of those crashes?
 - A. No.
- Q. Now, let's talk for a second about those studies, because I represented to the jury that in the early 1990s, you were a coauthor of two papers that were presented to the Society of Automotive Engineers and that were published by the Society of Automotive Engineers dealing with movements and forces in low-speed and low-impact low-speed rear-end collisions.

18 Is that accurate?

- A. That's correct.
- Q. Would you agree that those were two seminal papers?
- 22 A. Yes.
- **Q.** How so?
- A. In that heretofore tests have never been done with live humans in the vehicles. And the only way we

got to do it, because all types of human testing needs to be approved by what's called a Human Use Committee, and every university has one. So we went with the Human Use Committee of the local medical school in San Antonio, which is the University of Texas Health Science Center at San Antonio, and requested they review our protocol for live human testing and they did. And they initially declined. They said, no, we don't want you to do it. We don't know what the outcome's going to be. And that was when we were proposing using other people. Then we said, well, what if we made ourselves the subjects in the crashes? Would you approve it then? And they said okay, so we did.

And it was more or less, you know, you put your money where your mouth is, and we knew what the outcome was going to be. We just couldn't convince them of it to do it with other people, and then we demonstrated it. And after that — after that, there have been 600 or more of the types of tests that we ran until 1991, because once it was becoming an accepted methodology that these tests are not injurious beyond the sprain or strain, then more and more people were able to go ahead and experiment with it.

Q. So what were the protocols of those tests?

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The protocols were that the subjects A. Yes. were to be right front seat passengers -- pardon me, drivers with a Hybrid III dummy as right front seat passenger. So, in other words, we'd have both, the dummy as well as the subject. Both would be restrained, meaning the three-point restraint system. The dummies would be instrumented with measuring devices called accelerometers in their necks and low And the humans were instrumented with bite backs. blocks, which is a metallic sort of facsimile of the reversal of your teeth so that when you -- you can lock your -- both tops and uppers, your uppers and lowers into it to make solid contact. And in that sits a small measuring tool called an accelerometer. And then we also instrumented our low backs but on the outside not the inside where the dummies have it.

Then there was a ramp that we had constructed behind the vehicle we were in. And down that ramp would roll another car with a driver, and we'd strike bumper to bumper to see what would happen and what would be the consequential deformations as well as motions of both the subject and the dummy, because we wanted to get a good coordination going between how does the dummy react, how does the human react, how are they same, and how are they different?



- Q. Were the speeds of the striking vehicles monitored?
 - A. Oh, yes, very tightly so.
- Q. Okay. What sort -- pardon me. What sort of protocols were in place in that respect, and what speeds were generally tested during those tests?
- A. Speeds were predetermined. Depending on how high up the ramp you start, that will determine how fast you're going to be at the bottom. And so we calibrated those speeds to give us impact velocities of around 5 miles an hour initially, and then we later on raised it to 6 and 7.
- Q. And, sir, the results of those tests, were those presented to the Society of Automotive Engineers?
 - A. Yes, they were.
- Q. And what is the Society of Automotive Engineers?
- A. Society of Automotive Engineers is a large body of people -- it's an international organization even though it started in the United States -- that is composed of dominantly engineers or people with engineering degrees even though they may not be engineers in their daily practice. For instance, we have a few lawyers who are members of the Society of Automotive Engineers because these lawyers also had

engineering degrees before they went to law school, so they qualified. And then there are associate members, people who don't quite have engineering degrees but are allowed to join on the basis of interests on the basis of employment, technologists of all kinds, automotive technologists who are not quite engineers, but they certainly have an interest in the field. And these folks gather together several times a year to hear about new research that is being performed in the various areas of automotive — of automotive engineering.

Mind you, automotive engineering is not limited to cars. It also involves trucks. It also involves trains. It involves ATVs. Anything that moves is fair for the Society of Automotive Engineers.

- Q. What is the automotive -- Society of Automotive Engineers' general standing within the community?
- A. It is regarded as the main proponent for standards in testing together with the ANSIs and other organizations. It is the main organ for disseminating the information relative to automotive engineering.

 And it is the main, for lack of a better word, clearinghouse for research that is done in automotive engineering both to have peer reviewed and published

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Α.

Q.

Correct.

and thereby disseminated. 1 Were your two studies accepted by the SAE? 2 Q. 3 A. Yes. 4 Q. And what did they do with them? Well --5 A. Did they publish them? 6 Q. 7 They published them. First of all, we A. 8 presented them. Presentation involves going to the annual meeting of the Society of Automotive Engineers and have your paper been -- presented by one of the 10 It is then subject to questions from the 11 authors. In other words, it's a second review 12 audience. If somebody thinks you're -- you're not doing 13 process. it right, by golly, they're going to let you know, that 14 15 sort of thing. So once that has passed, then it goes into a 16 publication for the SAE. Then it's available to 17 whoever wants to ask for it, usually for a fee. 18 19 And, sir, you were one of the authors on the 20 paper that was published? 21 A. Yes. 22 I think, as I recall, there was about six or Q. 23 seven individuals that were coauthors?

And were all of them principals of BRC?



A.	Νo,	that	would	not	be	true.	The	majority
were.								

- Q. Okay. And I know those were -- was it Dr. McConnell was the lead author on those?
 - A. Right.
- Q. And he is, but he is a member of BRC -- or was a member of BRC.
 - A. He was, yeah.
 - Q. He's retired now, right?
- 10 A. Correct.
 - Q. Now, have you been published at any other time?
 - A. Oh, yes. If you look at my CV, the first third of the publications are in engineering, mostly related to civil engineering, mostly related to energy absorbing structures on highways. The second third is mostly medical publications in the areas of radiology and nuclear medicine. And then the last third is biomechanics, the combination of both medicine and engineering. So I have those are my three main groupings in which I have published.
 - Q. Okay. And have you been the recipient of any national awards or honors?
 - A. Yeah. On the engineering side, I have the usual engineering honoraries, the --

1	Q. Usual for who? Usual for every engineer out
2	there?
3	A. Usual for engineers who perform in their, you
4	know, top 5 or 10 percent of their class, yeah.
5	Q. Okay. And, Doctor, did you actually practice
6	clinical medicine?
7	A. Yes, I did.
8	Q. What is clinical medicine, first of all?
9	A. Clinical medicine is, in brief, seeing
10	patients and contributing to their care.
11	Q. Would you give us the nature and extent of
12	your clinical medicine experience?
13	A. Sure. I spent 9 years as an emergency room
14	physician. I spent roughly a little over 30 years as a
15	clinical radiologist. And also, as a clinical nuclear
16	medicine physician.
17	Q. Okay. When did you discontinue clinical
18	medicine?
19	A. Let's see. I retired from my appointment at
20	the Veterans Administration Hospital in 2010, and I
21	closed my radiology clinic for clinical purposes in
22	2011.
23	Q. Okay.
24	MR. JAFFE: Your Honor
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- Q. Oh, and by the way, sir, what is biomechanics?
- A. Biomechanics is a field that combines engineering with aspects of biology, the bio part. In our case, it is medicine, not just biology but medicine, whereas in other people's cases we have, say, engineering biomechanics. And their combination comes from studying biology and putting it together with engineering.
- Q. Now, just so I'm clear, your specialty -your medical specialties were in -- I know you were a
 flight trauma surgeon, but that's --
 - A. Flight surgeon.
- Q. Flight surgeon.
 - A. Just flight surgeon, yeah.
- 17 Q. That's going back.
 - And emergency medicine, radiology, and the fourth was?
 - A. Nuclear medicine.
 - Q. Nuclear medicine. Now, for the purposes of today, though, you do not seek to be admitted as an expert in either nuclear medicine or flight surgery, correct?
 - A. Correct.

1	MR. JAFFE: Your Honor, at this time, I would
2	like to offer Dr. Harry Smith as an expert in the field
3	of biomechanics, in the field of engineering, and in
4	the field of medicine with specialties in radiology and
5	emergency medicine.
6	MR. CLOWARD: Your Honor, we object to a
7	couple of those designations. May we approach?
8	THE COURT: Sure. Come on up.
9	(Whereupon a brief discussion was
10	held at the bench.)
11	THE COURT: The doctor will be recognized in
12	regards to his expert as a biomechanical engineer.
13	MR. JAFFE: Thank you, sir.
14	BY MR. JAFFE:
15	Q. Dr. Smith, did I hire you?
16	A. Yes, you did.
17	Q. And how much are you being paid to testify?
18	A. Well, the company, Biomechanic Research
19	Corporation, charges \$700 an hour for my time.
20	Q. And is that how you're being paid for your
21	time today, you're being billed at that rate?
22	A. BRC bills at that rate today, yes.
23	Q. And have we paid you for your time thus far?
24	A. I suppose.
25.	Q. Have you checked your billing records to

verify that I'm not a deadbeat? 1 2 They may have said something to me if you 3 were, yes, so ... Okay. Now, have you and I worked together in 4 Q. the past? Yes, we have. 6 Α. Q. Approximately how many times, sir? Oh, probably somewhere between a half a dozen 8 A. 9 and a dozen times over the last 20, 30 years. 10 Okay. Well, it's not 30 because I've only Q. 11 been licensed for 27. So if it was 30, that would be a 12 little bit different, so ... 13 Α. True. 14 0. Anyway, we've known each other for a long 15 time. 16 Α. Yes. 17 Okay. Dr. Smith, in reviewing the records in Q. 18 this case, and we're going to get to what you reviewed 19 in a moment, have you been able to form opinions to a 20 reasonable degree of probability within your field of 21 expertise? 22 Α. Yes, I have. 23 What I would like you to do is please give Q. 24 us -- anytime you state your opinions, make sure that 25 they are stated to a reasonable degree of probability

within your field of expertise. Okay, sir?

- A. Sure.
- Q. Now, what I would like to do is this: Please give us your first opinion with respect to this matter.
- A. So to a reasonable degree of medical and engineering probability, the rear-end collision that Ms. Seastrand was involved in on the 13th of March, 2009, was a low-severity rear-end collision. As her car moved forward, she engaged the seatback cushion and the headrest of her vehicle. This is called the kinematics. And there was minimal, if any, rebound from that at the low level which is approximately 3 g's of acceleration.

However, this happened in the time span of about a tenth of a second, a hundred milliseconds, less than an eye blink. When the neck is asked to respond that quickly, it typically will result in some stretching of the cervical musculature creating sprains and strains. And that is what occurred on March 13th, 2009.

- Q. Okay. What I would like to do now is, let's talk about the background for those opinions. Okay, sir?
- 24 A. Sure.
 - Q. Would you please tell us, have you had an

opportunity to inspect the vehicles involved in the 1 2 collision? 3 A. Yes, I -- I have. 4 Q. And, in fact, that was done at the same time 5 as Dr. Arthur Croft? 6 A. Yes. 7 Both of you were there together to see the Q. 8 cars at the same time? Correct. 9 A. 10 What did your inspection of the vehicles 11 consist of? 12 Well, the Honda had already been repaired. 13 But Mr. Khoury's had not yet been repaired, so I was 14 able to see the damage on the front of his car which 15 was mostly cracks and a indication that the right tow 16 hook was -- was involved, which is more demonstrated by the photograph of the Honda that was taken earlier of 17 18 the damage. 19 And, sir, did you have the opportunity to 20 review any documents in this case? 21 Α. Oh, yes. 22 Would you give us an idea of what -- what you Q. 23 reviewed. 24 Well, there were a series of photographs of Α.

both the Honda Odyssey and the -- the Infiniti.

Then

there were CD-ROMs and DVDs containing a variety of information such as the State of Nevada Traffic 3 Accident Report, pleadings, and more color photographs of the Honda, various medical records of Ms. Seastrand, contains a deposition of Ms. Seastrand. In general, it is reports, depositions, medical records, expert depositions, expert reports. It's page after page. 8 Without mentioning or reading all of it, those are the broad categories that I have reviewed. 10 Q. So about how many depositions did you have, sir? 11 12 Α. Let's see. About 10, and then mine was 13 No. 11. 14 And then after yours, because you no longer 15 wrote any more reports, did you still get other 16 depositions? 17 A. Yes, I did. 18 Q. Okay. So did you have a depositions of the 19 parties? 20 Pardon me? Α. 21 Q. The parties, did you have their depositions, 22 Mr. 23 Oh, yes. Α. -- Mr. Khoury's and Ms. Seastrand's, did you 24 Q. 25 see their depositions?

1	A. I believe I did. Let me quick look. I have
2	Ms. Seastrand's, yes.
3	Q. Do you have Mr. Khoury's?
4	A. I don't recall offhand. I'm looking for it.
5	I don't see it.
6	Q. Okay. How about the police officer's
7	deposition, doctors' depositions?
8	A. I have the doctors' depositions. I have I
9	don't see the police officer's deposition offhand.
10	Q. Okay. Might be there, might not be there?
11	A. Yeah.
12	Q. How many pages is that list you're scanning
13	through of what you've looked through?
14	A. There's five pages.
15	Q. Okay. Have you also seen the medical records
16	that predate the accident?
17	A. Yes.
18	Q. From what years did you see records?
19	A. I have seen records going back to 2004 from
20	Summerlin Hospital, and then, you know, up to to
21	2005 and 2007, 2008.
22	Q. Okay. Now, let's talk about how you were
23	able to make this determination, sir. Okay? And I've
24	put together some slides that I hope will assist us in
2.5	this regard.

。我们的时间,我就是这个人的事情的。我们就是我们的事情,我就是我的事情的事情,我们就是我们的事情的。这样的时候就是我的事情的。我们就是我们的事情况。我们就是这样

MR. JAFFE: Greg.

BY MR. JAFFE:

- Q. First, while he's doing that, did you also consider a crash test performed by the IIHS?
 - A. Right.
- Q. What is that crash test, and would you please tell us what it involved.
- A. Yeah. The -- the Insurance Institute for Highway Safety, referred to as IIHS, conducts studies on typically new vehicles for their ability to withstand crashes. They do major frontal crashes, they do side impacts, and they do rear impacts.

So for the 1994 to 2004 Honda Odyssey platform, for that model, they did a — they did tests, involving, primarily for my interests in this case, a rear impact test on a Honda Odyssey. This was a pole impact. And that's sparked my interest even more since the tow hook which was mostly implicated in the Seastrand crash more resembles that of a pole than of a flat barrier.

And so I consulted that particular test and took the images or the photographs that were produced from that test together with the speeds under which those tests — that test was performed and compared that to the damage on the Honda.

Q. Okay. So, Greg — let's start talking about the science of the accident and your biomechanical analysis. So now we know the IIHS conducted crash tests on the Odyssey. Dr. Croft said that they — hold on one second. Dr. Croft told us that they were of limited value because those were simply to assess property damage and cost of repair.

Do you agree or disagree with that assessment?

- A. Oh, I disagree with that.
- Q. Why?
- A. The property damage is for insurance interest purposes. But the fact that they also put the Hybrid III dummy in there made it also of interest to biomechanics. And they do that deliberately because they know people are interested in more than just property damage.
- Q. And did those dummies have sensors in them to measure the force?
- A. The dummy had a sensor in it. By the way, the dummy, just to give you a comparative, the 50th percentile Hybrid III dummy is 5 feet 8 inches tall and weighs approximately 168 pounds. So if we were to compare apples and oranges, you can say, well, that's very close to what Ms. Seastrand was at the time.

1	Q. Now by the way, does BRC do any work with
2	the IIHS?
3	A. No, we don't.
4	Q. Okay. Has BRC strike that. Let's go
5	let's move on.
6	So let's talk about okay. We just talked
7	about the IIHS test, about determining damage, but they
8	were also beneficial for finding out the forces on
9	occupants; is that correct?
10	A. Correct.
11	Q. Let's talk about how a biomechanical engineer
12	goes about figuring out and determining these forces.
13	Okay? So tell us about damage and force.
14	Do they work together?
15	A. They do. Without forces on objects, there
16	wouldn't be any damage.
17	Q. Okay. So, for example now, you said there
18	was a crash test dummy in the car. We already talked
19	about that; is that right, sir?
20	A. Right.
21	Q. And what is the effect strike that.
22	MR. JAFFE: Let's go to the next one, Greg.
23	BY MR. JAFFE:
24	Q. Let's talk about the IIHS one because you
25	already talked about the effect the damage from

A.

All right.

is going to create a force and, therefore, impose a 1 force on the dummy, right? 3 The force creates damage and also puts 4 accelerations on the dummy. 5 Q. Okay. 6 Accelerations is a standing word for force. 7 So we already talked about how the IIHS 8 rolled the car backwards into a fixed barrier meaning a 9 pole, right? Α. 10 Correct. 11 MR. JAFFE: Go to the next one, Greg. 12 BY MR. JAFFE: 13 And the monitors were inserted into the 14 dummy. We already talked about that. 15 A. Right. 16 And biofidelic, what is that? 17 A. Yeah. The type of neck that was used on this 18 dummy was called Biorid neck. The Biorid is specific 19 for rear-end collisions because the dummy's neck, 20 otherwise, could be considered a little too stiff, but 21 the Biorid dummy responds more like the human neck. 22 It's called the -- therefore, it's called Biorid. 23 Q. So now, with respect to those, did the 24 IIHS -- tell us about the IIHS test.

So the vehicle is caused to roll

12.

backward at a specific speed. This — the target speed was 5 miles an hour. And that means when the car comes to a stop against the pole and sometimes rebounds a little bit back from it, that damage is taken all by the bumper and whatever structures there are on the vehicle. The pole is not going to be deformed. So the whole 5 miles an hour is absorbed by the bumper of the car.

- Q. So has BRC conducted similar tests to these -- the IIHS Honda Odyssey test?
- A. We don't do bumper or pole impact testing. We tend to do car-to-car crash testing.
- Q. So tell us about a vehicle-to-vehicle test and how that is analogous to the IIHS test on the Honda Odyssey.
- A. Yeah. The reason that the test can be compared is because a 5-mile-an-hour, 10-mile-an-hour damage pattern is going to be the same. The bumper doesn't know what hit it. It doesn't have a brain with which to analyze. It just responds to the forces and deforms accordingly. And when you do car-to-car testing, both cars deform. So they share the damage.

To make this easy, if you have two cars of equal weight, equal mass, and one is stationary and the other one runs into it at 10 miles an hour, they don't

just split the damage. Each car is going to look like thit 5-miles-an-hour barrier, because the two together make the 10.

Now, when they're not equal weight, then it gets proportionated as to the ratios of their weights. The heavier car takes less and the — the lighter car takes more proportionately of that 10 miles an hour.

- Q. Okay. So is it then the same scientific principle?
 - A. That's correct.
- Q. Now, let's talk about the crash test results themselves. Okay? Let's talk about 10-mile-an-hour impacts. Okay, sir?
 - A. Sure.
 - Q. Tell us about those.
- A. Well, so a 10-mile-an-hour impact creates damage accordingly. If it hits a barrier, it's going to have more damage on it than if it hits another car because if it hits another car, the other car is going to be deformed, whereas on a barrier which is not deformable, the hitting car has to take all of the damage.
- Q. Okay. So let's talk about at 10-mile-an-hour impacts, what the results were from both the IIHS and the similar BRC tests.

A. Right. So the equivalent — the equivalency is this: The 5-mile-an-hour impact created deformation on the Odyssey in the IIHS test which was comparable to the damage from photographs we saw of the Honda. The difference was the pole test caused the IIHS Honda to have to take all the damage, whereas the car-to-car crash test meant it was shared between the Infiniti and Ms. Seastrand's Honda. And it was in an offset ratio that her car took more of that 10 miles an hour than the Infiniti did. It was in a — roughly in a ratio of 7 to 3.

The -- the Honda Odyssey with Ms. Seastrand in it weighed roughly 4500 pounds. 4330 for the curb weight of the Honda plus Ms. Seastrand at 165. The Infiniti weighed -- with Mr. Khoury in it, weighed roughly 5800 pounds. All right? Now, 5800 plus 4500 is 10,300 pounds total mass altogether. Out of that, Ms. Seastrand's car is going to take a ratio of 500 -- 5 -- 5800 pounds divided by 10,000 of the 10 miles, and Mr. Khoury's car takes the balance. For her car, that was roughly 7 miles an hour.

- Q. So what does that mean?
- A. That means the other car absorbed 3 miles an hour.
 - Q. And does that mean that 7 miles an hour of

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force was then imposed upon the plaintiff?

- A. No. That is just velocity.
- Q. Okay. So how -- velocity somehow has to transfer into force or transmit into force?
- A. It's transformed into accelerations which are analogous to forces.
- Q. Okay. So what does that mean in terms of g-forces?
- So the change in velocity of 7 miles A. Right. an hour is translated to feet per second first. That's about 10 feet per second. And then it was divided by the crash pulse, p-u-1-s-e. The crash pulse for car-to-car collisions and car-to-barrier collisions is somewhere between 60 and 140 milliseconds. That comes from running crash test after crash test. The midpoint is 100 milliseconds which is typically used. So now you divide the 10 miles an hour -- the 10 feet per second, rather, by .1 seconds. And 10 divided by a 10th makes it 100. That's 100 feet per second squared. That is the acceleration.

When you place that in terms of g's, the gravitational constant, which is 32.2 feet per second squared, then you divide 100 by 32.2, and you come up with about 3 g's.

Q. Okay.

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Honor?

MR. JAFFE: Mind if he steps down, Your

IN THE SUPREME COURT OF THE STATE OF NEVADA

RAYMOND RIAD KHOURY.

Supreme Court Case No. 64702

Appellant,

Supreme Court Case Electronically Filed Nov 13 2014 08:24 a.m.

Supreme Court Case Tracie Lindeman Clerk of Supreme Court

VS.

MARGARET SEASTRAND,

Respondent.

APPEAL

from the Eighth Judicial District Court, Clark County The HONORABLE JERRY WEISE, District Court Judge District Court Case No. A-11-636515-C

APPELLANT'S APPENDIX **VOLUME XV**

STEVEN T. JAFFE, ESQ. Nevada Bar No. 007035 JACOB S. SMITH, ESQ. Nevada Bar No. 010231 HALL JAFFE & CLAYTON, LLP 7425 Peak Drive Las Vegas, Nevada 89128 Attorneys for Appellant Raymond Riad Khoury

1	VOLUME XV						
2	Exhibit 38	July 23, 2013, Reporter's Transcript of Jury	JA 2652-2820				
3		Trial, (Day 7, pm)					
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