1 IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
2 WACO DIVISION

3 ALIGN TECHNOLOGY, INC. *
* June 30, 2026
4 VS. *
* CIVIL ACTION NO. 6:24-CV-187
5 CLEARCORRECT OPERATING, *
LLC, ET AL. *
6

BEFORE THE HONORABLE ALAN D ALBRIGHT
7 JURY TRIAL PROCEEDINGS
Volume 5 of 7
8

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ALIGN – EXHIBIT 2045
ClearCorrect Operating, LLC. v. Align Technology, Inc. IPR2025-00821

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09:03 1 (Hearing begins.)
09:06 2 THE BAILIFF: All rise.
09:06 3 THE COURT: Please remain standing for
09:06 4 the jury.
09:06 5 (Jury entered the courtroom.)
09:06 6 THE COURT: Thank you. You may be
7 seated.
09:06 8 DIRECT EXAMINATION CONTINUED
09:06 9 BY MR. HIRSCH:
09:06 10 Q. Good morning, Dr. Perryman.
09:06 11 A. Good morning.
09:06 12 Q. Now, sir, when we were speaking yesterday, you
09:06 13 had just told us about the -- each of the steps that
09:06 14 you undertook to perform your antitrust analysis,
09:06 15 correct?
09:06 16 A. Yes, sir. That's correct.
09:07 17 Q. I want to start right where we left off.
09:07 18 MR. HIRSCH: If we could pull up DDX-8.9.
19 BY MR. HIRSCH:
09:07 20 Q. And you told us, Dr. Perryman, that the first
09:07 21 step in your analysis was to determine what the
09:07 22 relevant antitrust market is; is that correct?
09:07 23 A. Yes, sir. That's correct.
09:07 24 Q. All right. First, sir, why is that the first
09:07 25 step of the analysis?

09:07 1 A. Well, we're going to be evaluating whether or
09:07 2 not Align has market power in a market, and so the
09:07 3 first thing we have to do is figure out what market are
09:07 4 we talking about. And in antitrust, market has a
09:07 5 little bit different meaning than we all use it, man on
09:07 6 the street, so to speak, having to do with whether or
09:07 7 not there are reasonable alternatives to the product at
09:07 8 issue.
09:07 9 Q. So let's talk about that, that special
09:07 10 meaning. How do we define the market for purposes of
09:07 11 the antitrust analysis?
09:07 12 A. Well, for the antitrust analysis, we're
09:07 13 defining the relevant market to be a market in which
09:08 14 basically there's the product and all the reasonably
09:08 15 interchangeable substitutes for the product, in other
09:08 16 words, things that you might buy if the price -- that a
09:08 17 significant number of people might buy if the price
09:08 18 changed.
09:08 19 Q. So why don't we take an example, Dr. Perryman,
09:08 20 and specifically a car dealership.
09:08 21 A. Yes, sir.
09:08 22 Q. And let's imagine a car dealership that sells
09:08 23 all different types of vehicles, so sedans, pickup
09:08 24 trucks, and sports cars, for instance.
09:08 25 A. Yes, sir.

09:08 1 Q. First, in that car dealership, how, if at all,
09:08 2 does it mean that all the cars are in the same
09:08 3 antitrust market simply because they're sold by the
09:08 4 same dealership?
09:08 5 A. Oh, it doesn't mean that at all. It's very
09:08 6 common for car dealerships to have all sorts of cars
09:08 7 there, but a person that comes in wanting a pickup is
09:09 8 probably not going to end up buying a sports car.
09:09 9 Q. So let's talk about how we would define --
09:09 10 using this example --
09:09 11 A. Yes, sir.
09:09 12 Q. -- how we would define the relevant market.
09:09 13 When we're doing this analysis, the special
09:09 14 antitrust market analysis, how many types of products
09:09 15 do we start the analysis with?
09:09 16 A. Well, we start with the smallest unit that we
09:09 17 have, and then we see if that's big enough or if we
09:09 18 need to expand it out until we get to the point if
09:09 19 there -- if things are not substitutes.
09:09 20 Q. So in our example, let's start with a single
09:09 21 model pickup, so a Ford F-150, for example.
09:09 22 A. Yes, sir.
09:09 23 Q. Is that by itself a relevant antitrust market?
09:09 24 A. No, sir. It would not be.
09:09 25 Q. And tell us why.

09:09 1 A. Well, if you think about it, if Ford were to
09:09 2 suddenly raise their price for the F-150 and it became
09:09 3 more expensive, you'd have the option of buying a Dodge
09:09 4 Ram or Toyota Tundra or a GMC or some other brand that
09:10 5 would serve the same purpose as the F-150.
09:10 6 Q. So in our example of the car dealership, what
09:10 7 would the relevant antitrust market be?
09:10 8 A. Well, in that case it would be pickups,
09:10 9 basically, because normally when people want that, they
09:10 10 need to haul stuff or they're out in the country a lot
09:10 11 or they -- they're hunters, whatever, but for whatever
09:10 12 reason they need that type of vehicle.
09:10 13 Q. And why do we include all the different models
09:10 14 of pickup trucks?
09:10 15 A. Well, because they're reasonably
09:10 16 interchangeable. That is, if one of them costs too
09:10 17 much, if one of them raise their price, you have the
09:10 18 option of buying the other one. It would still serve
09:10 19 the same purpose for you.
09:10 20 Q. And we said there are other types of cars,
09:10 21 like sports cars, for example --
09:10 22 A. Yes, sir.
09:10 23 Q. -- at this dealership?
09:10 24 A. Yes, sir.
09:10 25 Q. Why don't we include the other types of cars

09:10 1 that are sold?
09:10 2 A. Well, they're not reasonable substitutes. If
09:10 3 you're looking for a pickup and you go and you start
09:10 4 shopping for a pickup, you're probably not going to end
09:11 5 up with a sedan or a sports car because that doesn't
09:11 6 meet your needs.
09:11 7 Q. All right. So if we recap, sir, why isn't the
09:11 8 relevant antitrust market just a single model of
09:11 9 pickup?
09:11 10 A. Well, that would be too narrow.
09:11 11 Q. And why, on the other hand, isn't the relevant
09:11 12 antitrust market the entire fleet of cars sold by the
09:11 13 dealer?
09:11 14 A. Well, that would be too broad.
09:11 15 Q. So what is the relevant antitrust market in
09:11 16 our example?
09:11 17 A. Well, in this case the relevant market would
09:11 18 be pickups.
09:11 19 Q. So now let's apply that analysis,
09:11 20 Dr. Perryman, to the facts that we're dealing with in
09:11 21 this case. All right?
09:11 22 A. Yes, sir.
09:11 23 Q. In our case, what is the relevant antitrust
09:11 24 market?
09:11 25 A. Doctor-directed clear aligners.

09:11 1 Q. And what are doctor-directed clear aligners?
09:11 2 A. You have heard a lot about those. Those are
09:12 3 the aligners where you see a dentist or an orthodontist
09:12 4 and they prescribe a treatment plan for you and oversee
09:12 5 that plan to completion.
09:12 6 Q. And why isn't the relevant antitrust
09:12 7 analysis -- relevant antitrust market, excuse me, just
09:12 8 one type of aligner brand?
09:12 9 A. Well, obviously, these aligners all do
09:12 10 basically the same thing in basically the same way. So
09:12 11 if one of them were to raise their price a lot, then
09:12 12 you would expect in a competitive market that there
09:12 13 would -- that people would substitute into other
09:12 14 products.
09:12 15 Q. Now, Dr. Perryman, you understand that Align
09:12 16 contends that braces should be part of the market,
09:12 17 correct?
09:12 18 A. Yes, sir. I do.
09:12 19 Q. What is -- what are metal braces like, in your
09:12 20 car analogy?
09:12 21 A. Well, they're more like the sedan or the
09:12 22 sports car. They're -- they'll get -- like those
09:12 23 things will get you from Point A to Point B. Braces
09:13 24 will straighten your teeth, but they do it in a
09:13 25 different way and for a different group of consumers.

09:13 1 Q. All right. So let's talk about braces a
09:13 2 little bit more.
09:13 3 You heard Dr. Taylor's testimony yesterday?
09:13 4 A. Yes, sir. I did.
09:13 5 Q. And based on that testimony and the other
09:13 6 evidence that you've reviewed, sir, what are some of
09:13 7 the primary differences between clear aligners and
09:13 8 braces that are relevant to your analysis?
09:13 9 A. Well, one of them is that obviously the
09:13 10 aligners are transparent. You can't see them. Braces
09:13 11 are not. The aligners are removable and the braces are
09:13 12 not.
09:13 13 Some of the other witnesses have testified
09:13 14 about how you can have emergency with braces. In fact,
09:13 15 I had one when I was a teenager. And that -- that's
09:13 16 not the case with aligners. And then also that braces
09:13 17 can cause damage to your teeth.
09:13 18 So there's some basic differences there. And
09:13 19 what that basically means is people are unlikely to
09:14 20 switch from aligners back to braces. It's a thing we
09:14 21 call one-way substitution.
09:14 22 A few years ago -- or probably a number of
09:14 23 years ago, but most of us I think were there when we
09:14 24 switched from when you're out on the road and you need
09:14 25 to make a phone call, you used to have to find a pay

09:14 1 phone. We all switched to cell phones. But nobody's
09:14 2 switching back to pay phones if the price of a cell
09:14 3 phone goes up.
09:14 4 So it's a similar situation. You have
09:14 5 people -- the market moving from braces to aligners,
09:14 6 but you don't see people going the other direction.
09:14 7 Q. So what does that indicate as to whether
09:14 8 braces are in the relevant antitrust market?
09:14 9 A. It would indicate that they are not.
09:14 10 Q. Let's talk quickly about the customers of
09:14 11 these different products.
09:14 12 A. Yes, sir.
09:14 13 Q. What percentage of doctor -- of the
09:14 14 doctor-directed clear aligner market is adults?
09:14 15 A. About 75 percent.
09:15 16 Q. And you heard the interviews -- the videos of
09:15 17 the interviews of Joe Hogan, the Align CEO, yesterday?
09:15 18 A. Yes, sir. I did.
09:15 19 Q. And what did Mr. Hogan say about the customers
09:15 20 of aligners?
09:15 21 A. Well, I thought he said it very well.
09:15 22 Basically, that they brought adults into the
09:15 23 teeth-straightening market, that most adults were not
09:15 24 willing to do braces, but they opened up a whole new
09:15 25 market.

09:15 1 Q. All right. And we saw this with Mr. Miller
09:15 2 yesterday, but if we go to 8.22, what analogy did Align
09:15 3 use to compare braces to clear aligners?
09:15 4 A. Well, they were talking about digital braces,
09:15 5 which was an advancement making braces better, and the
09:15 6 description was that that was like better feed for
09:15 7 horses, whereas the aligners were cars.
09:15 8 Q. And how are horses and cars in the same
09:15 9 antitrust market?
09:15 10 A. Well, they're not. Again, they'll both
09:16 11 basically get you from Point A to Point B eventually,
09:16 12 but clearly you don't substitute a horse for a car, at
09:16 13 least not very many people would.
09:16 14 Q. And ultimately, Dr. Perryman, what did
09:16 15 Mr. Hogan say in that video that we saw yesterday about
09:16 16 the market for clear aligners?
09:16 17 A. He basically said that Invisalign had created
09:16 18 a new market for clear aligners that was its own
09:16 19 market.
09:16 20 Q. Now, there's also been some discussion of
09:16 21 direct-to-consumer aligners. You've heard that during
09:16 22 this trial?
09:16 23 A. Yes, sir.
09:16 24 Q. What are direct-to-consumer aligners?
09:16 25 A. Direct-to-consumer -- and I think you heard

09:16 1 about this before. But direct to consumer is where a
09:16 2 doctor's not involved. You make an impression of your
09:16 3 teeth. You send it in. They send you back the
09:16 4 aligners, and there's never a doctor involved in the
09:16 5 process.
09:16 6 Q. Are direct-to-consumer aligners in the
09:17 7 relevant antitrust market?
09:17 8 A. No, sir. They're not.
09:17 9 Q. Why not?
09:17 10 A. Well, primarily because, again, most people
09:17 11 who want to have this treatment want to have a
09:17 12 physician do it and want to have a physician oversee
09:17 13 it.
09:17 14 Those -- those products can't do as many
09:17 15 cases. They do different types of cases, use a
09:17 16 different approach, and also have some safety concerns
09:17 17 associated with them.
09:17 18 Q. What's the status of the direct-to-consumer
09:17 19 market right now?
09:17 20 A. Well, I think Mr. Hogan said it very well on
09:17 21 one of those videos. It blew itself up. I mean,
09:17 22 basically the -- most of the companies that were in
09:17 23 that market are no longer in that market. It's very,
09:17 24 very small and disappearing.
09:17 25 Q. So what impact, if any, does the

09:17 1 direct-to-consumer market have on Align's market share
09:17 2 or market power?
09:17 3 A. Basically none.
09:17 4 MR. TUBACH: Objection, Your Honor.
09:17 5 May we approach?
09:17 6 THE COURT: Sure.
09:17 7 (Bench conference.)
09:18 8 MR. TUBACH: Your Honor, Dr. Perryman is
09:18 9 now about to offer an opinion about market power,
09:18 10 including doctor direct -- the DTC, the
09:18 11 direct-to-consumers. He's offered no such opinion
09:18 12 whatsoever in his report. There's no opinion in his
09:18 13 report where he says that the larger market includes
09:18 14 it.
09:18 15 MR. HIRSCH: He says in his report,
09:18 16 Paragraph 76 at Note 176, that the direct-to-consumer
09:18 17 companies have not sustained any commercial presence
09:18 18 and did not constrain Align. That's exactly what he's
09:18 19 saying.
09:18 20 MR. TUBACH: He's just quoting from
21 something that Joe Hogan said. It's not an opinion
09:18 22 he's offered in any way, shape, or form. This is
09:18 23 critical, Your Honor.
09:18 24 THE COURT: Stop. If it's in there, he's
09:18 25 going to say exactly what's in there.

09:18 1 MR. HIRSCH: That's the last question I'm
09:18 2 going to ask him about it.
09:18 3 THE COURT: The objection is overruled.
09:18 4 MR. HIRSCH: Thank you, Your Honor.
09:18 5 (Bench conference concludes.)
09:19 6 BY MR. HIRSCH:
09:19 7 Q. Dr. Perryman, you told us yesterday you're an
09:19 8 economist, right?
09:19 9 A. Yes, sir. I am.
09:19 10 Q. And you run economic modeling; is that
09:19 11 correct?
09:19 12 A. Yes, sir. I do.
09:19 13 Q. Did you perform a quantitative analysis in
09:19 14 this case to define the relevant antitrust market?
09:19 15 A. Yes, sir. I did.
09:19 16 Q. What specific analysis did you perform?
09:19 17 A. Well, it's an analysis that the justice
09:19 18 department and the Federal Trade Commission have told
09:19 19 us is the proper way to define a market in the United
09:19 20 States. It's called a hypothetical monopolist test.
09:19 21 Q. What is the hypothetical monopolist test?
09:19 22 A. Well, basically it creates a hypothetical
09:19 23 world much like you saw one back when we were talking
09:19 24 about patents a while back. It creates a hypothetical
09:19 25 world in which it says that what if you had just one

09:19 1 company producing the product that you're interested in
09:20 2 and they raise their prices 5 percent, would they make
09:20 3 money from that or would so many people buy something
09:20 4 else that they wouldn't make money?
09:20 5 Q. And why were you looking at a 5 percentage
09:20 6 price increase in particular?
09:20 7 A. Well, again, what the justice department and
09:20 8 the Federal Trade Commission had told us is that you
09:20 9 want to look at a small but significant increase that's
09:20 10 around for a while, and they've determined that 5
09:20 11 percent is the appropriate benchmark.
09:20 12 Q. So in this -- in this test, if prices increase
09:20 13 by 5 percent and customers switch to buy something
09:20 14 else, what does that indicate as to what the relevant
09:20 15 antitrust market is?
09:20 16 A. Well, it basically tells me that that
09:20 17 something else is a part of the market because buyers
09:20 18 see it as something they can substitute.
09:20 19 Q. And if customers, on the other hand, accept
09:20 20 that 5 percent increase and don't buy something else,
09:21 21 what does that indicate as to the relevant antitrust
09:21 22 market?
09:21 23 A. Well, if they don't lose enough sales to
09:21 24 offset the price increase and they make more money,
09:21 25 then that tells us that's the appropriate market.

09:21 1 We've defined the market that has the products in it
09:21 2 that are reasonably interchangeable.
09:21 3 Q. All right. So if we go back to your example
09:21 4 with the cars and the pickups.
09:21 5 A. Yes, sir.
09:21 6 Q. And we do the hypothetical monopolist test
09:21 7 starting with just one type of pickup truck.
09:21 8 And the question again, sir, the question is
09:21 9 what's the relevant antitrust market, right?
09:21 10 A. Yes, sir.
09:21 11 Q. So if we have one type of pickup truck and the
09:21 12 price increases by 5 percent, what happens?
09:21 13 A. Well, what would happen is that company would
09:21 14 tend to lose money because people could buy other
09:21 15 trucks that were less expensive.
09:21 16 Q. So is that one type of truck the relevant
09:21 17 antitrust market?
09:21 18 A. No, sir. It's not.
09:21 19 Q. Now, if we expand to include all the different
09:22 20 models of pickup trucks and then the price increases by
09:22 21 5 percent, what happens?
09:22 22 A. Right. If you make that one market, one
09:22 23 supplier and the price goes up on all of them by
09:22 24 5 percent, then there's not anything that would
09:22 25 substitute enough to offset that. So they would

09:22 1 actually accept the price increase, and that would be
09:22 2 the relevant market.
09:22 3 Q. All right. So now let's turn to the test that
09:22 4 you performed with the data that you looked at.
09:22 5 You have that in mind?
09:22 6 A. Yes, sir.
09:22 7 Q. What products did you include in your
09:22 8 hypothetical monopolist test?
09:22 9 A. Well, the product I include in the
09:22 10 hypothetical monopolist test, you always start with the
09:22 11 smaller one and see if -- see if there's any
09:22 12 substitutes.
09:22 13 So I started with a single monopolist company
09:22 14 that was producing doctor-directed clear aligners.
09:22 15 Q. And, now, this is -- this is referring to a
09:22 16 single hypothetical monopolist?
09:22 17 A. Yes, sir.
09:22 18 Q. Why do you analyze each of these different
09:23 19 products as if they were sold by one company?
09:23 20 A. Well, that's what the test consists of. We're
09:23 21 not modeling companies. We're modeling a product to
09:23 22 see what the product market is. And so basically the
09:23 23 product is doctor-directed clear aligners, so we had to
09:23 24 add up all the data we could find to define the size of
09:23 25 that market.

09:23 1 And the companies that -- obviously Invisalign
09:23 2 and ClearCorrect, a couple of other companies, were
09:23 3 willing to share their data. And we ended up with
09:23 4 about 95 percent of all the data for the market.
09:23 5 Q. What time frame did you look at?
09:23 6 A. For this we looked from July of 2020 through
09:23 7 August of 2024.
09:23 8 Q. All right. And using all this data, what did
09:23 9 you -- what did you calculate first?
09:23 10 A. Well, the first thing we calculated is what we
09:23 11 call the break-even point.
09:23 12 Q. And what's that?
09:23 13 A. Well, again, we're going to see if you
09:23 14 increase the price by 5 percent, are they going to make
09:23 15 money or are they going to lose money. And at some
09:23 16 point it's just a wash. And that wash is the
09:23 17 break-even point which will tell us if we're -- if you
09:24 18 lose more sales than that, you're going to lose money.
09:24 19 If you lose fewer sales than that, you're going to make
09:24 20 money.
09:24 21 Q. And what'd you find the break-even point to
09:24 22 be?
09:24 23 A. Well, I did it a couple different ways
09:24 24 basically. I don't want to get into the weeds here.
09:24 25 But one way, assuming that demand was linear, one that

09:24 1 was curved, and basically the break-even point was 1.2
09:24 2 to 1.3.
09:24 3 And what that means is if a price went up
09:24 4 1 percent and your sales went down 1.2 to 1.3 percent,
09:24 5 you would -- you would just break even. Less than
09:24 6 that, you would make money. More than that, you would
09:24 7 lose money.
09:24 8 Q. What was the next step in your calculation?
09:24 9 A. Well, the next step is that we have to
09:24 10 actually determine what the coefficient, the same
09:24 11 elasticity that -- relative to the break-even point,
09:24 12 what that is for the -- for this hypothetical market
09:24 13 that's clear aligners.
09:24 14 Q. And you refer to a regression here?
09:25 15 A. Yes, sir.
09:25 16 Q. What's a regression?
09:25 17 A. Well, regression is a statistical tool. It's
09:25 18 been around well over a century. It's used thousands
09:25 19 of times every day in many fields. Basically that
09:25 20 shows us the relationship that a group of variables has
09:25 21 to a single variable that you're trying to explain.
09:25 22 Q. And how widely are regression analyses used in
09:25 23 these types of market analysis?
09:25 24 A. Almost every one. In modern times it's done
09:25 25 this way.

09:25 1 Q. Now, do regressions involve the use of
09:25 2 mathematical variables?
09:25 3 A. Yes, sir. They do.
09:25 4 Q. What types of variables did you use in the
09:25 5 regression that you did here?
09:25 6 A. Well, I used a lot of variables to control for
09:25 7 other factors. But the specific variable you have to
09:25 8 use in this type of regression is called an
09:25 9 instrumental variable.
09:25 10 Q. What is an instrumental variable?
09:25 11 A. Well, an instrumental variable is one that
09:25 12 will let me separate out the impact that price is
09:25 13 having on quantity without -- without it going the
09:25 14 other direction, with the quantity impacting price.
09:26 15 Q. And what specific instrumental variable did
09:26 16 you use?
09:26 17 A. What I used was a 90-day moving average of the
09:26 18 discounts that are offered on scanners, on the iTero
09:26 19 scanner because it had the properties that I needed for
09:26 20 this analysis.
09:26 21 Q. All right. And what was the result when you
09:26 22 performed this regression analysis?
09:26 23 A. Well, after we did a number of tests to make
09:26 24 sure that this instrumental variable was proper and met
09:26 25 all the proper specifications, we actually did the test

09:26 1 itself. And we found out that the actual coefficient
09:26 2 there or elasticity was .83.
09:26 3 Q. And how does the result of your regression
09:26 4 calculation compare to that break-even point that you
09:26 5 told us about?
09:26 6 A. Well, it's substantially lower. Remember, the
09:26 7 break-even point was about 1.2 to 1.3. The calculated
09:26 8 elasticity for this market was .83. And what that
09:26 9 means is they raise their price, they don't lose very
09:27 10 many sales. And so they actually make money by raising
09:27 11 their price, which means we've appropriately defined
09:27 12 the market.
09:27 13 Q. All right. So let's go back, sir, to your
09:27 14 vehicle example one last time.
09:27 15 A. Yes, sir.
09:27 16 Q. And let's see how it applies to the aligners
09:27 17 you looked at.
09:27 18 A. Yes, sir.
09:27 19 Q. If we look at a single type of pickup truck
09:27 20 and a single aligner, are those the correct markets for
09:27 21 the antitrust analysis?
09:27 22 A. No, sir. That would be too narrow.
09:27 23 Q. And if we go the other way and we add all the
09:27 24 cars on the lot and we add aligners and braces, how is
09:27 25 that the correct market for the antitrust analysis?

09:27 1 A. That would be too broad.
09:27 2 Q. But if we pick all the pickup trucks and just
09:27 3 all clear aligners but not braces, how is that the
09:27 4 relevant antitrust markets?
09:27 5 A. Well, that's where you've hit kind of the
09:27 6 Goldilocks spot or the sweet spot. That's where the --
09:28 7 this analysis and all the other evidence has
09:28 8 demonstrated that's the appropriate market.
09:28 9 Q. All right. Now, sir, during opening
09:28 10 statements, you saw Align pull up a slide with one of
09:28 11 their experts and how he defines the relevant market.
09:28 12 A. Yes, sir. I did.
09:28 13 Q. Do you agree that this is the correct
09:28 14 definition to use to define the antitrust market?
09:28 15 A. No, sir. I don't.
09:28 16 Q. And tell us why.
09:28 17 A. Well, basically, it's not the definition
09:28 18 that's used in the guidelines from the government, but
09:28 19 even if you take it on its face, they don't do a
09:28 20 similar thing in terms of the way they do it.
09:28 21 The customer bases are different, they
09:28 22 certainly do it in a different way, and I haven't seen
09:28 23 any evidence that the prices for a single patient that
09:28 24 has a particular problem are similar in any way as
09:28 25 well. So it's simply -- even by that definition would

09:28 1 not meet the criteria.
09:29 2 Q. All right. So considering all the evidence
09:29 3 that you considered, sir --
09:29 4 A. Yes, sir.
09:29 5 Q. -- the evidence about the differences between
09:29 6 aligners and braces, the regression that you performed,
09:29 7 the video we saw from Mr. Hogan, what's your conclusion
09:29 8 as to what the relevant antitrust market is in this
09:29 9 case?
09:29 10 A. Well, the relevant antitrust market is very
09:29 11 clearly doctor-directed clear aligners.
09:29 12 Q. All right. So we've talked about the market.
09:29 13 What was the next step in your analysis?
09:29 14 A. Well, the next step was to look at does Align
09:29 15 possess monopoly power in that market.
09:29 16 Q. And you mentioned this yesterday, but briefly
09:29 17 remind us. When we talk about monopoly power, what
09:29 18 does that mean?
09:29 19 A. Well, when you have monopoly power, basically
09:29 20 you have the ability to raise prices, like we just
09:29 21 talked about, and still make a profit, or to exclude
09:29 22 new people from coming in the market or make it very
09:29 23 difficult for them to expand to a reasonable scale.
09:29 24 Q. Now, if we go back to the market share that
09:30 25 you discussed with us yesterday --

09:30 1 A. Yes, sir.
09:30 2 Q. -- can you remind us of Align's share of the
09:30 3 clear aligner market over the period you considered?
09:30 4 A. Yes, sir. It's changed a little bit over
09:30 5 time, but it's been anywhere from 84 to 92 percent of
09:30 6 the market.
09:30 7 Q. And what does that market share that you
09:30 8 calculated indicate as to whether Align has monopoly
09:30 9 power?
09:30 10 A. Well, obviously that's a very high share. The
09:30 11 standard that is normally applied is somewhere between
09:30 12 60 and 70 percent. Anything above that is considered
09:30 13 to be -- to have an excess market share, a market share
09:30 14 that's indicative of market power.
09:30 15 Q. And what has Align itself said about its share
09:30 16 of the market?
09:30 17 A. Well, Mr. Hogan has said in this e-mail here,
09:30 18 I think you've seen before, that Align has a huge share
09:30 19 of the market.
09:30 20 Q. Now, you referred a couple moments ago, sir,
09:31 21 to preventing others from entering the market?
09:31 22 A. Yes, sir.
09:31 23 Q. What does it mean to prevent other competitors
09:31 24 from entering the market?
09:31 25 A. Well, they're called barriers to entry or

09:31 1 expansion. That means that there are things out there
09:31 2 that make it where it's not easy for somebody else to
09:31 3 enter the market.
09:31 4 Simple example -- I guess a little weird maybe
09:31 5 what just popped in my head -- if I had the only hotdog
09:31 6 stand in Waco and if you wanted to get a hotdog, you
09:31 7 had to come see me. If there weren't any barriers to
09:31 8 entry, if I started charging too much for my hotdogs or
09:31 9 if I started -- started skimping on the quality or the
09:31 10 quantity in my hotdogs, other people would just come in
09:31 11 and open a hotdog stand and take my business away.
09:31 12 So it's not only high market share. It's also
09:31 13 those things that prevent people from coming into the
09:31 14 market.
09:31 15 Q. And did you look at whether in the market in
09:31 16 this case there are barriers to entry?
09:31 17 A. Yes, sir. I did.
09:31 18 Q. What'd you find?
09:31 19 A. Well, there are a number of them. I think
09:32 20 you've heard about some. I mean, you have to have the
09:32 21 capital manufacturing capabilities, the ability to do
09:32 22 research and development, resources for marketing, that
09:32 23 sort of thing. So you have those types of things that
09:32 24 would be somewhat natural barriers.
09:32 25 And then you also have a number of things that

09:32 1 have been -- the conduct that's happened that we'll
09:32 2 talk about later that have also posed substantial
09:32 3 additional barriers.
09:32 4 Q. So all told, sir, what did you conclude as to
09:32 5 whether Align has monopoly power in the doctor-directed
09:32 6 clear aligner market?
09:32 7 A. Well, they have a market share that every year
09:32 8 is well above the threshold, and they have -- and there
09:32 9 are substantial barriers. So indeed they do have
09:32 10 monopoly power.
09:32 11 Q. All right. Now, the next thing that you said
09:32 12 you did in your analysis was to look at whether Align
09:32 13 engaged in anticompetitive conduct?
09:32 14 A. Yes, sir.
09:32 15 Q. What is anticompetitive conduct from an
09:33 16 economic perspective?
09:33 17 A. Well, what we're talking about, when we talk
09:33 18 about anticompetitive conduct, is anything that
09:33 19 distorts the market, it makes it come out in ways it
09:33 20 wouldn't happen if you had fair competition, anything
09:33 21 that impedes or impairs competition from happening, and
09:33 22 then anything that forecloses or shuts off a
09:33 23 substantial part of the market to other competitors.
09:33 24 Q. So I want to, Dr. Perryman, go back in time
09:33 25 briefly, back to the 2013 time period.

09:33 1 A. Yes, sir.
09:33 2 Q. What did Align say about the state of
09:33 3 competition at that time?
09:33 4 A. Well, at that time, Align folks were
09:33 5 suggesting that they expected to have some serious
09:33 6 competition in three to five years.
09:33 7 Q. And were they correct?
09:33 8 A. Yes, sir. They were. Beginning around 2017,
09:33 9 2018, a number of companies began to try to enter the
09:33 10 market and try to be successful.
09:33 11 Q. All right. So let's see what Align did when
09:34 12 that competition actually came.
09:34 13 You've heard discussion in this case about
09:34 14 Align's moat, right?
09:34 15 A. I have. Yes, sir.
09:34 16 Q. What conclusion did you reach as to whether
09:34 17 Align engaged in any competitive conduct by building a
09:34 18 moat around Invisalign using the iTero?
09:34 19 A. I came to the conclusion that that is -- that
09:34 20 is exactly what they did.
09:34 21 Q. All right. So we'll walk through this
09:34 22 step-by-step, but can you first give us a high-level
09:34 23 overview of how Align engaged in anticompetitive
09:34 24 conduct?
09:34 25 A. Sure. The first thing they did was they

09:34 1 changed their policies to where in the United States,
09:34 2 you had to buy an iTero to do Invisalign. So if you're
09:34 3 a doctor and you want to provide the service and you --
09:34 4 you know, everybody's moving away from PVS -- you want
09:34 5 to provide the service of offering aligners. And a lot
09:34 6 of people know about the company, it has 85 or
09:34 7 90 percent of the market. If you want to sell that
09:35 8 particular aligner, you have to buy an Invisalign. So
09:35 9 that was the first step.
09:35 10 And the second step would be that once -- once
09:35 11 you got in that situation, you had your iTero, it was
09:35 12 very difficult to do anything else. It imposed some
09:35 13 barriers. We sometimes call it choice friction in
09:35 14 economics. Makes it more difficult to make a different
09:35 15 choice.
09:35 16 Q. So how do those two steps, sir -- if we go to
09:35 17 the next slide, how do those two steps create an
09:35 18 anticompetitive conduct situation?
09:35 19 A. Well, basically, you have the doctor and if
09:35 20 they want to sell Invisalign and don't want to use the
09:35 21 putty, they basically have to buy an iTero.
09:35 22 Once they buy the iTero, it's very difficult
09:35 23 to do anything but Invisalign. So you just kind of
09:35 24 start this circle, going -- buy the iTero, use
09:35 25 Invisalign and so forth, and you end up being able to

09:35 1 sustain this very high market share.
09:35 2 Q. All right. I want to focus on the first
09:36 3 piece.
09:36 4 A. Yes, sir.
09:36 5 Q. You said that doctors must buy iTero to use
09:36 6 Invisalign.
09:36 7 A. Yes, sir.
09:36 8 Q. And I want to pause for a moment to talk about
09:36 9 PVS that we've heard about during this trial, right?
09:36 10 A. Yes, sir.
09:36 11 Q. And Align has suggested that doctors could use
09:36 12 PVS instead of buying a scanner like iTero, right, sir?
09:36 13 A. Yes, sir. They have.
09:36 14 Q. You heard Dr. Taylor's testimony, right?
09:36 15 A. I did. Yes, sir.
09:36 16 Q. And his testimony regarding the cost of using
09:36 17 PVS rather than a scanner?
09:36 18 A. Yes, sir. The cost and the inconvenience.
09:36 19 Yes, sir.
09:36 20 Q. And did you analyze the portion of Invisalign
09:36 21 cases that use iTero as opposed to PVS?
09:36 22 A. Yes, sir. I did.
09:36 23 Q. And when you did that analysis, what'd you
09:36 24 find?
09:36 25 A. Well, basically, I've got a graph here kind of

09:36 1 showing what it looked like, going all the way back to
09:36 2 2014. And back then, before scanners really caught on,
09:36 3 almost everybody used the PVS. That's the kind of
09:37 4 yellow line. And then as scanners came on, people
09:37 5 began to move to the scanner. And as of now, about
09:37 6 95 percent of Invisalign's orders come through the
09:37 7 iTero.
09:37 8 Q. Now, how much do scanners cost on average?
09:37 9 A. The iTero cost, depending on the model and
09:37 10 everything, somewhere between 34- and $43,000.
09:37 11 Q. So from an economic standpoint, how practical
09:37 12 is it for a doctor to buy more than one type of
09:37 13 scanner?
09:37 14 A. Well, obviously, that would be a substantial
09:37 15 investment, to buy more than one type of scanner. To
09:37 16 even need more than one scanner, you'd need a lot of
09:37 17 volume. And if you had to buy more than one, you'd
09:37 18 probably buy another iTero, because as Dr. Taylor told
09:37 19 us yesterday, having to train people on two different
09:37 20 approaches and two different machines and that sort of
09:37 21 thing would become very difficult and risky in the
09:37 22 office as well.
09:37 23 So, in essence, most doctors that are -- or
09:38 24 all doctors that want to sell Invisalign are probably
09:38 25 going to end up with just an iTero.

09:38 1 Q. So if a doctor wants to buy a scanner, why do
09:38 2 you say they need to buy an iTero to use Invisalign?
09:38 3 A. Well, that's the only way that you're allowed
09:38 4 to sell the product that's 85 to 90 percent of the
09:38 5 market is to have this particular scanner.
09:38 6 Q. And when did Align start that policy?
09:38 7 A. In 2018.
09:38 8 Q. In 2018, what was the state of competition in
09:38 9 the clear aligner market?
09:38 10 A. Well, the state of competition was that you
09:38 11 had a number of companies that were coming in -- coming
09:38 12 in and trying to enter the market. None of them were
09:38 13 able to do it profitably, but you had a lot of
09:38 14 companies coming in and trying to get into the market
09:38 15 at that point in time.
09:38 16 Q. And before that period, before folks were
09:38 17 trying to come into the market, what scanners could
09:38 18 Invisalign customers use?
09:39 19 A. Well, they could use a number of scanners at
09:39 20 that point in time.
09:39 21 Q. More than just iTero?
09:39 22 A. Yes, sir.
09:39 23 Q. And then as Align saw the competition coming,
09:39 24 what did it do?
09:39 25 A. Once -- at that point in time, it made a

09:39 1 policy that it would only accept scans from the iTero.
09:39 2 Q. And what, sir, have we seen Align itself
09:39 3 saying about whether other scanners other than iTero
09:39 4 could be used by Invisalign customers?
09:39 5 A. Well, it's pretty clear. It says if you want
09:39 6 to do Invisalign, you're forced to buy the iTero and
09:39 7 live with it.
09:39 8 And then also in -- another correspondence
09:39 9 said they want to do Invisalign and not use physical
09:39 10 impression, which is PVS, so they buy the iTero
09:39 11 scanner.
09:39 12 Q. What other clear aligner companies other than
09:39 13 Align have this type of policy limiting customers to
09:39 14 just one scanner?
09:40 15 A. Oh, none of the other companies do that.
09:40 16 Align's the only one. The industry standard is that
09:40 17 everything's open.
09:40 18 Q. All right. So Invisalign customers need a
09:40 19 scanner, and they have to buy the iTero. What do you
09:40 20 mean that iTero impairs choice in clear aligners?
09:40 21 A. Well, what they do is they make it very easy
09:40 22 to submit -- and Dr. Taylor talked about this at some
09:40 23 length yesterday and kind of walked through the
09:40 24 process. But they made it very easy to use it with
09:40 25 Align Invisalign and very difficult to use it with any

09:40 1 other brand.
09:40 2 Q. And you mentioned this, sir, but we heard
09:40 3 Dr. Taylor yesterday explain that customers need just a
09:40 4 few steps to use iTero with Invisalign, right?
09:40 5 A. Correct. Yes, sir.
09:40 6 Q. And then he explained how that compares to the
09:40 7 number of steps that customers would need to use iTero
09:40 8 with other aligners, correct?
09:40 9 A. Yes, sir. That's correct. And he -- the
09:41 10 diagram's up here again, but he walked through all
09:41 11 these steps step-by-step.
09:41 12 Q. And what did Align say about this process of
09:41 13 trying to use iTero with other aligners?
09:41 14 A. Well, in some of the documents that -- that
09:41 15 we've been able to review, one statement was while
09:41 16 customers could potentially use iTero for submitting a
09:41 17 scan to any company today, the workflow is not simple.
09:41 18 And we would, of course, not support it or facilitate
09:41 19 it.
09:41 20 Q. What evidence, Dr. Perryman, have you seen
09:41 21 that Align could have made this process easier, made
09:41 22 the process of using iTero with other -- other aligners
09:41 23 easier?
09:41 24 A. Well, they -- they do it with their own, for
09:41 25 one thing. They do it with restorative dentistry.

09:41 1 Other types of scans, they make it easy. All the other
09:41 2 companies make it easy. So there's -- there's no
09:41 3 reason that it couldn't be done.
09:41 4 Q. And ultimately what did Align say as to
09:42 5 whether doctors would use the iTero with other clear
09:42 6 aligners as a routine part of their business?
09:42 7 A. Well, again, in another internal e-mail, they
09:42 8 said that the process is highly manual and time
09:42 9 consuming and thus will never be widely adopted.
09:42 10 Q. Now, are you aware of Align conducting any
09:42 11 analyses to determine the percentage of doctors that
09:42 12 actually do use iTero to export scans to other
09:42 13 companies?
09:42 14 A. Yes, sir. I am.
09:42 15 Q. And when Align looked at that, what did they
09:42 16 find?
09:42 17 A. Well, what they found was that one-half of
09:42 18 1 percent of doctors will -- are actually using this
09:42 19 globally and in the United States to export their
09:42 20 files. So one out of every 200 doctors are using it.
09:42 21 Q. So even according to Align, what choice does
09:42 22 an iTero customer have for a clear aligner to buy?
09:43 23 A. Well, realistically, and Dr. Taylor talked
09:43 24 about chair time and that sort of thing, not much of a
09:43 25 choice. Internally they've said an iTero customer is a

09:43 1 locked-in Invisalign customer and that we should be
09:43 2 locking in every Invisalign customer into iTero now.
09:43 3 Q. And how is that type of conduct
09:43 4 anticompetitive?
09:43 5 A. Well, it causes the market to be foreclosed,
09:43 6 creates this thing we called choice friction, which
09:43 7 makes it much harder to make a choice.
09:43 8 So they've put -- they basically created a
09:43 9 situation where anyone that wants to supply the
09:43 10 market-dominant product has to have this scanner. And
09:43 11 if you have this scanner, it's going to be very, very
09:43 12 difficult to do anything else. So it shuts off some of
09:43 13 the market.
09:43 14 Q. And to be clear, Dr. Perryman, are you saying
09:43 15 that no ClearCorrect customers use iTero?
09:43 16 A. Oh, no. There are a few. Just like this we
09:43 17 just saw, one out of every 200 dentists does use it
09:44 18 for -- to at least do some scans other than Invisalign.
09:44 19 Q. And we saw a document during Ms. Sterling's
09:44 20 testimony with the number of scans from various
09:44 21 scanners.
09:44 22 Do you recall this?
09:44 23 A. Yes, sir. I do.
09:44 24 Q. And Align argued that this shows that there
09:44 25 were thousands of scans that ClearCorrect customers got

09:44 1 from iTero, correct?
09:44 2 A. Yes, sir. There were a few thousand every
09:44 3 year.
09:44 4 Q. And how do you respond, sir?
09:44 5 A. Well, there -- there were a few thousand every
09:44 6 year out of a total of 1.5 million over the same time
09:44 7 period. So only about 3.3 percent of the scans that
09:44 8 are -- of the sales that ClearCorrect had cases were
09:44 9 through the iTero -- or I'm -- yeah, through the iTero.
09:44 10 Q. And how does the number of ClearCorrect orders
09:44 11 that came through iTero compare to the number of
09:44 12 Invisalign orders that came through the iTero?
09:44 13 A. Well, it's not much of a comparison. The
09:45 14 green line you see down here at the bottom would
09:45 15 represent on this particular scale the few -- the few
09:45 16 that ClearCorrect got, while at least for the last
09:45 17 several years, Invisalign's been getting over a million
09:45 18 every year.
09:45 19 So it's well over a million compared to just a
09:45 20 few thousand.
09:45 21 Q. Now, you said that 3.3 percent of ClearCorrect
09:45 22 orders come from iTero?
09:45 23 A. Yes, sir.
09:45 24 Q. What percentage of total clear aligner
09:45 25 revenues in the U.S. market come through iTero?

09:45 1 A. About 76 percent at this point.
09:45 2 Q. Now, Align has argued that the iTero is an
09:45 3 open system, right, sir?
09:45 4 A. I heard them say that. Yes, sir.
09:45 5 Q. If the iTero were really an open system and
09:45 6 there were no impediments to using it with other clear
09:45 7 aligners, what would you expect to see in terms of the
09:45 8 percentage of iTero orders that ClearCorrect receives?
09:45 9 A. Well, it should -- ClearCorrect's order should
09:45 10 also be getting up pretty close to 70 percent or a
09:46 11 little more. Certainly a lot more than 3.3 percent.
09:46 12 Q. Let's take an example, Dr. Perryman. If we
09:46 13 consider traffic in a road.
09:46 14 A. Yes, sir.
09:46 15 Q. There's three lanes, and let's imagine no
09:46 16 impediments. What would we expect to see in terms of
09:46 17 the percentage of cars going through each toll booth on
09:46 18 each of those lanes?
09:46 19 A. Well, assuming they all use a toll tag and
09:46 20 it's easy to go through there, you would expect to see
09:46 21 about the same number going through each -- each lane.
09:46 22 Q. But now let's imagine that in the middle lane,
09:46 23 instead of having a lane that you can go through with a
09:46 24 pass, they only take cash. Okay?
09:46 25 A. Yes, sir.

09:46 1 Q. And let's imagine that in that middle lane,
09:46 2 it's not the same percentage of cars going through, but
09:46 3 it's much, much less, like 3 percent of the traffic
09:46 4 going through that middle lane.
09:46 5 A. Yes, sir. If that was the type of thing you'd
09:46 6 have to stop and get your wallet out and do all that,
09:47 7 obviously it's going to slow down considerably. That's
09:47 8 the type of impediment situation we're talking about
09:47 9 here.
09:47 10 Q. And tell us more. How does that apply to what
09:47 11 we see with the percentage of ClearCorrect orders
09:47 12 coming through iTero?
09:47 13 A. Well, we see -- as Dr. Taylor told us
09:47 14 yesterday, we see the very easy way, just a couple of
09:47 15 clicks, that you can send the Align. That's like the
09:47 16 toll lanes that take the toll tag.
09:47 17 And then you've got this one that's very
09:47 18 cumbersome and complex which would be analogous to the
09:47 19 one where you have to stop and take out your money and
09:47 20 make change and all that sort of thing.
09:47 21 And so it just -- it illustrates that when you
09:47 22 have these technical impediments, that you make it much
09:47 23 more difficult and you begin to foreclose some of the
09:47 24 market and create this choice friction.
09:47 25 Q. All right. Now, Dr. Perryman, did you also

09:47 1 perform any statistical analyses to determine whether
09:47 2 Align's iTero policies actually cause doctors to buy
09:48 3 Invisalign as opposed to a competitive aligner?
09:48 4 A. Yes, sir. I did.
09:48 5 Q. What analysis did you do there?
09:48 6 A. Well, it's something we call an event study.
09:48 7 And it's -- again uses regression. It's a little more
09:48 8 complicated than the last one.
09:48 9 But you look at what impact one event has on
09:48 10 other types of activity. In this case, the one event
09:48 11 would be the purchase of an iTero scanner.
09:48 12 Q. And if we go to 8.56, you said you looked at
09:48 13 the purchase of an iTero scanner?
09:48 14 A. Yes, sir.
09:48 15 Q. And why did you use that as the event in your
09:48 16 event study?
09:48 17 A. Well, I want to see what impact that's having
09:48 18 on the marketplace. So I was able to get a lot of
09:48 19 data. I found doctors that prior to buying the iTero
09:48 20 were using both ClearCorrect and Invisalign.
09:48 21 They may have been using others too. We only
09:48 22 had this granular data for ClearCorrect and Invisalign,
09:48 23 but they were using both. They'd buy the iTero, and
09:49 24 then what happens to their usage afterwards.
09:49 25 Q. And you mentioned you looked at doctors that

09:49 had previously purchased iTero -- I'm sorry, from Align
09:49 and ClearCorrect?
09:49 A. Yes, sir.
09:49 Q. Why'd you look at that group of doctors?
09:49 A. Well, that gave me kind of a control group to
09:49 analyze. In other words, they certainly had no
09:49 objection to using ClearCorrect. They had been using
09:49 ClearCorrect.
09:49 And then -- then I have the event that we're
09:49 analyzing here. You purchase the iTero. And once you
09:49 get it installed and operating, you can see what
09:49 happens to that percentage of sales that go to the two
09:49 companies.
09:49 Q. How many orders did you consider in your event
09:49 study?
09:49 A. Well, across the entire study, there were
09:49 millions. But in this particular piece of it with the
09:49 iTero and the ClearCorrect, it was about 287,000.
09:49 Q. And again, what time period did you look at?
09:49 A. For this, we had data where we could look at
09:49 it from 2016 through 2024. So we had a long time
09:49 period to cover a lot of the purchases of iTeros.
09:50 Q. All right. So when you did this analysis and
09:50 you performed another regression --
09:50 A. Yes, sir.

09:50 1 Q. -- what was the result?
09:50 2 A. Well, the result of this analysis was that the
09:50 3 purchase of the iTero, after you control for everything
09:50 4 else -- we've heard about a lot of other things. After
09:50 5 you control for everything else, the iTero leads to
09:50 6 about a 15 percent share of revenue going over to
09:50 7 Align.
09:50 8 Q. So if we break that down for a moment, use an
09:50 9 example --
09:50 10 A. Yes, sir.
09:50 11 Q. -- if we imagine that before buying the iTero,
09:50 12 the revenue split for doctors that you analyzed was
09:50 13 82 percent Align and 18 percent ClearCorrect?
09:50 14 A. Yes, sir.
09:50 15 Q. Then the doctor buys iTero, right?
09:50 16 A. Yes, sir.
09:50 17 Q. And then what happens?
09:50 18 A. Well, then, basically, you have a 15 percent
09:50 19 shift in revenue. So the gap becomes 97 percent and
09:50 20 3 percent. That is, one gains 15 percent, one loses
09:50 21 15 percent once the iTero is purchased.
09:51 22 Q. And how -- Dr. Perryman, how do we know that
09:51 23 it's the iTero and not something else that's causing
09:51 24 doctors to shift to Invisalign?
09:51 25 A. Well, this particular approach we use --

09:51 1 again, it's -- the math is fairly complex, but it
09:51 2 controls for all of the other factors. And we're able
09:51 3 to look at things and see how in some cases for years
09:51 4 the providers have used about the same percentage no
09:51 5 matter what was going on with the marketing or any
09:51 6 other things we've heard about, complaints, that type
09:51 7 of thing.
09:51 8 So we were able to control for all of that and
09:51 9 then see just this one single event, what impact it
09:51 10 had. And there were a large number of statistical
09:51 11 tests we could do that it passed with flying colors.
09:51 12 Q. Now, Align has argued that your analysis here
09:51 13 was flawed because you used doctor addresses as opposed
09:51 14 to doctor names.
09:51 15 Are you aware of that?
09:51 16 A. Yes, sir. I remember them saying that.
09:51 17 Q. Are they right?
09:52 18 A. No, sir.
09:52 19 Q. Tell us why.
09:52 20 A. Well, again, the whole dataset we used, all
09:52 21 the sales of both companies for eight years, millions
09:52 22 of observations, we had to sort of clean that data
09:52 23 before we could use it. And what you find is that,
09:52 24 with regard to the names, they're very inconsistent.
09:52 25 Like, you know, a good example, Dr. Taylor

09:52 1 mentioned yesterday himself and another doctor in his
09:52 2 practice. Might be one name. Might be the other. The
09:52 3 order might say Dr. Taylor. It might say Brazos
09:52 4 Braces. And so you have no way to really sort out
09:52 5 who's getting what that way.
09:52 6 So we had to use addresses to do it rather
09:52 7 than names because there's a lot more consistency in
09:52 8 the addresses. And strangely enough, the thing people
09:52 9 get right more than anything else is a ZIP code, for
09:52 10 some reason.
09:52 11 Q. All right. So at the end, sir, how does your
09:52 12 event study in your quantitative analysis, how does
09:52 13 that compare what Align itself said as to the effect of
09:53 14 buying an iTero?
09:53 15 A. Well, first of all, I did want to mention -- I
09:53 16 should have mentioned this. There were a couple of
09:53 17 places where -- or a few places where two doctors had
09:53 18 the same address. That's fairly unusual that you'd
09:53 19 have two competing doctors at the same place, but there
09:53 20 were a couple of them -- or a few of them.
09:53 21 And that -- we did a lot of statistical
09:53 22 testings to show that made absolutely no difference,
09:53 23 which it typically doesn't when you have hundreds of
09:53 24 thousands of observations. But I did want to mention
09:53 25 that, and I should have mentioned it before.

09:53 1 But, basically, Align said the same thing that
09:53 2 this analysis shows, basically. And I think you've got
09:53 3 the wrong slide up here.
09:53 4 Q. All right. Well, we can move on, sir.
09:53 5 A. Okay.
09:53 6 Q. And I want to --
09:53 7 A. I apologize. I apologize.
09:53 8 Q. That's all right.
09:53 9 A. It's one that we looked at before. It says:
09:53 10 An iTero customer is a locked-in Invisalign customer.
09:53 11 Q. Thank you.
09:53 12 You mentioned a couple moments ago
09:53 13 foreclosure?
09:53 14 A. Yes, sir.
09:53 15 Q. What -- briefly, what does "foreclosure" mean
09:53 16 in the context of an antitrust analysis?
09:54 17 A. Well, in antitrust, what foreclosure is, it's
09:54 18 a piece of the market that is shut off from --
09:54 19 effectively from everybody else. And what that means
09:54 20 is if you're trying to enter the market, you're not
09:54 21 going to be able to get to those folks at all.
09:54 22 And if it's a large enough number, that means
09:54 23 it's going to be very difficult to enter, build scale,
09:54 24 become profitable and that sort of thing.
09:54 25 Q. And did you calculate in this case the amount

09:54 1 of foreclosure in the clear aligner market that results
09:54 2 from Align's iTero policies?
09:54 3 A. Yes, sir. I did.
09:54 4 Q. And what'd you find?
09:54 5 A. Basically, what I found was it's about
09:54 6 76 percent of the market.
09:54 7 Q. Now, you heard --
09:54 8 MR. HIRSCH: And we can go to 8.60.
9 BY MR. HIRSCH:
09:54 10 Q. You heard Mr. Coss' testimony yesterday?
09:54 11 A. Yes, sir. I did.
09:54 12 Q. And Mr. Coss explained that typically scanners
09:54 13 can last three to four years.
09:54 14 Did you hear that?
09:54 15 A. Yes, sir.
09:54 16 Q. The foreclosure that you calculated, how long
09:54 17 does that last?
09:55 18 A. Well, that tends to -- that tends to last a
09:55 19 long time. And, you know, the government's told us
09:55 20 anything above about 40 percent is considered to be --
09:55 21 to be excess foreclosure in market. In other words, it
09:55 22 constrains that market.
09:55 23 But in this case, if you buy a scanner, it
09:55 24 lasts three, four, five years, and it's time to buy
09:55 25 another scanner. You're facing exactly the same

09:55 1 situation.
09:55 2 If you want to use -- if you want to provide
09:55 3 Invisalign, you have to buy the iTero again. So the
09:55 4 process can just continue in the current environment.
09:55 5 Q. Yesterday, Dr. Perryman, we heard some
09:55 6 testimony about Align's contracts with its customers.
09:55 7 Did you hear that?
09:55 8 A. Yes, sir.
09:55 9 Q. Did you analyze Align's contracts?
09:55 10 A. Yes, sir. I did.
09:55 11 Q. And what did you find that was relevant to
09:55 12 your analysis?
09:55 13 A. What I found was -- and we reviewed and did
09:55 14 key word searches and that sort of thing on thousands
09:55 15 of them. And what I found was there were a lot of
09:55 16 elements to those contracts that would harm competition
09:55 17 and harm competitors.
09:56 18 Q. Now, let's take an example. If we turn back
09:56 19 to Align's contract with Heartland Dental that we saw
09:56 20 yesterday --
09:56 21 A. Yes, sir.
09:56 22 Q. -- what does that agreement say regarding what
09:56 23 a doctor must do to stay in good standing with Align?
09:56 24 A. Well, in order to stay in good standing, the
09:56 25 doctor has to -- has to not -- basically, not direct

09:56 1 any patient toward any scanner other than the -- or any
09:56 2 product other than Invisalign.
09:56 3 Q. And what evidence is there, sir, that these
09:56 4 contracts that have these types of provisions harmed
09:56 5 ClearCorrect and other companies in the clear aligner
09:56 6 market?
09:56 7 A. Well, we did a lot of analysis of that, and
09:56 8 what you found was the market share that Align has in
09:56 9 the -- among those -- among those doctors is -- you
09:56 10 know, those organizations that have these contracts is
09:56 11 even higher than the market share they have with
09:56 12 others.
09:56 13 So it's definitely, again, serving to move
09:57 14 things over to Align and make it more difficult for
09:57 15 others to enter and compete.
09:57 16 Q. Now, there's also been testimony about Align's
09:57 17 loyalty program, right?
09:57 18 A. Yes, sir.
09:57 19 Q. Did you consider that as part of your
09:57 20 analysis?
09:57 21 A. Yes, sir. I did look at that.
09:57 22 Q. And what did you find?
09:57 23 A. Well, again, the way it's structured, it --
09:57 24 Align itself says it creates a barrier to switching.
09:57 25 And the way it's structured, again, it makes it very

09:57 1 difficult for a practice to even sell one or two units
09:57 2 of something else. And Dr. Taylor explained this to
09:57 3 some extent yesterday.
09:57 4 Q. Now, Align showed in their opening a slide
09:57 5 that has airline and coffee loyalty programs.
09:57 6 Do you recall that?
09:57 7 A. Yes, sir. I do.
09:57 8 Q. And they've argued that their pricing is just
09:57 9 like these other loyalty programs?
09:57 10 A. Yes, sir.
09:57 11 Q. Do you agree with that?
09:57 12 A. No, sir. I don't.
09:57 13 Q. Tell us why.
09:57 14 A. Well, the way their program works is how many
09:57 15 you sell in one six-month period determines the price
09:58 16 on every unit for the next six months. So if you were
09:58 17 to sell one less than your tier, that could cost you
09:58 18 hundreds of dollars for every one you sell for the next
09:58 19 six months.
09:58 20 And so what that means is there's a big --
09:58 21 Dr. Taylor talked about this. There's a big risk.
09:58 22 You're always chasing that goal, chasing that thing, a
09:58 23 big risk to selling even one of the others. Even if
09:58 24 they gave it to you, there's a big risk.
09:58 25 These other programs are loyalty programs to

09:58 1 encourage loyalty. That's certainly a good thing. But
09:58 2 they don't do it that way.
09:58 3 I mean, I fly a lot in my business, as you can
09:58 4 probably imagine. And I have that American Airlines
09:58 5 AAdvantage one that -- that's on this chart. I also
09:58 6 have Southwest. I also have Delta.
09:58 7 And when I make a -- when I book a flight --
09:58 8 if I book a Southwest Airlines flight, that doesn't
09:58 9 mean I have to pay more for every American flight that
09:58 10 I book for the next six months. And so it -- it --
09:58 11 these programs are very different than the type of
09:58 12 program that Align has in place.
09:59 13 Q. All right. Now, you said, Dr. Perryman, that
09:59 14 the next step in your analysis was to analyze whether
09:59 15 Align's anticompetitive conduct caused injury to
09:59 16 ClearCorrect, right?
09:59 17 A. Yes, sir.
09:59 18 Q. And we'll get into the numbers, but first,
09:59 19 tell us, sir, what'd you conclude?
09:59 20 A. My conclusion was that it has caused injury to
09:59 21 ClearCorrect.
09:59 22 Q. Now, if we go to 8.65, Align's argued that it
09:59 23 wasn't its conduct that caused harm to ClearCorrect
09:59 24 but, rather, the quality of ClearCorrect's products,
09:59 25 right, sir?

09:59 1 A. Yes, sir. I heard them say that.
09:59 2 Q. Did you analyze the rate of complaint for
09:59 3 ClearCorrect's aligners as compared to the aligners
09:59 4 made by Align?
09:59 5 A. Yes, sir. I did.
09:59 6 Q. What'd you find?
09:59 7 A. They both have very, very low complaint rates
09:59 8 overall. I mean, if you sell a lot of units, you're
09:59 9 going to have some complaints. But they both -- they
09:59 10 both make good products, evidently.
09:59 11 Q. And what does that indicate as to whether
09:59 12 there was some product quality issue that could explain
09:59 13 why ClearCorrect has been foreclosed in the market?
10:00 14 A. Well, it indicates that that was not the
10:00 15 issue, and our model was also able to control for that
10:00 16 and many other factors.
10:00 17 Q. And in fact, what did Align itself say
10:00 18 regarding competition with ClearCorrect?
10:00 19 A. Well, Align said back in 2019 that they were
10:00 20 the best competitor that we have.
10:00 21 Q. Did you also analyze, Dr. Perryman, if we go
10:00 22 to 8.68, ClearCorrect's sales outside of the United
10:00 23 States?
10:00 24 A. Yes, sir. I did.
10:00 25 Q. And when you looked outside of the United

10:00 1 States, what'd you find?
10:00 2 A. Well, if you look at these bars briefly, the
10:00 3 red one is the United States in -- over the three years
10:00 4 we had data. The blue is Canada. The kind of yellow
10:00 5 color is EMEA, which is Europe, the Middle East, and
10:00 6 Africa. And the LATAM, the green one, is Latin
10:00 7 America.
10:00 8 In every other market, they tended to have
10:00 9 pretty significant increases in revenues in the markets
10:00 10 other than the United States.
10:01 11 Q. Now, outside of the United States, what
10:01 12 scanner policies does Align have?
10:01 13 A. Well, they make -- they make Invisalign
10:01 14 available on other scanners outside of the United
10:01 15 States. It's only in the United States that it's
10:01 16 restricted to iTero.
10:01 17 Q. So if we -- if we make that one change, sir,
10:01 18 if we get rid of the Align iTero policies, what's the
10:01 19 impact on ClearCorrect's success?
10:01 20 A. Well, obviously they do quite well in that
10:01 21 context.
10:01 22 Q. All right. Finally, sir, what about pricing?
10:01 23 How do we know that customers weren't choosing Align
10:01 24 because it had a better price than ClearCorrect?
10:01 25 A. Well, there's a whole lot of different

10:01 1 versions of these products, but I took the
10:01 2 Comprehensive package that Invisalign sells and a
10:01 3 couple of packages that Align sells that basically do
10:01 4 the same thing, provide the same levels of service.
10:02 5 And I looked at the average effective prices, so
10:02 6 getting rid of all the discounting and that type of
10:02 7 thing and just looked at the average price that they
10:02 8 actually charge. And Align's were actually a little
10:02 9 bit lower -- I'm sorry, ClearCorrect's were actually a
10:02 10 little bit lower.
10:02 11 Q. All right. Let's go now, sir, to your damages
10:02 12 calculation.
10:02 13 A. Yes, sir.
10:02 14 Q. And that was the last issue you said you
10:02 15 looked at, correct?
10:02 16 A. That's correct. Yes, sir.
10:02 17 Q. All right. Now, I want to start with the
10:02 18 Align iTero policies.
10:02 19 A. Yes, sir.
10:02 20 Q. Did you calculate damages that ClearCorrect
10:02 21 suffered as a result of Align's iTero policies?
10:02 22 A. Yes, sir. I did.
10:02 23 Q. All right. And let's talk about how you did
10:02 24 that, if we go to 8.74.
10:02 25 A. Yes, sir.

10:02 1 Q. And first, Dr. Perryman, I want to ask you
10:02 2 about doctors who previously purchased ClearCorrect and
10:02 3 Align, okay?
10:02 4 A. Yes, sir. Yes, sir.
10:02 5 Q. Did you calculate damages for that group?
10:03 6 A. Yes, sir. I did. I looked at what --
10:03 7 basically for that group and others what the profits
10:03 8 that ClearCorrect would have made if it had but for the
10:03 9 conduct that we're talking about here with the iTero.
10:03 10 Q. And remind us. After that group of doctors
10:03 11 that had previously purchased from both ClearCorrect
10:03 12 and Align, after they purchased an iTero, what
10:03 13 happened?
10:03 14 A. After they purchased an iTero, the lower
10:03 15 15 percent of the revenue -- market revenue shifted
10:03 16 over to Align for each of the -- for each of those
10:03 17 instances.
10:03 18 Q. Now, to calculate the damages number for this
10:03 19 group, what time period did you use?
10:03 20 A. I used a period from July of 2020 through --
10:03 21 and with the data itself through August of 2024.
10:03 22 That's the latest data that we had.
10:03 23 Q. All right. And how did you determine damages
10:03 24 for this group of doctors?
10:03 25 A. Well, the first thing I did was I looked at

10:03 1 Align's revenues, and then I looked at the fact that
10:04 2 this policy caused 15.14 percent of that revenue to
10:04 3 shift over to Invisalign once you bought the iTero and
10:04 4 got it installed. So that told me the amount of
10:04 5 revenue that shifted.
10:04 6 Then all of that wouldn't have been profit.
10:04 7 It would have cost them something to produce those,
10:04 8 those extra units. So I just multiplied by their
10:04 9 profit margin in order to take out the cost associated
10:04 10 with that. And then putting that together gave me a
10:04 11 total of $93.5 million.
10:04 12 Q. All right. And just briefly to break this
10:04 13 down.
10:04 14 A. Yes, sir.
10:04 15 Q. Why do you start with that 15.14 percent?
10:04 16 A. Well, that's the shift that we were able to
10:04 17 measure with our -- with the event study that we talked
10:04 18 about before.
10:04 19 Q. And why are you multiplying that number by
10:04 20 Align's revenues?
10:04 21 A. Because that's how much revenue actually
10:04 22 shifted over to Align. So we got a 15 percent shift.
10:04 23 Q. And then why is that last step are you
10:04 24 multiplying by ClearCorrect's profit margin?
10:04 25 A. Well, because ClearCorrect lost that much

10:04 1 revenue, but it would have cost them something to
10:05 2 produce that many aligners. And so I wanted to just
10:05 3 only allocate the part that would have been profit to
10:05 4 ClearCorrect.
10:05 5 Q. Now, let me ask you about another category of
10:05 6 doctors, sir.
10:05 7 A. Yes, sir.
10:05 8 Q. Did you also calculate damages for doctors who
10:05 9 did not previously buy from ClearCorrect?
10:05 10 A. Yes, sir. I did.
10:05 11 Q. And why were those folks included in your
10:05 12 calculation?
10:05 13 A. Well, there were several different groups we
10:05 14 looked at. There was one group that gave an indication
10:05 15 that they actually chose the iTero after they'd used
10:05 16 something else. So they may have -- they may have
10:05 17 really liked Align. So I didn't give any damages to
10:05 18 those. I took those out completely.
10:05 19 And then we had the other group that we could
10:05 20 observe, and there's several different categories. But
10:05 21 basically we know that we only have data for
10:05 22 ClearCorrect and Align. We know there's all these
10:05 23 others. We know that they had a lot of -- not a lot of
10:06 24 sales, but compared to ClearCorrect, they had a number
10:06 25 of sales. And we weren't able to measure that. And

10:06 1 so -- and so we know some of that would have been
10:06 2 picked up by Align as well.
10:06 3 So we were able to put all that together and
10:06 4 measure how much profit would have been gained by those
10:06 5 who in the database didn't actually use any -- didn't
10:06 6 actually use ClearCorrect but only Align between those
10:06 7 two companies.
10:06 8 Q. All right. If we go to 8.77. What was the --
10:06 9 how'd you calculate damages for this group and what was
10:06 10 the result?
10:06 11 A. Well, it's very similar. There's one more
10:06 12 step. I -- after I took out the ones that I didn't
10:06 13 feel were appropriate, I again shifted 15.14 percent of
10:06 14 the revenue to Align to count how much revenue was
10:06 15 involved. I did ClearCorrect's profit margin. But
10:06 16 then I also said in that case, ClearCorrect may have
10:06 17 gotten some of that. Spark may have gotten some of it.
10:06 18 Angel may have gotten some of it.
10:07 19 So for that piece of it, I only accounted
10:07 20 ClearCorrect's market share among the group other than
10:07 21 Align.
10:07 22 Q. And what was the result of your calculation?
10:07 23 A. The result of that one was $121.5 million in
10:07 24 loss.
10:07 25 Q. All right. So for the total damages that you

10:07 1 calculated for just the iTero policies --
10:07 2 A. Yes, sir.
10:07 3 Q. -- what was the total through August 2024?
10:07 4 A. The total, if you just add those two numbers
10:07 5 up, was $215 million.
10:07 6 Q. And did you also look at the period after
10:07 7 August 2024?
10:07 8 A. Yes, sir. I did.
10:07 9 Q. And what'd you find there?
10:07 10 A. Well, we needed to carry this out to the end
10:07 11 of 2025, and we didn't have the data. But we do know
10:07 12 the market has been growing some over time. So
10:07 13 basically I just took the average daily amount for the
10:07 14 data that I had and then extended that out from
10:07 15 August 2024 out through the end of 2025.
10:07 16 Q. And what was the total?
10:07 17 A. The total goes up to 289 million.
10:08 18 Q. All right. Now, how, sir, does this number --
10:08 19 how does this include any -- any harm that ClearCorrect
10:08 20 suffered as a result of those contracts, those Align
10:08 21 contracts that we discussed?
10:08 22 A. None. It doesn't include any of that.
10:08 23 Q. And how does this number include any harm that
10:08 24 ClearCorrect suffered as a result of those Align
10:08 25 loyalty programs that we talked about?

10:08 1 A. It doesn't include any of that either. Those
10:08 2 had not existed. Just the iTero would have generated
10:08 3 this much loss.
10:08 4 Q. All right. To conclude, Dr. Perryman, the
10:08 5 beginning of the day yesterday when we first began
10:08 6 talking --
10:08 7 A. Yes, sir.
10:08 8 Q. -- you told us about a competitive market and
10:08 9 how that would look.
10:08 10 A. Yes, sir.
10:08 11 Q. Do you recall that?
10:08 12 A. I do.
10:08 13 Q. And remind us how that compares to the
10:08 14 real-world market that we actually see today?
10:08 15 A. Yes, sir. Well, again, the competitive market
10:08 16 would have different people's shares going up and down,
10:08 17 gaining, losing, new people coming in, different people
10:08 18 making profits, innovation. A lot of activity.
10:08 19 What we actually see here, as we've seen this
10:09 20 a couple of times now, is one company dominating and
10:09 21 everybody else kind of fighting over the scraps. And
10:09 22 none of them have been able to make a profit in the
10:09 23 United States.
10:09 24 Q. Now, Dr. Perryman, I want to zoom in for a
10:09 25 moment on just ClearCorrect, okay?

10:09 1 A. Yes, sir.
10:09 2 Q. And I want to focus on that 2020 period and
10:09 3 beyond, okay?
10:09 4 A. Yes, sir.
10:09 5 Q. And if we look at ClearCorrect's performance,
10:09 6 in the world where Align didn't have its iTero
10:09 7 policies, do you have that in mind?
10:09 8 A. Yes, sir. I do.
10:09 9 Q. What's the difference between where
10:09 10 ClearCorrect is today and where they would have been if
10:09 11 Align didn't have its iTero policies?
10:09 12 A. Over that time period, it would have been a
10:09 13 total of $289 million.
10:09 14 Q. And even here, sir, even in this market where
10:09 15 Align doesn't have its iTero policies, where's Align?
10:09 16 A. Well, basically ClearCorrect right now has
10:09 17 around 3, 4 percent of the market. With this, they
10:09 18 would have gone up to 9, 10 percent of the market.
10:10 19 Align would still be up there above 80 percent of the
10:10 20 market. So they would be way off this chart, way up
10:10 21 there.
10:10 22 Q. Last question, sir.
10:10 23 A. Yes, sir.
10:10 24 Q. Why does all this matter? Why should we want
10:10 25 to get closer to that competitive market even if it's

10:10 1 just that little bit?
10:10 2 A. Well, as I think most of you know, this
10:10 3 weekend we'll be celebrating a pretty special day, our
10:10 4 250th anniversary as a country. And we were actually
10:10 5 the first country in the history of the world -- people
10:10 6 don't realize this -- but we were the first county in
10:10 7 the history of the world to be founded and organized
10:10 8 around market principles for our economy. And that is
10:10 9 people having an opportunity to come in and compete and
10:10 10 succeed and ultimately work to the benefit of
10:10 11 consumers, and not -- no guarantee of success but a
10:10 12 guarantee of an opportunity to try for success.
10:10 13 And when you have markets that interfere with
10:10 14 that, you're destroying that process and you're also
10:10 15 ultimately hurting the consumers of these products.
10:11 16 MR. HIRSCH: Thank you for your time,
10:11 17 Dr. Perryman.
10:11 18 I pass the witness.
10:11 19 THE WITNESS: Thank you.
10:11 20 CROSS-EXAMINATION
10:11 21 BY MR. TUBACH:
10:12 22 Q. Good morning, Dr. Perryman.
10:12 23 A. Good morning.
10:12 24 Q. My name is Michael Tubach. I'm going to have
10:12 25 some questions for you today, okay?

10:12 1 A. Yes, sir.
10:12 2 Q. We met first time briefly out there on the
10:12 3 street?
10:12 4 A. Briefly in the humidity, yes, sir. We did.
10:12 5 Q. Yes. Thank you.
10:12 6 Now, you've testified here you're an expert in
10:12 7 economics, right? We can all agree on that.
10:12 8 A. Yes, sir.
10:12 9 Q. Okay. You're not a medical doctor, though,
10:12 10 right?
10:12 11 A. Oh, I'm not a medical doctor. No, sir.
10:12 12 Q. And you're not here to offer any opinions
10:12 13 about the relevant quality of any of the products that
10:12 14 have been talked about here today, right?
10:12 15 A. Oh, no, sir. That would not be my role.
10:12 16 Q. You testified that your hourly rate is $900,
10:12 17 correct?
10:12 18 A. I did. Yes, sir.
10:12 19 Q. And you testified that you were not just
10:12 20 working at The Perryman Group, you own The Perryman
10:12 21 Group, right?
10:12 22 A. I do. Yes, sir.
10:12 23 Q. You're 100 percent owner, right?
10:12 24 A. That's correct.
10:12 25 Q. Okay. So how much has The Perryman Group been

10:12 1 paid to date for your work in this case, all told,
10:12 2 patent case and the antitrust part?
10:12 3 A. I'm not sure. It'd be quite a bit, because
10:12 4 we've been working about a year and -- maybe a little
10:12 5 over a year, and we've had a number of people working
10:12 6 on it. I mean, I don't have a number. I haven't added
10:13 7 that up. But it would be a substantial amount.
10:13 8 Q. Well, can you give us -- I mean, you own the
10:13 9 place. You presumably have to pay taxes on all that
10:13 10 money, right?
10:13 11 A. All of it I don't spend on my employees and
10:13 12 other business expenses, I suppose.
10:13 13 Q. Of course. Only on the profit, right?
10:13 14 So give us -- give us your best estimate of
10:13 15 how much money The Perryman Group has made on this
10:13 16 case.
10:13 17 A. I'm really -- again, we don't -- that's not --
10:13 18 I don't track it in that way. We don't -- it's
10:13 19 individual projects in my own head. I would say
10:13 20 several hundred thousand dollars, certainly.
10:13 21 Q. Well, you alone, sir, have spent several
10:13 22 hundred hours working just on the antitrust case,
10:13 23 right?
10:13 24 A. I believe that's correct. Yes, sir.
10:13 25 Q. Okay. So just you alone would be several

10:13 1 hundred thousand dollars, right?
10:13 2 A. Yes, sir. Multiplied by my rate, it certainly
10:13 3 would. Yes.
10:13 4 Q. Okay. So that doesn't include all -- how many
10:13 5 folks have you had working on this case?
10:13 6 A. We've had two or three that have worked
10:14 7 extensively on it and several others that did some
10:14 8 work.
10:14 9 Q. So the total's going to be quite a bit higher
10:14 10 than several hundred thousand dollars, isn't it, sir?
10:14 11 A. I'm not sure. I mean, it would -- we've been
10:14 12 paid a substantial amount. I don't quibble with that.
10:14 13 Q. Now, you testified today about the loyalty
10:14 14 discount program that we've heard a bit in court today,
10:14 15 right?
10:14 16 A. Briefly, yes, sir.
10:14 17 Q. And we'll come back to it, but I just want to
10:14 18 make sure, you're not offering any damages analysis at
10:14 19 all related to that loyalty discount program, right?
10:14 20 A. That's correct. Only the impediments from the
10:14 21 iTero.
10:14 22 Q. Thank you.
10:14 23 And you're not offering any damages analysis
10:14 24 at all relating to any of those contracts that we've
10:14 25 talked about. Remember, Mr. Mueller put the boxes.

10:14 1 You were here for that, right?
10:14 2 A. I saw that, yes.
10:14 3 Q. Okay. You're not offering any damages
10:14 4 analysis for any of those contract provisions either,
10:14 5 correct?
10:14 6 A. No. That would have been an additional
10:14 7 amount. Yes, sir.
10:14 8 Q. Now, when you submitted your report,
10:14 9 Dr. Perryman, before you did that -- you submitted a
10:15 10 formal report, right? That's what happens in court?
10:15 11 A. Yes, sir. I did.
10:15 12 Q. Okay. And all the experts here have done
10:15 13 formal reports. And I see yours right here, okay?
10:15 14 A. Okay. I'll take your word for it.
10:15 15 Q. Yeah, yeah. Before you submitted that report,
10:15 16 you didn't talk to any dentists, did you?
10:15 17 A. I don't believe so. No.
10:15 18 Q. And you didn't talk to any orthodontists?
10:15 19 A. I don't think I did. No, sir.
10:15 20 Q. You didn't do any surveys of doctors or
10:15 21 orthodontists, right?
10:15 22 A. No. I didn't conduct any surveys. No, sir.
10:15 23 Q. And you didn't look at any scanners before
10:15 24 your report?
10:15 25 A. No. Not the actual physical scanner.

10:15 1 Q. You didn't look at the iTero here, right?
10:15 2 A. No. I looked at materials that had pictures
10:15 3 of them and how they operated, but I did not look at
10:15 4 one. That's true.
10:15 5 Q. And this export process that we've talked so
10:15 6 much about, where you're exporting the scan from the
10:15 7 iTero to somewhere else, you didn't watch anyone -- you
10:15 8 didn't do that process yourself, right?
10:15 9 A. Definitely not. No, sir.
10:15 10 Q. And you didn't even watch anyone do it, did
10:15 11 you, before you issued your report?
10:15 12 A. No. I did not.
10:16 13 Q. You did read Dr. Taylor's expert report,
10:16 14 though, right?
10:16 15 A. Yes. I did.
10:16 16 Q. Okay. Now, I want to start at the beginning.
10:16 17 In the late '90s, if you wanted to get your teeth
10:16 18 straightened, there was really only one option, right?
10:16 19 A. As far as I know, that'd be correct. Yes,
10:16 20 sir.
10:16 21 Q. That was braces, right?
10:16 22 A. Yes, sir.
10:16 23 Q. And many of us in this room probably had
10:16 24 braces. I certainly did.
10:16 25 A. I endured them in the '60s.

10:16 1 Q. Well, I endured it a little later than that
10:16 2 but also well before the '90s.
10:16 3 So when you wanted to get your teeth
10:16 4 straightened, you had to go get braces, right?
10:16 5 A. Yes, sir.
10:16 6 Q. Okay. And the first company to come along and
10:16 7 offer something, an alternative to braces, was Align,
10:16 8 right?
10:16 9 A. Well, there have been aligners around for --
10:16 10 since the '40s, I think. They were the first company
10:16 11 to commercialize it on a significant scale, to my
10:16 12 understanding. Yes, sir.
10:16 13 Q. We've heard like the -- I understand that,
10:16 14 Dr. Perryman. Someone had thought of the idea of a
10:17 15 plastic aligner. Maybe a few people had made some.
10:17 16 But Align was the first company that really
10:17 17 brought it out into the market, right?
10:17 18 A. I think that's a fair statement. Yes, sir.
10:17 19 Q. And at that point, it was very difficult for
10:17 20 Align to break in to the doctors' and the dentists' and
10:17 21 the orthodontists' offices to get them to start
10:17 22 prescribing these, using these products, right?
10:17 23 A. I would assume so. Yes, sir.
10:17 24 Q. Because you would imagine that the dentists
10:17 25 and the orthodontists would be very used to using

10:17 1 braces because that's all they'd ever done, right?
10:17 2 A. Orthodontists in particular. Yes, sir.
10:17 3 Q. And it would be very hard to get them to
10:17 4 switch over to doing something that no one had ever
10:17 5 shown them before, right?
10:17 6 A. Oh, I would think it would be -- there'd be
10:17 7 some challenges with that. Yes, sir.
10:17 8 Q. Pretty risky proposition?
10:17 9 A. I would think so.
10:17 10 Q. And Align was the only one that took that
10:17 11 risk, wasn't it?
10:17 12 A. They were the first company to -- at any
10:17 13 significant scale in the market. Yes, sir.
10:17 14 Q. And for almost 20 years, Align was the only
10:17 15 company that took that risk at any scale, right?
10:18 16 A. That's about right. Yes, sir.
10:18 17 Q. And you would agree with me, Dr. Perryman,
10:18 18 wouldn't you, that that gave Align a significant head
10:18 19 start in selling aligners?
10:18 20 A. Oh, certainly. Yes, sir.
10:18 21 Q. I mean, it's what you've called "the first
10:18 22 mover advantage," right?
10:18 23 A. Yes, sir. It's a very common term.
10:18 24 Q. Common term. I'm not saying you invented it,
10:18 25 but you certainly used it, right?

10:18 1 A. Absolutely, yes.
10:18 2 Q. And one of the advantages that the first mover
10:18 3 gets is that they can spend a lot of money on research
10:18 4 and development to make their product really good,
10:18 5 right?
10:18 6 A. That's an opportunity that they have,
10:18 7 certainly.
10:18 8 Q. And they can do that while there's nobody else
10:18 9 out there selling the same product that they're
10:18 10 selling, right?
10:18 11 A. Yes, sir. At least at that point in time,
10:18 12 Align could. Yes.
10:18 13 Q. And in fact, just since -- and you've been in
10:18 14 court. You've seen this already.
10:18 15 Just since 2017, Align has spent over
10:18 16 $2 billion on research and development, correct?
10:18 17 A. Yes. I did see that number.
10:18 18 Q. Now, another advantage that a first mover gets
10:19 19 is that they can market themselves to the -- out there
10:19 20 to the public so that they start identifying the
10:19 21 product with them, right?
10:19 22 A. Yes, sir.
10:19 23 Q. And as you've also heard in court, you've sat
10:19 24 here diligently throughout the whole trial, just since
10:19 25 2017, Align has spent over $1.4 billion on marketing

10:19 1 and education, right?
10:19 2 A. I believe that was the number I saw. Yes,
10:19 3 sir.
10:19 4 Q. And as a result of all this spending on R&D
10:19 5 and on marketing, they have developed what you call
10:19 6 strong brand loyalty, right?
10:19 7 A. Oh, yes, sir. They do.
10:19 8 Q. And "strong brand loyalty" means that
10:19 9 customers know the product, identify the product, like
10:19 10 the product, and want to get the product, right?
10:19 11 A. I'm not sure that's a formal definition, but
10:19 12 yes. In general, you would tend to see those things.
10:19 13 Q. Now, I want to talk just a little bit about
10:20 14 the iTero, the scanner?
10:20 15 A. Sure.
10:20 16 Q. Align was the first company that really
10:20 17 commercialized the digital scanner for use with
10:20 18 Align -- with aligners, right?
10:20 19 A. They were among the first. I'm not certain.
10:20 20 They may have been first. I'm not sure.
10:20 21 Q. And one of the things that you as a company
10:20 22 that sell both a scanner and aligners want to do is
10:20 23 create a seamless experience for both the patient and
10:20 24 the doctor in using this product to get aligners,
10:20 25 right?

10:20 1 A. I would think they'd want to make it easy to
10:20 2 get aligners. Yes, sir.
10:20 3 Q. And a lot of companies have done that, right?
10:20 4 There are a number -- strike that.
10:20 5 A number of companies sell both the scanner
10:20 6 and an aligner, right?
10:20 7 A. Oh, yes, sir. Absolutely.
10:20 8 Q. Okay. Well, let's look at PDX-10. Well, our
10:20 9 first slide here, PDX-10.4, please.
10:20 10 A. Okay. Yes, sir.
10:21 11 Q. We'll put it up on the screen. I think it
10:21 12 might be in your binder there, but I don't even try --
10:21 13 A. I'd love for you to put it on the screen.
10:21 14 Q. Okay. So what we have here is on the left is
10:21 15 Dentsply Sirona. That's an aligner manufacturer,
10:21 16 right?
10:21 17 A. Yes, sir.
10:21 18 Q. And they also sell a scanner, right?
10:21 19 A. Yes, sir. They do.
10:21 20 Q. It's called the Primescan. Yeah?
10:21 21 A. That's correct.
10:21 22 Q. And SureSmile is the brand name for the
10:21 23 aligner that they sell, correct?
10:21 24 A. That's correct. Yes, sir.
10:21 25 Q. And Align, of course, we have in the middle.

10:21 1 We've heard probably enough about that. I don't need
2 to go through that. They sell both the iTero
3 scanner --
10:21 4 I'm getting the red light. I've got to slow
10:21 5 down on my speaking. Sorry about that.
10:21 6 They sell both the iTero scanner and
10:21 7 Invisalign, right?
10:21 8 A. Yes, sir.
10:21 9 Q. Okay. And then Straumann on the right there,
10:21 10 they sell the SIRIOS scanner, and they sell
10:21 11 ClearCorrect, right?
10:21 12 A. Yes, sir. That's correct.
10:21 13 Q. Now, before they came out with the SIRIOS,
10:21 14 they had that other scanner called Virtuo Vivo. You've
10:21 15 heard testimony about that?
10:21 16 A. I have. Yes, sir.
10:21 17 Q. That one -- that one didn't do very well,
10:21 18 right?
10:21 19 A. Oh, was that a question?
10:22 20 Q. Sorry. That one didn't do very well, right?
10:22 21 A. My understanding is that that is no longer
10:22 22 available.
10:22 23 Q. Yeah. And each of these companies is trying
10:22 24 to create that seamless experience that we talked about
10:22 25 just a minute ago, right?

10:22 1 A. I think all the companies want their -- their
10:22 2 scanners to be easy to use. Yes, sir.
10:22 3 Q. And easy to use specifically to buy their own
10:22 4 product, right?
10:22 5 A. Well, I'm sure they want to buy their own
10:22 6 product, but they also make it easy to buy other
10:22 7 products as well.
10:22 8 Q. Okay. But I want to make sure you answer my
10:22 9 question, though, Dr. Perryman.
10:22 10 They want to make it easy to buy their
10:22 11 product, right?
10:22 12 Do you agree with that?
10:22 13 A. That's part of it. Yes, sir.
10:22 14 Q. Okay. Now, let's look at PTX-3042.
10:22 15 A. Yes, sir.
10:22 16 Q. Again, we'll put this up on the screen for
10:22 17 you.
10:22 18 MR. TUBACH: And if you go to Page 1,
10:22 19 it's that blue -- actually, right at the very top
10:23 20 there, maybe if you could just blow up the very top.
10:23 21 A. Okay.
10:23 22 BY MR. TUBACH:
10:23 23 Q. And this is -- this is Dentsply Sirona,
10:23 24 correct?
10:23 25 A. Yes, sir. That's correct.

10:23 1 Q. And what they say is the Primescan intraoral
10:23 2 scanner, an ideal match for the SureSmile clear aligner
10:23 3 workflow.
10:23 4 Do you see that?
10:23 5 A. Yes, sir. I do.
10:23 6 Q. Okay.
10:23 7 MR. TUBACH: Let's go to PTX-3045.
8 BY MR. TUBACH:
10:23 9 Q. This is a page from the Straumann website.
10:23 10 And where it says: The Straumann SIRIOS
10:23 11 scanners have been optimized for Straumann solutions,
10:23 12 including ClearCorrect.
10:23 13 Do you see that?
10:23 14 A. Yes, sir. I do.
10:23 15 MR. HIRSCH: Object. These are not in
10:23 16 evidence. The witness is being shown -- they're being
10:23 17 published.
10:23 18 THE COURT: What is it the jury is
10:23 19 seeing?
10:23 20 MR. TUBACH: The jury is seeing
10:23 21 demonstratives. I'm explaining to him about how -- the
10:23 22 seamless experience.
10:24 23 THE COURT: You have to -- you still have
10:24 24 to tether in the record the demonstrative. So if
10:24 25 you'll let --

10:24 1 MR. TUBACH: I'll go back and do it.
10:24 2 Thank you, Your Honor. Apologies.
10:24 3 BY MR. TUBACH:
10:24 4 Q. If we go back to PTX-3042.
10:24 5 A. Yes, sir.
10:24 6 MR. TUBACH: Go to the second page,
10:24 7 please.
8 BY MR. TUBACH:
10:24 9 Q. This is a -- this is a page from the -- from
10:24 10 the website of the -- of Dentsply Sirona relating to
10:24 11 the Primescan scanner, right?
10:24 12 A. I'll take your word for it.
10:24 13 Q. Thank you.
10:24 14 And PTX-3045 is from Straumann's own website
10:24 15 about how to --
10:24 16 MR. HIRSCH: Your Honor, again, there's
10:24 17 no foundation with this witness. It's a web page.
10:24 18 There's no basis to ask the questions about it.
10:24 19 THE COURT: I think he just said -- you
10:24 20 just said where it came from, right?
10:24 21 MR. TUBACH: Yes, Your Honor.
10:24 22 THE COURT: And so what is your
10:24 23 objection?
10:24 24 MR. HIRSCH: There's no foundation with
10:24 25 this witness. It's a hearsay document, and there's

10:25 1 been no foundation.
10:25 2 THE COURT: Well, he's an expert, so
10:25 3 that's okay. But what is -- what is your concern?
10:25 4 MR. HIRSCH: My concern is just putting
10:25 5 the document that Dr. Perryman hasn't seen or relied on
10:25 6 or --
10:25 7 THE COURT: Dr. Perryman, as an expert,
10:25 8 I'm sure will let us know if he hasn't seen it and if
10:25 9 he has any issues. You're overruled.
10:25 10 MR. TUBACH: Thank you, Your Honor.
10:25 11 BY MR. TUBACH:
10:25 12 Q. And PTX-3045, I think we've gotten that also.
10:25 13 That's the Straumann website that we've already been
10:25 14 through, right?
10:25 15 A. Yes, sir. I don't know that I'd seen the
10:25 16 other one before, but I'm happy to talk about it.
10:25 17 Q. Okay. Thank you.
10:25 18 And this is -- we've already talked about how
10:25 19 this is the -- optimized for Straumann solutions.
10:25 20 Now, let's look at the Align iTero website.
10:25 21 This is PTX-3061.
10:25 22 MR. TUBACH: Let's go to Page 4, if we
10:25 23 could.
24 BY MR. TUBACH:
10:25 25 Q. And the sentence at the bottom that says:

10:25 1 Seamlessly integrated with Invisalign treatment
10:25 2 planning, iTero technology enables clinicians to
10:26 3 simulate outcomes, track progress, and deliver
10:26 4 personalized care with confidence.
10:26 5 Do you see that, sir?
10:26 6 A. Yes, sir. I do.
10:26 7 Q. And you agree with all these statements that
10:26 8 these scanner companies and aligner companies are
10:26 9 trying to create this seamless experience, right?
10:26 10 A. Oh, I would think they want to make it as easy
10:26 11 as possible to use their scanners. Yes, sir.
10:26 12 Q. Seamless is good, right?
10:26 13 A. I would think seamless is better than not
10:26 14 seamless.
10:26 15 Q. And there's -- and there's nothing wrong --
10:26 16 you're not suggesting, are you, sir, that Align has to
10:26 17 create that same seamless experience for someone to
10:26 18 order a ClearCorrect aligner, right? The same
10:26 19 experience?
10:26 20 A. I don't think I've expressed an opinion about
10:26 21 that. I have talked about the technical impediments
10:26 22 that come into the context we're talking about here.
10:26 23 Q. Sir, that's not the question I asked you, with
10:26 24 all respect, and I apologize for cutting you off.
10:26 25 My question's not about ordering other

10:26 1 scanners just with the STL export process. My question
10:27 2 is that seamless experience where, for example, if
10:27 3 you're going to order Invisalign with an iTero, they
10:27 4 can now show you what your face is going to look like
10:27 5 with your fixed teeth.
10:27 6 That's pretty cool, right?
10:27 7 A. It's cool. I understand a few doctors use it.
10:27 8 Yes, sir.
10:27 9 Q. And you're not suggesting that -- and Align,
10:27 10 you realize that would have taken quite a bit of time
10:27 11 and effort to develop the software and expertise to be
10:27 12 able to create that image of a patient's own face with
10:27 13 their fixed teeth.
10:27 14 You understand that?
10:27 15 A. I would certainly assume so. Yes, sir.
10:27 16 Q. And you're not suggesting that Align has to
10:27 17 make that kind of data or software available for
10:27 18 ClearCorrect, right?
10:27 19 A. That -- the image thing you're talking about?
10:27 20 Q. Yes.
10:27 21 A. I'm not aware that they would have to do that.
10:27 22 No, sir.
10:27 23 Q. And you wouldn't expect that they would want
10:27 24 to do that, right?
10:27 25 A. That would be their decision. I really don't

10:27 1 know one way or the other.
10:27 2 Q. And if you've invested a lot of money in
10:28 3 helping to make that experience so good, that's a good
10:28 4 thing for the patient and a good thing for the doctor,
10:28 5 right?
10:28 6 A. Potentially it could be used. Yes, sir,
10:28 7 absolutely.
10:28 8 Q. Now, you talked a little bit about what
10:28 9 happened since 2017, since --
10:28 10 MR. TUBACH: Actually, you can take that
10:28 11 down.
12 BY MR. TUBACH:
10:28 13 Q. Since 2017, a lot of companies have started
10:28 14 selling aligners in the United States, correct?
10:28 15 A. There have been several that have tried to
10:28 16 enter the market. Yes, sir.
10:28 17 Q. Well, not just tried. There are more than two
10:28 18 dozen that have actually come in and started selling
10:28 19 clear aligners, right?
10:28 20 A. Not profitably, but yes, sir. They've entered
10:28 21 the market.
10:28 22 Q. Sir, more than two dozen companies have come
10:28 23 in and started selling aligners, right?
10:28 24 A. I think that's right. Yes, sir.
10:28 25 Q. And you keep saying they're not profitable.

10:28 1 And you've heard that -- I heard that a couple times
10:28 2 earlier in your testimony.
10:28 3 You haven't done any analysis of whether
10:28 4 Dentsply Sirona is profitable in selling its aligners,
10:29 5 have you?
10:29 6 A. I think I just looked at the overall
10:29 7 financials, I believe.
10:29 8 Q. You have not looked at any financial data from
10:29 9 Dentsply Sirona that shows that their sale of aligners
10:29 10 is not profitable, have you?
10:29 11 A. I honestly don't remember. We looked at so
10:29 12 much information. I've looked at some of their data.
10:29 13 I just -- I don't remember off the top of my head.
10:29 14 Q. You can't recall any financial data you looked
10:29 15 at that suggests that Dentsply Sirona is not profitable
10:29 16 in selling aligners. Is that a fair statement?
10:29 17 A. I'm not recalling one way or the other.
10:29 18 That's correct. Yes, sir.
10:29 19 Q. And you haven't looked at any data -- you
10:29 20 didn't get any special financial data from Dentsply
10:29 21 Sirona or Ormco or -- right?
10:29 22 A. Oh, no, sir. We did not.
10:29 23 Q. That would have allowed you to calculate
10:29 24 whether or not those companies are profitably selling
10:29 25 clear aligners, right?

10:29 A. Yeah. We did not get their very detailed
10:29 financials. That's correct.
10:29 Q. And so fair enough.
10:29 You can't tell us whether Ormco is profitable
10:29 in selling its clear aligners, right?
10:30 Fair statement?
10:30 A. Only -- only to the extent it was available in
10:30 public information.
10:30 Q. Okay. And you haven't pointed to anything in
10:30 the public information that says that, right?
10:30 A. I don't think so. No, sir.
10:30 Q. Same thing with Dentsply Sirona. We just
10:30 covered that?
10:30 A. I believe that's correct.
10:30 Q. And that's the same with all the other clear
10:30 aligner companies. You didn't get any financial data
10:30 to test whether they are profitably in this business,
10:30 right?
10:30 A. Unless it was in their public filings, no,
10:30 sir.
10:30 Q. Okay. Now, even some braces companies have
10:30 gotten in on the action in the last ten years, right?
10:30 A. I believe so. Yes, sir.
10:30 Q. So Henry Schein, for example, they
10:30 introduced -- they've introduced three different types

10:30 1 of clear aligners in the last ten years, right?
10:30 2 A. They've -- they've been in the market. Yes,
10:30 3 sir.
10:30 4 Q. Angel is another company that's come in, big
10:30 5 Chinese company, right?
10:30 6 A. Yeah. Very big Chinese company. Yes, sir.
10:30 7 Q. And they've come in and started selling clear
10:30 8 aligners in the United States also, right?
10:30 9 A. They -- they are selling some. Yes, sir.
10:30 10 Q. And they just announced last year that they're
10:30 11 going to build a 50,000-square-foot facility near
10:31 12 Milwaukee, Wisconsin. Did you know about that?
10:31 13 A. Seemed like I read something about it. Yes,
10:31 14 sir.
10:31 15 Q. Now, you wouldn't expect that these
10:31 16 sophisticated companies, like Dentsply and Ormco and
10:31 17 Angel, would enter into a business to sell aligners if
10:31 18 they thought they couldn't make any money at it, do
10:31 19 you?
10:31 20 A. Well, I think there are a number of them
10:31 21 trying to enter the market and trying to gain scale.
10:31 22 Yes, sir.
10:31 23 Q. And the reason -- the only reason those big
10:31 24 companies would try to enter the clear aligner business
10:31 25 is because they thought they could make money on it.

10:31 1 Is that -- does that seem fair to you?
10:31 2 A. They would certainly hope to make money, yes,
10:31 3 sir.
10:31 4 Q. Okay. Now, over the years since 2017, these
10:31 5 companies have taken a fair amount of market share away
10:32 6 from Align, haven't they?
10:32 7 A. Align's market share's dropped from something
10:32 8 over 90 percent to about 84 percent. Yes, sir.
10:32 9 Q. Right. And so in your testimony yesterday and
10:32 10 today, you said that Align's share fluctuated and --
10:32 11 that was yesterday. And then today. You say: It
10:32 12 changed a little bit over time.
10:32 13 Do you recall that?
10:32 14 A. Yes, sir.
10:32 15 Q. And you weren't meaning to suggest that
10:32 16 Align's market share sort of was going up and down over
10:32 17 these years, were you?
10:32 18 A. No, sir. It's dropped a little bit as other
10:32 19 firms have entered.
10:32 20 Q. A little bit. It's dropped 16 percent since
10:32 21 2017; isn't that right, sir?
10:32 22 A. Well, I guess from 100 percent to
10:32 23 84 percent --
10:32 24 Q. 84.
10:32 25 A. -- is 16 percent. Yes, sir.

10:32 1 Q. Every single year, since new companies have
10:32 2 come in to start selling aligners, Align's market share
10:32 3 has gone down, down, down, down, fair?
10:32 4 A. Well, obviously from when they were the only
10:32 5 one. Yes, sir.
10:32 6 Q. But not just -- every single year it's gone
10:32 7 down, true?
10:32 8 A. I believe that's right. Certainly that's been
10:33 9 the trend.
10:33 10 Q. But at the same time, aligner sales as a whole
10:33 11 have gone up a lot, haven't they?
10:33 12 A. Yes, sir. Aligner sales have increased.
10:33 13 Q. And in fact, the sales of aligners in the last
10:33 14 ten years have -- just of the companies' data that you
10:33 15 got, that we all got, have more than doubled in the
10:33 16 last ten years, fair statement?
10:33 17 A. I believe that's right. Yes, sir. COVID was
10:33 18 a big push. Yes, sir.
10:33 19 Q. Now, not every company has grown in the last
10:33 20 five, six years, have they?
10:33 21 A. It's been some variation. Yes, sir.
10:33 22 Q. Yeah. And the main variation in the companies
10:33 23 that you looked at has been ClearCorrect; is that true?
10:33 24 A. I saw some data you put up from -- starting in
10:33 25 2019 that showed that. If you do a longer period, it

10:33 1 doesn't. But yes, sir. I'm -- I'm aware that they've
10:33 2 had some years of declining revenue.
10:33 3 Q. We'll get back to that.
10:34 4 But from 2019 to 2023, of the companies
10:34 5 that -- whose data you looked at, ClearCorrect's the
10:34 6 [redacted]?
10:34 7 A. In terms of revenue, that's correct. Yes,
10:34 8 sir.
10:34 9 Q. And it went down about 50 percent during that
10:34 10 time, right?
10:34 11 A. It was pretty significant. They've had a
10:34 12 rough time in this market. Yes, sir.
10:34 13 Q. It's gone down about 50 percent in that time,
10:34 14 right?
10:34 15 A. That sounds about right.
10:34 16 Q. Now, talk a little bit about other types of
10:34 17 ways to straighten your teeth here. Braces has sort of
10:34 18 gotten into the act of trying to be less visible.
10:34 19 Do you think that's a fair statement?
10:34 20 A. I've seen some of the clear braces. Yes, sir.
10:34 21 Q. Right. So since aligners have come on the
10:34 22 scene, braces, now they have ceramic braces.
10:34 23 Have you heard of those?
10:34 24 A. I've seen some of those. Yes, sir.
10:34 25 Q. And clear braces?

10:34 A. I've seen some of those.
10:34 Q. You saw some photos of those, right, up on the
10:34 screen?
10:34 A. I've seen pictures of them at least.
10:35 Q. And there are now even things called smart
10:35 braces or something called self-ligating braces. Have
10:35 you heard of those?
10:35 A. I've heard of some of the digital
10:35 technologies. Yes, sir.
10:35 Q. And those are ones where you don't even have
10:35 to go back to the orthodontist to get them adjusted.
10:35 This was a, for anyone who remembers, a terrible
10:35 process where you had to go back to the orthodontist,
10:35 tighten them up again. It'd be painful for a couple
10:35 days, right?
10:35 Do you remember that?
10:35 A. I remember it well.
10:35 Q. And probably not fondly?
10:35 A. That's right. Yeah.
10:35 Q. Same.
10:35 And now they have braces that can self-adjust,
10:35 right?
10:35 A. That's my understanding, is there are some
10:35 that can. Yes.
10:35 Q. And that suggests, doesn't it, that braces is

10:35 1 trying to do what it can to compete with aligners?
10:35 2 A. That could be a situation where they're trying
10:35 3 to -- trying to create some substitution the other
10:35 4 direction.
10:35 5 Q. Now, there are also other advances going. For
10:35 6 example, now you can even 3D print aligners in the
10:35 7 orthodontist's own office, right?
10:36 8 A. Yes, sir.
10:36 9 Q. So that just bypasses Align and ClearCorrect
10:36 10 altogether, right?
10:36 11 A. In some circumstances, yes, sir.
10:36 12 Q. And you can even now -- this is -- the world
10:36 13 is going crazy. You can even 3D print braces in the
10:36 14 orthodontist's office, right?
10:36 15 A. I think I've seen something about that. It
10:36 16 would not surprise me at all, given what my grandkids
10:36 17 do with a 3D printer.
10:36 18 Q. And the company that does that is LightForce,
10:36 19 right?
10:36 20 A. Yes, sir.
10:36 21 Q. Okay. Do you know what percentage of
10:36 22 orthodontists have a 3D printer in their office?
10:36 23 A. I may have seen that number. I don't remember
10:36 24 it.
10:36 25 Q. Does 17 percent sound right? I'm happy to

10:36 1 show you a document.
10:36 2 A. I'll accept your representation. That's fine.
10:36 3 Q. Now, over this whole time period, we've been
10:36 4 talking about 2017 to going forward, the average price
10:37 5 for Invisalign has gone down, right?
10:37 6 A. The average effective price has gone down.
10:37 7 Yes, sir.
10:37 8 Q. Right. And you're an economist. So you -- I
10:37 9 would expect you wouldn't just say price.
10:37 10 "Average effective price" means the price that
10:37 11 the doctor actually pays, right?
10:37 12 A. On average, it's gone down. Yes, sir.
10:37 13 Q. On average, which is you got to include the
10:37 14 discounts and whatever else they're getting, and the
10:37 15 price they actually write the check for on average has
10:37 16 gone down from 2017 to 2024?
10:37 17 A. Yes, sir. It has.
10:37 18 Q. In fact, in 2016, the Invisalign Comprehensive
10:37 19 package -- that's their main flagship product, right?
10:37 20 A. Yes, sir.
10:37 21 Q. -- that was $1,513. You may not remember this
10:37 22 exactly, but you did this analysis in your report?
10:37 23 A. Yes, sir. I believe that's correct.
10:37 24 Q. And in fact, the decrease since 2017 has been
10:37 25 about [redacted] for that package, right?

10:37 1 A. I don't recall, but I know I made those
10:38 2 calculations. That's fine.
10:38 3 Q. And in the same time as we've all experienced,
10:38 4 what's happened to prices generally in the economy?
10:38 5 A. Generally, we've had inflation, particularly
10:38 6 in the last few months here. But generally, it's been
10:38 7 a little bit of inflation for most of that time period.
10:38 8 Q. Yeah. And so between 2017 and -- you know,
10:38 9 2017, you know, 2024 -- sorry. Since 2016 and 2024, in
10:38 10 that time period, inflation's been about 30 percent,
10:38 11 hasn't it, if you add it all up?
10:38 12 A. That sounds about right. Yes, sir. That
10:38 13 would encompass the period around COVID. So that
10:38 14 sounds about right. Yes, sir.
10:38 15 Q. So while the prices out there generally are
10:38 16 going up 30 percent, Invisalign's price has gone down
10:38 17 [redacted], fair?
10:38 18 A. I think that's -- in terms of the average
10:38 19 effective price, that's correct.
10:38 20 Q. I'm going to ask you some questions about the
10:38 21 relevant market. We've been talking about this
10:38 22 already.
10:38 23 You testified early, right at the start this
10:39 24 morning, I think, that sort of "relevant market" is a
10:39 25 special term that antitrust economists and lawyers use,

10:39 1 right?
10:39 2 A. Yes, sir.
10:39 3 Q. And that's not necessarily the way
10:39 4 walking-around people would refer to a market, right?
10:39 5 A. Yeah. We all use the term loosely, I think.
10:39 6 Q. And I think even executives use the term
10:39 7 loosely, fair?
10:39 8 A. I think so. At times, yes.
10:39 9 Q. Now, braces can treat all cases that aligners
10:39 10 can treat, right?
10:39 11 A. As you point out, I'm not an orthodontist, but
10:39 12 I believe that is correct. Yes.
10:39 13 Q. And aligners now, now, can treat -- we heard
10:39 14 testimony yesterday -- 98 percent or more of the cases
10:39 15 that braces can treat, fair?
10:39 16 A. I heard that testimony. Yes, sir.
10:39 17 Q. And you heard a bit about the trucks and the
10:40 18 cars. I wanted to ask you some questions about that.
10:40 19 A. Okay.
10:40 20 Q. Can trucks do things that cars can't do?
21 A. Yes.
10:40 22 Q. They can haul -- like Dr. Taylor says, he
10:40 23 hauls his lawn mower?
10:40 24 A. Yes.
10:40 25 Q. You're probably not going to put a lawn mower

10:40 1 in the back of your sedan, right?
10:40 2 A. That's correct. Yeah.
10:40 3 Q. And that's not true of braces and aligners,
10:40 4 right? There aren't really things that braces and
10:40 5 aligners do that the other can't do, right?
10:40 6 A. They do them in different ways, but they both
10:40 7 are about straightening teeth.
10:40 8 Q. Right. Now, we looked at a website yesterday.
10:40 9 I think you were here for that. It might have been the
10:40 10 day before.
10:40 11 MR. TUBACH: If we could pull up
10:40 12 PDX-10.1, please.
13 BY MR. TUBACH:
10:40 14 Q. This is the Dr. Lowe website. And I just have
10:40 15 a question for you.
10:40 16 It's your testimony that braces and aligners
10:41 17 are not in the same market, right?
10:41 18 A. Yes, sir. That's what my analysis shows.
10:41 19 Q. Okay. And is this --
10:41 20 MR. TUBACH: Could we run this?
10:41 21 (Video played.)
10:41 22 BY MR. TUBACH:
10:41 23 Q. This is -- sort of runs in the background of
24 the website, and two girls taking --
25 A. Yes, sir.

10:41 1 Q. -- photos, selfies --
10:41 2 A. I see that.
10:41 3 Q. -- and they're smiling, just like no one's
10:41 4 photographing them, which of course they are being
10:41 5 photographed.
10:41 6 And so is it your testimony, Dr. Perryman,
10:41 7 that the girl on the left wearing aligners is in a
10:41 8 different market than the girl on the right wearing
10:41 9 braces?
10:41 10 A. A different antitrust market, yes, sir.
10:41 11 Q. Now, let's talk a little bit about direct to
10:41 12 consumer.
10:41 13 A. Oh. Yes, sir. Sure.
10:41 14 Q. Direct to consumer is basically a way of
10:41 15 cutting out the middleman in a way, right?
10:41 16 A. I guess you could say that, if you view the
10:42 17 doctor as a middleman.
10:42 18 Q. I wouldn't say that to any doctor, but that's
10:42 19 basically what the direct-to-consumer companies are
10:42 20 trying to do, right?
10:42 21 A. Yes, sir. I think that's a fair statement.
10:42 22 Q. Because they want to sell their product
10:42 23 directly to the consumer without going through doctors?
10:42 24 A. That's my understanding. Yes, sir.
10:42 25 Q. Now, let me show you PDX-10.2-3.

10:42 It's going to be like Let's Make A Deal, if you remember that game.

10:42 A. I'm old enough to remember that. Yes, sir.

10:42 Q. All right. So you -- can you tell me if any of these aligners are direct-to-consumer or doctor-directed?

10:42 A. Oh, I would -- I would not be the person to do that. No, sir.

10:42 Q. It's because it's the same product, right?

10:42 A. Again, that would be a technical question. I wouldn't be the person to ask that.

10:42 Q. Well, you --

10:42 A. They're both aligners. I mean, I understand that.

10:42 Q. Okay. Why don't we go to the next slide.

10:42 There's SmileSet. That's a direct-to-consumer, right?

10:43 A. Yes, sir. It is.

10:43 Q. And the other two are doctor-directed, correct?

10:43 A. Yes, sir.

10:43 Q. Okay. Now, let's look at DDX-8-19.

10:43 A. Yes, sir.

10:43 Q. This is a slide that you went through.

10:43 MR. TUBACH: If I could have the ELMO,

10:43 1 please, Mr. Lee.
10:43 2 A. Yes, sir. It is.
10:43 3 BY MR. TUBACH:
10:43 4 Q. There we go now.
10:43 5 Now, this is a -- this is a slide that -- a
10:43 6 slide that you talked through with Straumann's counsel
10:43 7 on your direct testimony, correct?
10:44 8 A. Yes, sir. It is.
10:44 9 Q. And this was comparing the doctor-directed
10:44 10 clear aligners versus braces, right?
10:44 11 A. Yes, sir.
10:44 12 Q. Now, if we put -- if we put DTC up here, would
10:44 13 you agree with me that they are transparent?
10:44 14 A. Yes, sir.
10:44 15 Q. Would you agree with me that they're
10:44 16 removable?
10:44 17 A. Yes, sir.
10:44 18 Q. Would you agree with me that there are no
10:44 19 emergency visits?
10:44 20 A. I wouldn't think so.
10:44 21 Q. And would you agree with me that there are no
10:44 22 damage to the teeth?
10:44 23 A. Again, without the doctor overseeing, I'm not
10:44 24 sure, but not in the same sense as braces.
10:44 25 Q. So at least on your chart, doctor-directed

10:44 1 clear aligners and DTC have the same functional -- the
10:44 2 same functions as you've described on this chart,
10:44 3 correct?
10:44 4 A. Well, they're both aligners.
10:45 5 Q. Well, no, not just aligners. They have these
10:45 6 same functional differences that you used to describe
10:45 7 the difference between braces and doctor-directed;
10:45 8 isn't that right?
10:45 9 A. I would assume so. Again, I'm making a little
10:45 10 bit of a assumption about the -- leaving the doctor
10:45 11 out, but I would assume so.
10:45 12 Q. Now, there are a lot of companies that have
10:45 13 sold direct-to-consumer over last ten years, correct?
10:45 14 A. There are several. Yes, sir.
10:45 15 Q. One of them we may have referenced earlier is
10:45 16 called Smile Direct Club, right?
10:45 17 A. Correct. Yes, sir.
10:45 18 Q. And do you know how much -- what Smile Direct
10:45 19 Club's revenue was in 2020?
10:45 20 A. I don't recall. They were -- they were very
10:45 21 successful. I know that genre did pretty well during
10:45 22 COVID.
10:45 23 Q. And their revenue, I'll represent to you, was
10:45 24 $656 million in 2020.
10:45 25 A. Okay.

10:45 1 Q. I can show you their 10-K if you'd like to see
10:45 2 it.
10:45 3 A. I'm more than happy to accept your
10:45 4 representation.
10:45 5 Q. Do you know what ClearCorrect's revenue was
10:46 6 during that year?
10:46 7 A. I don't recall. No, sir.
10:46 8 Q. In your report, you say 49 million roughly.
10:46 9 Does that sound about right?
10:46 10 A. No reason to doubt that.
10:46 11 Q. Okay. But you didn't include the 656 million
10:46 12 in revenue in your market definition, correct?
10:46 13 A. Oh, it wasn't in the proper antitrust market.
10:46 14 No, sir.
10:46 15 Q. Okay. Now --
10:46 16 THE COURT: Counsel, we're going to take
10:46 17 a short recess for the morning.
10:46 18 Ladies and gentlemen of the jury, if
10:46 19 you'd please remember my instructions not to discuss
10:46 20 the case, and we'll be back in ten minutes.
10:46 21 THE BAILIFF: All rise.
10:46 22 (Jury exited the courtroom.)
10:47 23 THE COURT: I'm sorry. Thank you. You
24 may step down, sir.
10:47 25 I'm sorry. I couldn't find a good place

10:47 1 to break for you.
10:47 2 MR. TUBACH: I was going to ask when you
10:47 3 wanted to take a break.
10:47 4 THE COURT: Is there anything we need to
10:47 5 take up?
10:47 6 MR. TUBACH: Not from my point of view,
10:47 7 Your Honor.
10:47 8 MR. MUELLER: No, Your Honor. Thank you.
10:47 9 THE COURT: So for your planning --
10:47 10 This doesn't need to be on the record.
10:47 11 (Off-the-record discussion.)
10:47 12 (Recess taken.)
11:02 13 THE BAILIFF: All rise.
11:02 14 THE COURT: Please remain standing for
11:02 15 the jury.
11:02 16 (Jury entered the courtroom.)
11:02 17 THE COURT: Thank you. You may be
11:02 18 seated.
11:02 19 BY MR. TUBACH:
11:02 20 Q. With apologies to all, including the Court and
11:03 21 Dr. Perryman, I'm going to switch gears for just a few
11:03 22 minutes.
11:03 23 A. Sure.
11:03 24 Q. And talk about -- she doesn't want me to move
11:03 25 from the microphone -- and talk about the patent case,

11:03 1 if I could.
11:03 2 A. Sure.
11:03 3 Q. Just a few minutes, okay?
11:03 4 Because you testified about that on your
11:03 5 direct examination.
11:03 6 A. Briefly, yes, sir.
11:03 7 Q. Yes. And we're going to touch it briefly
11:03 8 here.
11:03 9 You agree, sir, don't you, that using a
11:03 10 reasonable royalty in a hypothetical negotiation is a
11:03 11 proper way to calculate patent damages, correct?
11:03 12 A. I don't want to be giving legal opinions, but
11:03 13 that's the framework I understand.
11:03 14 Q. And you've testified many times in patent
11:03 15 cases, right?
11:03 16 A. I have. Yes, sir.
11:03 17 Q. Including for the plaintiffs, right?
11:03 18 A. Plaintiff and defendant. Yes, sir.
11:03 19 Q. And you've used this hypothetical negotiation
11:03 20 model many times on both sides as a way of determining
11:03 21 what the damages might be?
11:03 22 A. Yes, sir. Sure.
11:03 23 Q. Okay. Perfect.
11:03 24 Now, the hypothetical negotiation we're
11:03 25 talking about here is between Align and Straumann,

11:04 1 correct?
11:04 2 A. That's my understanding. Yes, sir.
11:04 3 Q. And you and Mr. Lasinski I think both agree
11:04 4 that the date that you would do this hypothetical
11:04 5 negotiation is April 13, 2021?
11:04 6 A. Yes, sir. We did.
11:04 7 Q. Okay. Now, this negotiation, Align would have
11:04 8 been negotiating for the price it was willing to take
11:04 9 to let Straumann compete against it, right, using its
11:04 10 technology?
11:04 11 A. Well, to use its technology. Yes, sir.
11:04 12 Q. Yeah. And to be clear, they were going to use
11:04 13 the technology to sell clear aligners, right?
11:04 14 A. Assuming validity and infringement. Yes, sir.
11:04 15 Q. And I should have added that. Thank you. You
11:04 16 reminded me.
11:04 17 For the -- for the hypothetical negotiation,
11:04 18 you have to assume that the patent is valid, right?
11:04 19 A. Correct. Yes, sir.
11:04 20 Q. And you have to assume that the product is
11:04 21 infringing?
11:04 22 A. That's correct. Yes, sir.
11:04 23 Q. Okay. And so what we have here is this
11:04 24 hypothetical negotiation which never happened in the
11:04 25 real world but we all assume it might have, which is we

11:05 1 have to imagine that Align is going to have to figure
11:05 2 out how much it's going to need in money to license its
11:05 3 patents to a direct competitor to compete against it
11:05 4 head to head, right?
11:05 5 A. Yes, sir. That would be one of the factors.
11:05 6 Q. And the other one would be on the other side
11:05 7 what Straumann would have been willing to pay for the
11:05 8 right to have the technology to compete against Align,
11:05 9 fair?
11:05 10 A. Yes, sir.
11:05 11 Q. Now, on the -- on the Align side, Align had
11:05 12 spent -- you heard this testimony earlier in the
11:05 13 trial -- about eight years developing the SmartTrack,
11:05 14 right?
11:05 15 A. Developing what? I couldn't hear the last
11:05 16 part.
11:05 17 Q. Developing the SmartTrack. My apologies.
11:05 18 A. Oh, yes, sir. Yes, sir.
11:05 19 Q. And that took a lot of man-hours, fair?
11:05 20 A. I would presume so.
11:05 21 Q. A lot of development effort. You heard Dr. Li
11:05 22 testify about that, correct?
11:05 23 A. I would presume so. Yes, sir.
11:06 24 Q. And Align spent all that money so it could
11:06 25 compete against its competitors, right, better?

11:06 1 A. I would assume so. Yes, sir.
11:06 2 Q. And it did -- would not want to give away that
11:06 3 competitive advantage for cheap, would it?
11:06 4 A. Again, it would be a reasonable -- they would
11:06 5 want a reasonable royalty for it.
11:06 6 Q. But they wouldn't want to just give it away,
11:06 7 though, having spent eight years to develop a product
11:06 8 to compete against their competitors. They wouldn't
11:06 9 give that away for cheap. Would you expect them to do
11:06 10 that?
11:06 11 A. Again, that would be one of the factors in
11:06 12 determining the reasonable royalty.
11:06 13 Q. Now, on the other side, on the Straumann side
11:06 14 of the table, we know that Straumann was relatively new
11:06 15 to the clear aligner market, correct?
11:06 16 A. Yes, sir.
11:06 17 Q. They bought ClearCorrect in 2017?
11:06 18 A. That's correct. Yes, sir.
11:06 19 Q. And they bought Bay Materials. Was it 2019?
11:06 20 A. I believe so. Yes, sir.
11:06 21 MR. TUBACH: And, Mr. Smith, can we turn
11:07 22 to, please, PTX-0075-4?
11:07 23 BY MR. TUBACH:
11:07 24 Q. You see that up on the screen?
11:07 25 A. Yes, sir. I do.

11:07 1 Q. This is an internal ClearCorrect document.
11:07 2 MR. TUBACH: I don't know if it's been
11:07 3 admitted, Your Honor, but I'll move its admission just
11:07 4 for safety.
11:07 5 MR. HIRSCH: No objection.
11:07 6 THE COURT: Admitted.
11:07 7 BY MR. TUBACH:
11:07 8 Q. And if you look at that top left, the two
11:07 9 bullet points --
11:07 10 MR. TUBACH: If we could pull those out,
11:07 11 please.
12 BY MR. TUBACH:
11:07 13 Q. This is what ClearCorrect was saying, that the
11:07 14 ClearCorrect current material is less competitive
11:07 15 compared to other aligners' materials, correct?
11:07 16 A. Yes, sir. I see that.
11:07 17 Q. And then below that, it says: The new
11:07 18 material will allow us to compete head to head with
11:07 19 Invisalign.
11:07 20 You see that?
11:07 21 A. Yes, sir. I see that.
11:07 22 MR. TUBACH: And you can take that down.
23 BY MR. TUBACH:
11:07 24 Q. So this is ClearCorrect's statement about its
11:07 25 intent to launch aligners made of ClearQuartz, which is

11:08 1 made of Zendura FLX, correct?
11:08 2 A. I believe so. Yes, sir.
11:08 3 Q. And that's what they were looking at to
11:08 4 compete head to head with Align, fair?
11:08 5 A. I would think that was one of the purposes. I
11:08 6 know they wanted to use that material.
11:08 7 Q. So being able to sell and use Zendura FLX
11:08 8 would have been important to Straumann and to
11:08 9 ClearCorrect.
11:08 10 Is that a fair statement?
11:08 11 A. I know that's something -- a direction they
11:08 12 were moving.
11:08 13 Q. Well, let's look at PTX-548, if we could.
11:08 14 A. Yes, sir.
11:08 15 Q. And again, feel free to find it in your
11:08 16 binder.
11:08 17 A. I'm very happy to use this.
11:08 18 Q. This is an internal e-mail from a gentleman
11:08 19 we've heard about before in this case, Guillaume
11:08 20 Daniellot. And it relates to Zendura.
11:08 21 MR. TUBACH: And I offer its admission,
11:08 22 Your Honor.
11:08 23 MR. HIRSCH: No objection.
11:08 24 THE COURT: Admitted.
11:08 25 MR. TUBACH: If you could zoom in on the

11:08 1 part --
2 BY MR. TUBACH:
11:08 3 Q. This is in June of 2020. So now this is just
11:09 4 eight -- ten months before that hypothetical
11:09 5 negotiation we're about to have, right, Dr. Perryman?
11:09 6 A. Yes, sir. That's correct.
11:09 7 Q. Okay. So let's zoom in on the part that says
11:09 8 "As we are not yet."
11:09 9 As we are not yet at the top with our entire
11:09 10 clear aligner solution value proposition (meaning
11:09 11 software plus treatment planning material plus training
11:09 12 and education), this is very important for our ortho
11:09 13 franchise to generate growth with our most important
11:09 14 asset.
11:09 15 That's what he said there, right?
11:09 16 A. Yes, sir. It is.
11:09 17 Q. And so now in this hypothetical negotiation,
11:09 18 you heard Doctor -- you heard Mr. Lasinski say what he
11:09 19 believed the fair, reasonable royalty was, right?
11:09 20 A. I did. Yes, sir.
11:09 21 Q. And you haven't offered any number at all
11:09 22 about what you think these two large companies would
11:09 23 have agreed on to allow one to compete against the
11:10 24 other with the patented technology?
11:10 25 A. I did not present a number today. That's

11:10 1 correct.
11:10 2 Q. But what do you think the fair number is, sir?
11:10 3 A. I'm sorry?
11:10 4 Q. What do you think the fair number is?
11:10 5 A. Based on evidence I saw in the course of
11:10 6 working on the case, somewhere around $6.5 million.
11:10 7 Q. Now, that's not an opinion that you provided
11:10 8 on direct examination, is it?
11:10 9 A. No, sir. It's not.
11:10 10 Q. And is it your testimony that Align Technology
11:10 11 would have agreed to take $6.5 million to allow one of
11:10 12 its competitors to compete against it head to head for
11:10 13 a fully paid-up license to use their technology that
11:10 14 they spent eight years developing, that Align would
11:10 15 have taken that for $6.5 million? Is that your
11:10 16 testimony?
11:11 17 A. Based on all the market evidence that I was
11:11 18 able to review during my work in this matter, yes, sir,
11:11 19 that was the number I came up with.
11:11 20 Q. We're done with the patent business, sir.
11:11 21 A. Okay.
11:11 22 Q. Now, let's get back to the antitrust case we
11:11 23 were talking about before we switched gears.
11:11 24 A. Yes, sir.
11:11 25 Q. You testified on direct examination and we put

11:11 1 up a chart that compared the prices of Invisalign with
11:11 2 the prices of ClearCorrect.
11:11 3 Do you remember that chart?
11:11 4 A. For one -- for one product, yes, sir.
11:11 5 MR. TUBACH: And let's pull that up.
11:11 6 That's DDX-8.69.
7 BY MR. TUBACH:
11:11 8 Q. This is the chart that we looked at, right?
11:11 9 A. Yes, sir. It was.
11:11 10 Q. And this is comparing the price. At the
11:12 11 bottom there, the purple one is Align's Comprehensive
11:12 12 package.
11:12 13 Do you see that?
11:12 14 A. Correct. Yes, sir.
11:12 15 Q. And the other two there, the blue and the
11:12 16 green lines, are Two (ClearCorrect) and then Three
11:12 17 (ClearCorrect), right?
11:12 18 A. Yes, sir.
11:12 19 Q. You're not suggesting that the Two and the
11:12 20 Three are the same as Comprehensive, are you?
11:12 21 A. A similar treatment. My understanding, it's a
11:12 22 similar treatment protocol. I'm not sure if they're
11:12 23 identical or not.
11:12 24 Q. Well, it's all about the number of aligners
11:12 25 that you're going to need in the course of your

11:12 1 treatment, right?
11:12 2 A. I think that's part of the pricing.
11:12 3 Q. And the Comprehensive package, you get lots
11:12 4 and lots of aligners, fair?
11:12 5 A. Yes, sir.
11:12 6 Q. And if you have a very simple case, you don't
11:12 7 need as many aligners, right?
11:12 8 A. That's correct. Yes, sir.
11:12 9 Q. And so the Two and the Three that we have here
11:12 10 for Straumann -- for ClearCorrect, those are simple
11:12 11 cases, fair?
11:12 12 A. Those are ones that we identified to be the
11:12 13 most comparable.
11:12 14 Q. Well, let's look at -- this is -- let's look
11:13 15 at the chart that you actually put in your report,
11:13 16 Dr. Perryman.
11:13 17 A. Sure.
11:13 18 Q. This is DTX-2244, right?
11:13 19 MR. TUBACH: If we could zoom in.
11:13 20 A. Yes, sir.
11:13 21 BY MR. TUBACH:
11:13 22 Q. That's the same chart we just looked at, but
11:13 23 now we've added in other products for ClearCorrect that
11:13 24 are more comparable to the Comprehensive package; is
11:13 25 that fair?

11:13 1 A. I'm not sure I would say "more comparable."
11:13 2 There's some other products in here.
11:13 3 Q. Well, the other products are One and
11:13 4 Unlimited, right?
11:13 5 A. Correct. Yes, sir.
11:13 6 Q. And as you sit here, you realize a
11:13 7 Comprehensive allowed for lots of -- lots of different
11:13 8 aligners as you went through your treatment, fair?
11:13 9 A. Yes, sir.
11:13 10 Q. And the same with Unlimited, right?
11:13 11 A. Yes, sir.
11:13 12 Q. And those prices, you can see the purple one
11:13 13 and that dark blue one are almost -- they're very
11:13 14 similar, aren't they?
11:14 15 A. Those two are. Yes, sir.
11:14 16 MR. TUBACH: Okay. We can take that
11:14 17 down.
11:14 18 BY MR. TUBACH:
11:14 19 Q. Now, you agree, though, sir, that the -- in
11:14 20 determining the relevant market, one question you want
11:14 21 to look at is what is the price that the patient's
11:14 22 going to pay, fair?
11:14 23 A. Well, the relevant market has a very specific
11:14 24 test and protocol, but the consumer payment is clearly
11:14 25 a relevant issue in our analysis.

11:14 1 Q. Right. So the price that the -- the price
11:14 2 that the patient pays is one thing you'd want to look
11:14 3 at to see whether braces and aligners are in the same
11:14 4 market, fair?
11:14 5 A. If you had granular patient by patient, you
11:14 6 could make that comparison. It's -- again, it's not
11:14 7 part of the test, but --
11:14 8 Q. That's not my question, whether you have the
9 data, sir.
11:14 10 I'm just asking as a general matter -- I'm
11:14 11 sorry to cut you off. I'm on the clock here, so I got
11:14 12 to make sure I get my stuff out.
11:14 13 A. I understand totally.
11:14 14 Q. On -- between -- if you're trying to figure
11:14 15 out what the relevant market is, one of the things you
11:15 16 want to do is look at what patients pay for clear
11:15 17 aligners and for braces, fair?
11:15 18 A. It would not be unreasonable to look at that
11:15 19 if you had the data that would allow you to view it on
11:15 20 a case-by-case type of basis.
11:15 21 Q. Is that an economist's way of saying yes?
11:15 22 A. Not exactly.
11:15 23 Q. Okay. Well, you didn't -- you compared -- the
11:15 24 only price comparison you made, sir, was the cost to
11:15 25 the doctor of the braces and the aligners, right?

11:15 1 A. I had that information to look at. Yes, sir.
11:15 2 Q. And that's the only comparison you did on
11:15 3 price between braces and clear aligners, fair?
11:15 4 A. I believe so. Yes, sir.
11:15 5 Q. And that's not really an apples-to-apples
11:15 6 comparison, is it, the cost to the doctor of the
11:15 7 aligners and the braces?
11:15 8 A. I'm not sure what you mean by that.
11:15 9 Q. Let me ask you another question.
11:15 10 A. Okay.
11:15 11 Q. When the patient gets the aligners, they can
11:16 12 just stick them in their mouth, right?
11:16 13 A. Correct.
11:16 14 Q. They don't need anybody's help?
11:16 15 A. That's correct. Yes, sir.
11:16 16 Q. The doctor doesn't have to stick it in for
11:16 17 them, right?
11:16 18 A. That's correct. Yes, sir.
11:16 19 Q. In fact, one of the advantages is you don't
11:16 20 have to have the doctor stick it in your mouth, right?
11:16 21 A. Yes, sir.
11:16 22 Q. Okay. What about the braces? So you looked
11:16 23 at the cost of the actual brackets and the wires, sure,
11:16 24 right?
11:16 25 A. I did. Yes, sir.

11:16 1 Q. Now, is that doctor just going to hand the
11:16 2 patient the brackets and the wires and say: Good luck,
11:16 3 sir; see you in three weeks?
11:16 4 A. I wouldn't think so. No, sir.
11:16 5 Q. Wouldn't think so. They're going to have to
11:16 6 spend time gluing each of the -- I've lived through
11:16 7 this -- gluing each of these brackets on each tooth,
11:16 8 right?
11:16 9 A. Yes, sir. That's correct.
11:16 10 Q. And then they have to run the wire through,
11:16 11 right?
11:16 12 A. Yes, sir.
11:16 13 Q. And then they have to tighten it up?
11:16 14 A. Yes, sir.
11:16 15 Q. And that takes a lot of doctor time, doesn't
11:16 16 it?
11:16 17 A. It does. Yes, sir.
11:16 18 Q. So the real true comparison, even to the cost
11:16 19 of the doctors, would be not just how much they paid
11:16 20 for the wires and brackets but how much their time was
11:16 21 worth for putting those wires and brackets on the
11:17 22 patient's -- in the patient's mouth; is that fair?
11:17 23 A. Depending on the context you're looking at,
11:17 24 that's something I'm sure the doctors consider. Yes,
11:17 25 sir.

11:17 1 Q. Well, something that you would want to
11:17 2 consider in deciding whether or not braces and aligners
11:17 3 are in a relevant market?
11:17 4 A. Well, again, the appropriate test for the
11:17 5 relevant market is the one that I did.
11:17 6 Q. I'm asking you, sir. You've heard of the
11:17 7 Brown Shoe factors, just to get a little technical
11:17 8 here?
11:17 9 A. Yes, sir. I have.
11:17 10 Q. Okay. And we've all been talking about some
11:17 11 Brown Shoe factors here. It's a Supreme Court case
11:17 12 that lists all of the factors you can look at in trying
11:17 13 to decide whether two things are in the same market,
11:17 14 fair?
11:17 15 A. Correct. Yes.
11:17 16 Q. Okay. And one of those is price?
11:17 17 A. Yes, sir. It is.
11:17 18 Q. Okay. So it is relevant, the price to the
11:17 19 doctor includes his time to put those braces on the
11:17 20 patient, right?
11:17 21 A. Oh, certainly.
11:17 22 Q. And you didn't do any analysis about that,
11:17 23 about the cost to the doctor, including his time, to
11:17 24 put those braces into the patient's mouth, fair?
11:17 25 A. Well, again, we didn't need that for the

11:18 1 analysis we were --
11:18 2 Q. Sir, I'm not asking whether you needed it.
11:18 3 I'm sorry to interrupt. I just need you to
11:18 4 answer my question.
11:18 5 You didn't do that analysis, fair?
11:18 6 A. I apologize. I'm trying to give you a full
11:18 7 answer.
11:18 8 Q. They can -- they can ask you all the questions
11:18 9 they want on redirect.
11:18 10 A. I understand.
11:18 11 THE COURT: Counsel, just ask him a
11:18 12 question.
11:18 13 THE WITNESS: I understand. Yes, sir.
14 Yes, Your Honor.
11:18 15 BY MR. TUBACH:
11:18 16 Q. Channel Judge Albright. Because you've
11:18 17 been -- we're doing cross-examination.
11:18 18 There's no question pending, sir.
11:18 19 A. Okay.
11:18 20 Q. Now, I want to ask you some questions about
11:18 21 your hypothetical monopolist test, okay?
11:18 22 A. Yes, sir.
11:18 23 Q. That's not a sentence I thought I would ever
11:18 24 say in a courtroom.
11:18 25 A. You and me both.

11:18 1 Q. Now, the way you're supposed to do a
11:18 2 hypothetical monopolist test is you start with one
11:18 3 brand, right?
11:18 4 A. Correct. One product. Yes, sir.
11:18 5 Q. Like you did. Like the Ford truck, you
11:18 6 started with the Ford truck in your hypothetical, fair?
7 A. Yes.
11:18 8 Q. And you do an analysis, and you run your test
11:18 9 to see if that brand is its own market, fair?
11:19 10 A. That's what -- that's one step. Yes, sir.
11:19 11 Q. That's the way you do it.
11:19 12 And then if -- as you would expect, you run
11:19 13 Ford through there. It says, nope, not its own market.
11:19 14 You got to add one more. And then you run a test
11:19 15 again, right?
11:19 16 A. Yes, sir.
11:19 17 Q. And then you keep adding them until you get to
11:19 18 the point where if one company owned all of the truck
11:19 19 makers in the United States, they would be their own
11:19 20 market. Is that about right?
11:19 21 A. Yes, sir. That's correct.
11:19 22 Q. Okay. Now, that's how you described the
11:19 23 hypothetical monopolization test when you did the
11:19 24 Ford -- you know, the Ford trucks, right?
11:19 25 A. Yes, sir.

11:19 Q. Okay. But that's not what you did when you
11:19 ran a hypothetical monopolization test on aligners,
11:19 right?
11:19 A. Well, I looked at the market for aligners
11:19 specifically.
11:19 Q. My question is you didn't start with one
11:19 brand --
11:19 Let me finish my question.
11:19 You didn't start with one brand like Ford as
11:20 you did in your hypothetical. You didn't start with
11:20 one brand of aligners when you did your hypothetical
11:20 monopolization test, did you?
11:20 A. I did not start with one brand. That's
correct.
11:20 MR. TUBACH: Let's pull up -- wow, I
11:20 can't read that. DDX-8.30.
11:20 BY MR. TUBACH:
11:20 Q. What you did instead was you -- the only test
11:20 you ran was on four different companies all at once,
11:20 true?
11:20 A. Representing the clear aligner market. That's
11:20 correct. Yes, sir.
11:20 Q. Right. And you would agree with me, sir, that
11:20 if you run this test on -- strike that.
11:20 In the Ford hypothetical that you gave with

11:20 1 the trucks, Ford would have been either Invisalign,
11:20 2 ClearCorrect, SureSmile, or Henry Schein; is that fair?
11:21 3 A. Yes, sir. I believe that's fair.
11:21 4 Q. And that's the way you describe it above when
11:21 5 you first explained the hypothetical monopolization
11:21 6 test, how one should go about doing it, right?
11:21 7 A. Yes, sir.
11:21 8 Q. Okay. But when you got to the clear aligners,
11:21 9 that's not what you did, right?
11:21 10 A. Well, I did the -- I did the single product
11:21 11 test. That's correct.
11:21 12 Q. Right. The single product is single brand,
11:21 13 right?
11:21 14 Before you said it was Ford trucks, and that
11:21 15 was the way to do it, fair?
11:21 16 A. Correct. Yes, sir. In the illustration.
11:21 17 That's correct.
11:21 18 Q. And you would agree with me, sir, that if you
11:21 19 run your model on just, say, ClearCorrect and it shows
11:21 20 that ClearCorrect is in its own market -- is its own
11:21 21 market, that there's something wrong with the model; is
11:21 22 that fair?
11:21 23 A. Again, I would have to do the analysis and
11:21 24 look at it, but I would think so. That would certainly
11:21 25 raise a flag.

11:21 1 Q. Right. Because we all can agree that
11:21 2 ClearCorrect is not a monopolist, is not its own
11:22 3 market, right?
11:22 4 A. It's not -- it doesn't have 100 percent of the
11:22 5 market. No, sir.
11:22 6 Q. It -- and the same would be -- so if you run
11:22 7 the test and it says, hey, ClearCorrect, you're your
11:22 8 own market, you'd want to -- you'd think there's
11:22 9 something wrong with the model. That seems fair,
11:22 10 right?
11:22 11 A. That would be something you would want to
11:22 12 examine. Certainly.
11:22 13 Q. Now, we've talked a lot about the scanner
11:22 14 market, about the scanners. I just want to make sure
11:22 15 one thing's clear. Straumann and ClearCorrect here
11:22 16 aren't seeking any damages for lost sales of any
11:22 17 scanners, right?
11:22 18 A. That's correct. Yes, sir. That's my
11:22 19 understanding.
11:22 20 Q. It's just in the aligner space, right?
11:22 21 A. That's my understanding. Yes, sir.
11:22 22 Q. Okay. Now, you testified -- I think we
11:23 23 established that you hadn't looked at how long it took
11:23 24 to export a scan before you submitted your report. You
11:23 25 didn't personally look at that, right?

11:23 1 A. I didn't personally try to export one. No,
11:23 2 sir.
11:23 3 Q. And you've testified here that it is -- that
11:23 4 you've heard testimony it takes a couple of minutes,
11:23 5 right?
11:23 6 A. I'm not sure I testified to that, but I
11:23 7 heard -- heard Dr. Taylor say that yesterday.
11:23 8 Q. Yes, sir. I didn't mean to suggest you had
11:23 9 said that.
11:23 10 Other witnesses here in court have testified
11:23 11 it takes a couple of minutes, right?
11:23 12 A. Yes, sir.
11:23 13 Q. Okay. Now, one of the reasons why -- why the
11:23 14 steps you have to go through is because there's some
11:23 15 drop-down menus that allow you to choose different
11:23 16 options, fair?
11:23 17 A. He went through some drop-down menus in the
11:23 18 process. Yes, sir.
11:23 19 Q. And the drop -- one drop-down menu, just to
11:23 20 pick an example, is you get to choose which type of
11:23 21 file you want to use to send your scan somewhere else,
11:24 22 right?
11:24 23 A. Yes, sir. That was one of them.
11:24 24 Q. And there's STL. I believe there was OBJ. I
11:24 25 think there was PLY maybe.

11:24 1 Do you remember that?
11:24 2 A. I remember there were several.
11:24 3 Q. Okay. And you would agree with me that that's
11:24 4 giving the doctors the choice about what kind of file
11:24 5 type they're going to use to export that scan wherever
11:24 6 they're going to send it, fair?
11:24 7 A. I presume they could click any one of those.
11:24 8 My understanding, the STL is what they use. But sure,
11:24 9 that's my -- I suppose they could click any of them.
11:24 10 Q. Well, the STL, your understanding, is used to
11:24 11 export for the making of aligners, right?
11:24 12 A. Correct. Yes, sir.
11:24 13 Q. But you know that the iTero is used for lots
11:24 14 of things other than aligners, right?
11:24 15 A. Oh, yes. Scanners in general are. Yes, sir.
11:24 16 Q. All kinds of things. You can do crowns,
11:24 17 implants, any number of things that you might want to
11:24 18 use that scan to do, right?
11:24 19 A. Correct. Yes, sir.
11:24 20 Q. And you might want to use a different file
11:24 21 type if you're ordering something other than an
11:24 22 aligner, right?
11:24 23 A. That's getting out of my area of expertise,
11:25 24 but I would presume so.
11:25 25 Q. Well, and so basically what that drop-down

11:25 1 menu is is giving doctors a choice, right?
11:25 2 A. Well, again, they can pick which file. Yes,
11:25 3 sir.
11:25 4 Q. Yeah. And that's a good thing giving doctors
11:25 5 the choice of what file type they want to select; isn't
11:25 6 that fair?
11:25 7 A. Other things equal, that would be -- that
11:25 8 would be a true statement.
11:25 9 Q. Now, I want to talk to you about the damages
11:25 10 that you have testified about here.
11:25 11 A. Yes, sir.
11:25 12 Q. You testified on direct examination that --
11:25 13 about two different groups of doctors, correct?
11:25 14 A. Correct. Yes, sir.
11:25 15 Q. And the one group is the group that bought
11:25 16 ClearCorrect and Invisalign before they had an iTero?
11:25 17 A. Right. And possibly other brands as well.
11:25 18 Q. And possibly other brands. Thank you.
11:25 19 And then they buy an iTero, right?
11:25 20 A. Yes, sir.
11:25 21 Q. And then they keep buying ClearCorrect and
11:25 22 Invisalign after they get the iTero, right?
11:26 23 A. Yes, sir.
11:26 24 Q. Okay. And for that group -- then there's
11:26 25 another group where you see them only ordering

11:26 1 Invisalign ever, right?
11:26 2 A. Correct. Yes, sir.
11:26 3 Q. Okay. And that group, the second group, you
11:26 4 divided that into two different categories, right?
11:26 5 A. Essentially. Yes, sir.
11:26 6 Q. So the one group is a group of doctors who had
11:26 7 never ordered any aligners that we knew of from anyone?
11:26 8 A. Right.
11:26 9 Q. They buy the iTero, and they only ever order
11:26 10 Invisalign, right?
11:26 11 A. Correct.
11:26 12 Q. And there's another group. Now, for that
11:26 13 group you've assigned damages of $41.6 million.
11:26 14 Does that sound right?
11:26 15 A. I believe that's correct. Yes, sir.
11:26 16 Q. Okay. Now, those folks never bought any
11:26 17 ClearCorrect, right, those doctors?
11:26 18 A. That's correct.
11:26 19 Q. Okay. And that other group they were talking
11:26 20 about of the folks who only ever bought Invisalign,
11:27 21 they bought Invisalign before they had an iTero. So
11:27 22 they're doing the goop, right?
11:27 23 A. Right.
11:27 24 Q. And they buy an iTero?
11:27 25 A. Yes, sir.

11:27 1 Q. And then they keep buying only Invisalign,
11:27 2 right?
11:27 3 A. Well, only between ClearCorrect and
11:27 4 Invisalign, only Invisalign.
11:27 5 Q. Yeah. But that's all the data you looked at,
11:27 6 right?
11:27 7 A. That's all I had. Yes, sir.
11:27 8 Q. And so for that group, you believe that
11:27 9 Straumann and ClearCorrect are entitled to damages of
11:27 10 $79.9 million; is that right?
11:27 11 A. I believe that was the right number. Yes,
11:27 12 sir.
11:27 13 Q. Now, you would agree with me, sir, that the
11:27 14 iTero made it easier to order Invisalign; is that fair?
11:27 15 A. Yes, sir.
11:27 16 Q. Okay. So let me try an analogy on you here.
11:27 17 In that group, this -- the folks who only ever
11:27 18 bought Invisalign, before they had the iTero, then they
11:27 19 get the iTero and then they only ever buy Invisalign
11:27 20 afterwards, okay?
11:27 21 Let me -- let me run a hypothetical by you, an
11:27 22 analogy, if you will.
11:27 23 A. Okay. If I could, I don't -- by that you mean
11:27 24 they don't buy any other brands at all?
11:28 25 Q. We're just on your analysis, sir. This is the

11:28 1 one you did.
11:28 2 You called them the Invisalign only?
11:28 3 A. Right. But that did include other brands
11:28 4 besides ClearCorrect. I just want to make sure I
11:28 5 understand the hypothetical.
11:28 6 Q. My hypothetical is the one that you used in
11:28 7 your -- in your report. Okay?
11:28 8 A. Okay.
11:28 9 Q. Now, let's say there's a group of people.
11:28 10 They love Dr. Pepper.
11:28 11 A. Okay.
11:28 12 Q. They only ever drink -- there are some of
11:28 13 those, right?
11:28 14 A. Well, in Waco, there's a lot of them.
11:28 15 Q. Absolutely. They only ever buy Dr. Pepper.
11:28 16 They never buy anything but Dr. Pepper. Okay?
11:28 17 A. Yes, sir.
11:28 18 Q. And then Dr. Pepper comes along and makes it
11:28 19 easier to buy Dr. Pepper, okay?
11:28 20 A. Yes, sir.
11:28 21 Q. And then after they make it easier to buy
11:28 22 Dr. Pepper, those folks still buy only Dr. Pepper,
11:28 23 okay?
11:28 24 A. Yes, sir.
11:28 25 Q. And it's your testimony, sir, that in that

11:28 1 example, those folks, after Dr. Pepper made it easier,
11:28 2 would have started buying Mr. Pibb; is that right?
11:28 3 A. No, sir. That's not the structure of my
11:29 4 analysis.
11:29 5 Q. That's exactly what you concluded, sir, that
11:29 6 because the iTero -- when -- after the iTero was
11:29 7 purchased, those folks would have started buying
11:29 8 ClearCorrect, right?
11:29 9 A. Well, they would have -- they'd already been
11:29 10 buying other brands. They weren't all Dr. Pepper
11:29 11 users.
11:29 12 Q. Sir, you don't know that in your analysis.
11:29 13 You're just assuming that now, right?
11:29 14 A. Well, I know that there were sales of those
11:29 15 other products out there. Yes, sir.
11:29 16 Q. Sir, that cohort that you looked at, you have
11:29 17 no idea whether they bought any other brands, right?
11:29 18 Let's focus on your analysis here, okay?
11:29 19 In your hypothetical, the folks who got the
11:29 20 iTero after only ever buying Invisalign, they would
11:29 21 have bought ClearCorrect. That's your -- that's how
11:29 22 you determined damages, right?
11:29 23 A. You haven't characterized it correctly. No,
11:29 24 sir.
11:29 25 Q. So it's your testimony that they wouldn't have

11:29 1 bought ClearCorrect after they bought the iTero for
11:29 2 that group?
11:29 3 A. That ClearCorrect would have had an
11:29 4 opportunity to get a piece of the part of the market
11:29 5 that was -- that was not Invisalign.
11:29 6 Q. I see. And your piece of that market gives
11:29 7 them $79.9 million, right?
11:30 8 A. I believe that was -- for that particular
11:30 9 group, I believe that's correct. Yes.
11:30 10 Q. Yeah. And so that's just not a hypothetical
11:30 11 ability to compete. You're saying they should get
11:30 12 $80 million because you believe that those folks, those
11:30 13 Dr. Pepper lovers, would have started buying Mr. Pibb,
11:30 14 right?
11:30 15 A. Well, again, in my dataset, they weren't --
11:30 16 they weren't all Invisalign lovers. They'd used many
11:30 17 other brands as well.
11:30 18 MR. TUBACH: Now, let's pull up -- the
11:30 19 Court's indulgence.
11:30 20 BY MR. TUBACH:
11:30 21 Q. While we're pulling up the right chart, I just
11:30 22 want to ask you, sir, all these things that you've
11:30 23 talked about here today that you say were impediments
11:31 24 to ClearCorrect succeeding in this business --
11:31 25 A. Yes, sir.

11:31 Q. -- all of those were faced by Dentsply Sirona, right?
11:31 A. Yes, sir.
11:31 Q. They faced the same export scan issues that you've testified about, right?
11:31 A. Yes, sir.
11:31 Q. They faced the same loyalty program that you've testified about?
11:31 A. Yes, sir.
11:31 Q. And they faced the same contract provisions that have been testified about here today?
11:31 A. Yes, sir.
11:31 Q. Okay. And [redacted], if you compare the one number to the other, right?
11:31 A. That's correct. Yes, sir.
11:31 Q. So this is just saying between 2019 and 2023, just looking at those two numbers, [redacted], right?
11:32 A. Yes, sir. That's correct.
11:32 Q. And ClearCorrect -- ClearArc and Clarity and Spark, they all face the exact same -- and Angel Aligner, they all face the exact same obstacles that you claim prevented ClearCorrect from competing in this market, right?

11:32 1 A. Yes, sir.

11:32 2 Q. And yet [redacted]

11:32 3 [redacted] and ClearCorrect was not.

11:32 4 Fair statement, sir?

11:32 5 A. That's correct. Yes, sir. That chart is

11:32 6 correct for that time period.

11:32 7 MR. TUBACH: Pass the witness.

11:32 8 REDIRECT EXAMINATION

11:32 9 BY MR. HIRSCH:

11:32 10 Q. Dr. Perryman, just a few more for me.

11:32 11 Quickly let's go back to the patent -- patent

11:32 12 damages.

11:32 13 A. Yes, sir.

11:32 14 Q. To be very, very clear on it --

11:32 15 A. Yes, sir.

11:32 16 Q. -- if there's no infringement, if there's no

11:32 17 patent infringement, what's the patent damages number?

11:32 18 A. It's zero.

11:32 19 Q. If the ladies and gentlemen of the jury find

11:33 20 that the Zendura FLX hard-soft-hard does not infringe,

11:33 21 what's the damages number?

11:33 22 A. It's -- they're zero.

11:33 23 Q. All right. Now, I want to level set on the

11:33 24 antitrust side.

11:33 25 A. Yes, sir.

11:33 1 MR. HIRSCH: So let's pull up DDX-8.8.
2 BY MR. HIRSCH:
11:33 3 Q. You said this was the market for
11:33 4 doctor-directed clear aligners, right?
11:33 5 A. Correct. Yes, sir.
11:33 6 Q. How, sir, is this market competitive?
11:33 7 A. Well, it's not. You have a dominant player,
11:33 8 and none of the others were able to gain sufficient
11:33 9 scale.
11:33 10 Q. And you were just shown a graphic about some
11:33 11 of those other companies in the industry, right, sir?
11:33 12 A. Yes, sir.
11:33 13 Q. Where are they on this market share chart?
11:33 14 A. Well, all of them are down there at the very
11:33 15 bottom, the ones that you can -- that you can barely
11:33 16 see down there at the very bottom over that entire time
11:33 17 period.
11:33 18 Q. And what's their market share, sir?
11:33 19 [redacted]
11:33 20 [redacted]. What's their market share?
11:33 21 A. Well, combined, everyone else in the market
11:33 22 only has at most about 16 percent.
11:34 23 Q. Now, you weren't asked any questions by
11:34 24 counsel for Align challenging any of the accuracy of
11:34 25 these calculations, were you?

11:34 1 A. No, sir. I was not.
11:34 2 Q. But counsel did ask you whether Align's market
11:34 3 share is going down, right?
11:34 4 A. Yes, sir.
11:34 5 Q. What's their market share now even after going
11:34 6 down slightly?
11:34 7 A. The last data we have is about 84 percent.
11:34 8 Q. And what's the threshold that economists like
11:34 9 yourself look at to determine whether there's a
11:34 10 monopoly?
11:34 11 A. Well, economists and the justice department
11:34 12 have typically looked at somewhere in the range of 60
11:34 13 to 70 percent. I've never seen higher than 70.
11:34 14 Q. And what's happened to Align's revenues over
11:34 15 that same period, sir?
11:34 16 A. Well, as you can see here, they've -- they've
11:34 17 increased significantly.
11:34 18 Q. You also talked about foreclosure. You showed
11:34 19 us that calculation, right?
11:34 20 A. Yes, sir. I did.
11:34 21 Q. If we go to 8.60 -- sorry, 6-0.
11:34 22 What's happened to Align's -- to the portion
11:35 23 of the market that Align has foreclosed over the same
11:35 24 period?
11:35 25 A. Well, as you can see, that number has gone

11:35 1 steadily up and is now at about 76 percent.
11:35 2 MR. HIRSCH: All right. We can go back
11:35 3 to DDX-8.8.
4 BY MR. HIRSCH:
11:35 5 Q. Sir, you were asked a few questions about
11:35 6 braces.
11:35 7 A. Yes, sir.
11:35 8 Q. And different types of braces you can print
11:35 9 with a printer.
11:35 10 Do you recall that?
11:35 11 A. Yes, sir.
11:35 12 Q. How -- sir, how can you take off your -- from
11:35 13 your own teeth, how can you take off any of those new
11:35 14 types of braces?
11:35 15 A. Well, you can't.
11:35 16 Q. You were also asked a couple questions about
11:35 17 direct-to-consumer aligners, true?
11:35 18 A. Yes, sir.
11:35 19 Q. What did -- yesterday, what did we see Joe
11:35 20 Hogan himself say about the status of the
11:35 21 direct-to-consumer market?
11:35 22 A. He said it blew itself up and it's basically
11:35 23 going away.
11:35 24 Q. And, sir, in Texas, how, if at all, can a
11:35 25 patient get a clear aligner without going to a doctor?

11:35 1 A. Well, in Texas, you can't. Texas has made it
11:35 2 illegal to use the direct-to-consumer, as have several
11:36 3 other states, because of the risk and concern.
11:36 4 Q. You were also asked about prices, sir?
11:36 5 A. Yes, sir.
11:36 6 Q. You were asked about the effective price of
11:36 7 Align's aligners?
11:36 8 A. Yes, sir.
11:36 9 Q. Talk to me for a moment about the list prices,
11:36 10 okay?
11:36 11 A. Yes, sir.
11:36 12 Q. A new doctor that comes in that doesn't have
11:36 13 existing Align orders, they pay the list price or the
11:36 14 effective price?
11:36 15 A. Well, when they first came in, before they had
11:36 16 any of these other programs, they would pay the list
11:36 17 price.
11:36 18 Q. And that list price for Align's aligners, has
11:36 19 that gone up or down?
11:36 20 A. It's gone up.
11:36 21 Q. All right. Finally, sir, you were asked a
11:36 22 number of questions about Align being a first mover?
11:36 23 A. Yes, sir.
11:36 24 Q. And you were asked about the amount that Align
11:36 25 has spent on marketing and R&D, true?

11:36 A. Yes, sir.
11:36 Q. The gap that we see here in the market between
11:36 Align and everybody else --
11:36 A. Yes, sir.
11:36 Q. -- how, if at all, is that gap the result, in
11:36 your view, of Align being a first mover?
11:37 A. Well, what you -- what you find is -- and
11:37 there was some discussion of this with Ms. Sterling and
11:37 others, I think, in the last few days here.
11:37 To get into the market, you have to make
11:37 substantial investments in marketing and in research
11:37 and development and manufacturing and all the other
11:37 things. And it's very difficult to do that if there's
11:37 a -- so much of the market foreclosed that you can't
11:37 get to scale.
11:37 Q. How, if at all, is the gap that we see between
11:37 Align and everybody else the result of R&D spending or
11:37 marketing spending?
11:37 A. Well, it really goes the other way around. I
11:37 mean, it's basically because of the impediments to the
11:37 market, the other companies are not able to do the
11:37 kinds of things you would have to do to -- if they
11:37 could access the full market, they would be able to do
11:37 some of those things.
11:37 Q. Now, you quantified for us, sir, the harm that

11:37 1 ClearCorrect incurred as a result of Align's iTero
11:38 2 policies, correct?
11:38 3 A. Yes, sir.
11:38 4 MR. HIRSCH: And if we pull up DDX-8.79.
5 BY MR. HIRSCH:
11:38 6 Q. And remind us, sir, what was your damages
11:38 7 number for just the iTero policies from July 2020 to
11:38 8 December 31st, 2026?
11:38 9 A. Just for the iTero policies, it was
11:38 10 $289 million.
11:38 11 Q. And to be clear, sir, what's your view on
11:38 12 whether Align's exclusionary contracts harmed
11:38 13 ClearCorrect?
11:38 14 A. They did. Yes, sir.
11:38 15 Q. And what's your view as to whether Align's
11:38 16 loyalty program harmed ClearCorrect?
11:38 17 A. It did. Yes, sir.
11:38 18 Q. But to be conservative, sir, what categories
11:38 19 of harm did you quantify today?
11:38 20 A. Only the one from the iTero.
11:38 21 Q. And if you had included the harm from Align's
11:38 22 exclusionary contracts, if you had included the harm
11:38 23 from Align's loyalty program, what would have happened
11:38 24 to your damages number?
11:38 25 A. It would have gone up.

11:39 1 MR. TUBACH: Objection, Your Honor. It's
11:39 2 beyond the scope of cross. He's offered no opinion at
11:39 3 all about any damages related to those other things.
11:39 4 Now he's trying to get into this.
11:39 5 THE COURT: Can you tell me how it
11:39 6 relates to what he was asked on cross?
11:39 7 MR. HIRSCH: He was asked specifically
11:39 8 about whether there was any harm on these issues. I'm
11:39 9 not going to elicit any number. That was -- I wanted
11:39 10 to elicit exactly what Dr. Perryman said, that there is
11:39 11 a harm.
11:39 12 MR. TUBACH: He was asked -- he was
11:39 13 asking whether he suffered additional damages, and
11:39 14 that's what I'm objecting to.
11:39 15 THE COURT: Overruled.
11:39 16 BY MR. HIRSCH:
11:39 17 Q. Do you have the question, sir?
11:39 18 A. If you could repeat it, it'd be great.
11:39 19 Q. Sure. If you had included the harm from
11:39 20 Align's exclusionary contracts and the harm from
11:39 21 Align's loyalty program, what would happen to your
11:39 22 damages number?
11:39 23 A. Oh, it would go up substantially.
11:39 24 MR. HIRSCH: If we go to DDX-8.83.
25 BY MR. HIRSCH:

11:39 1 Q. One last time, Dr. Perryman. What's your
11:39 2 conservative estimate of the harm to ClearCorrect from
11:39 3 July 2020 to December 31st, 2026?
11:39 4 A. Making a number of very conservative
11:40 5 assumptions in this analysis and not looking at any
11:40 6 other impediments, $289 million.
11:40 7 MR. HIRSCH: Thank you, sir.
11:40 8 Pass the witness.
11:40 9 RECROSS-EXAMINATION
11:40 10 BY MR. TUBACH:
11:40 11 Q. Just a few follow-up questions, if I might.
11:40 12 A. Yes, sir.
11:40 13 MR. TUBACH: Let's pull up DDX-8.8, if we
11:40 14 could.
11:40 15 BY MR. TUBACH:
11:40 16 Q. This is the chart that Straumann's counsel
11:40 17 just showed you, right?
11:40 18 A. Yes, sir. It is.
11:40 19 Q. And you understand that Align's market share
11:40 20 has gone down every single year from 2017 until today,
11:40 21 correct?
11:40 22 A. Yes, sir. We talked about that. It started
11:40 23 at 100 percent, and it's gone down. Yes, sir.
11:40 24 Q. And you're not offering any opinion that Align
11:40 25 had almost 100 percent of aligner sales in the United

11:41 1 States as of 2017, that there was anything wrong with
11:41 2 that at all, right, sir?
11:41 3 A. I did not offer any opinions about that. No,
11:41 4 sir.
11:41 5 Q. Right. And so when you have a bunch of
11:41 6 companies coming in to sell aligners, you would expect
11:41 7 it's going to take some time for them to take market
11:41 8 share away from Align, wouldn't you?
11:41 9 A. It's been several years, but yes, sir.
11:41 10 Q. And in fact, that's exactly what's happened.
11:41 11 They've taken away 16 percent of market share away from
11:41 12 Align and to themselves, right?
11:41 13 A. Well, Align sales have gone up significantly,
11:41 14 but percentage-wise --
11:41 15 THE COURT: Doctor, Doctor, just answer
11:41 16 his question.
11:41 17 THE WITNESS: Yes, sir.
11:41 18 BY M. TUBACH:
11:41 19 Q. Percentage-wise that's correct, right, sir?
11:41 20 A. Yes, sir. Yes, sir.
11:41 21 MR. TUBACH: You can take that down.
22 BY MR. TUBACH:
11:41 23 Q. You testified about list prices going up just
11:41 24 now.
11:41 25 A. Yes, sir.

11:41 1 Q. That's the first time we've heard list prices.
11:41 2 How much did they go up during this period?
11:41 3 A. I don't recall the exact number. It was -- it
11:41 4 wasn't a huge amount, but I can't remember exact
11:41 5 numbers.
11:41 6 Q. It was less than 10 percent, wasn't it, sir?
11:42 7 A. I believe so. Yes, sir.
11:42 8 Q. And this is the same period of time over which
11:42 9 you testified that prices generally in the economy have
11:42 10 gone up 30 percent, right?
11:42 11 A. Yes, sir. That was during the COVID period.
11:42 12 Q. Now, you also testified that the problem here
11:42 13 with ClearCorrect is that they can't get to sufficient
11:42 14 scale to invest and become better. That was roughly
11:42 15 your testimony; is that fair?
11:42 16 A. Not exactly, but I know what you're talking
11:42 17 about. Yes, sir.
11:42 18 Q. Close enough for a non-economist?
11:42 19 A. That's fine.
11:42 20 Q. Okay. Now, one of the advantages of being
11:42 21 acquired by a large company like Straumann is that you
11:42 22 have the backing of a well-resourced company to help
11:42 23 you invest in your business, fair?
11:42 24 A. If Straumann thinks that that type of
11:42 25 investment is appropriate, they do have some resources.

11:42 1 Q. Well, presumably they wouldn't have even
11:42 2 bought the business if they didn't think it was worth
11:42 3 investing.
11:42 4 Is that a fair statement?
11:42 5 A. They purchased the business in order to enter
11:42 6 that market. Yes, sir.
11:42 7 Q. Yeah. And it took -- it took Align a number
11:43 8 of years to become profitable when it first started
11:43 9 selling aligners, right?
11:43 10 A. I believe so. Yes, sir.
11:43 11 Q. And, sir, just to be clear, your testimony
11:43 12 here about damages has nothing to do with those
11:43 13 contracts that Mr. Mueller put on this table, and it
11:43 14 has nothing to do with the loyalty discount that we
11:43 15 spent so much time talking about, fair?
11:43 16 A. That's fair. I did not quantify those today.
11:43 17 MR. TUBACH: I have no further questions.
11:43 18 Thank you, Your Honor.
11:43 19 MR. HIRSCH: Nothing further.
11:43 20 THE COURT: Thank you, Doctor. You may
11:43 21 step down.
11:43 22 MR. MUELLER: Your Honor, at this point,
11:43 23 ClearCorrect rests.
11:43 24 THE COURT: Thank you, sir.
11:43 25 Ladies and gentlemen of the jury, we are

11:43 1 going to take our lunch recess. It is 11:45. If you
11:44 2 all would be back at -- we have to do some work on the
11:44 3 charge that I'm going to read to you tomorrow. So if
11:44 4 you all will be back by 1:15, that should give us the
11:44 5 opportunity to get that work done. And we'll see you
11:44 6 at that time.
11:44 7 THE BAILIFF: All rise.
11:44 8 (Jury exited the courtroom.)
11:44 9 THE COURT: Thank you. You may be
11:44 10 seated.
11:44 11 MS. DURIE: Good morning, Your Honor. We
11:44 12 have a motion -- sorry.
11:44 13 THE COURT: Yes, ma'am. I'm sorry.
11:45 14 MS. DURIE: We have a motion under
11:45 15 Rule 50. There is a portion of that motion that is
11:45 16 directed to the allegations of fraud on the Patent
11:45 17 Office in connection with Walker process and enablement
11:45 18 that I will address. And then Ms. Aguilar will address
11:45 19 the remaining antitrust-related issues.
11:45 20 With respect to fraud on the Patent
11:45 21 Office, the standard for fraud for a Walker process
11:45 22 claim is essentially the same as the standard for an
11:45 23 inequitable conduct.
11:45 24 So there must be a statement that is
11:45 25 false or misleading. It must be material. There must

11:45 1 have been an intent to deceive. And then in the
11:45 2 context of Walker process, there also must be damages
11:45 3 that flow from that material misstatement.
11:45 4 Here, the evidence fails at each of those
11:45 5 steps.
11:45 6 There was no evidence of a statement that
11:45 7 was false. Dr. Li testified that each of the
11:45 8 statements that she made were factually true.
11:45 9 In addition, there was absolutely no
11:45 10 evidence with respect to the materiality of the alleged
11:46 11 misstatements.
11:46 12 Those statements were made in connection
11:46 13 with a declaration that was submitted to overcome
11:46 14 pending rejections relative to prior art to Chen and
11:46 15 DeSimone.
11:46 16 THE COURT: So I have not dealt -- I've
11:46 17 dealt with a couple of these matters as a lawyer. I've
11:46 18 not had a case and I -- whose job is it, meaning mine
11:46 19 or the jury's --
11:46 20 MS. DURIE: Right.
11:46 21 THE COURT: -- to determine whether or
11:46 22 not I believe, or not, that the statement was false and
11:46 23 whether I believe or whether the jury believes the
11:46 24 statement is material?
11:46 25 MS. DURIE: So we had previously moved

11:46 1 for a summary judgment on this issue, and the Court had
11:46 2 deferred ruling.
11:46 3 I think it is fair that in the context of
11:46 4 Walker process, this is a jury issue. But there still
11:46 5 has to be substantial evidence in order to allow the
11:46 6 issue to go to the jury.
11:47 7 And particularly with respect to
11:47 8 materiality, there has to be evidence tying the alleged
11:47 9 misstatement for but-for causation to the proposition
11:47 10 that the patent would not otherwise have issued.
11:47 11 THE COURT: Now, in the old days, the bad
11:47 12 old days I think, there was the whole the more material
11:47 13 it was, the more likely it was on purpose and all that.
11:47 14 And that was a sliding scale that allowed either the
11:47 15 judge -- the judge to kind of wing it and say -- so.
11:47 16 Here, again, if it's up to me to
11:47 17 determine whether or not something meets the
11:47 18 threshold -- I guess it's -- you're saying reaches the
11:47 19 threshold that I find it sufficiently material to allow
11:47 20 the jury to hear it?
11:47 21 MS. DURIE: I would say there must be a
11:47 22 plausible theory pursuant to which it was but-for
11:48 23 material to the issuance of the patent. And the
11:48 24 problem --
11:48 25 THE COURT: I'm sorry. That -- you said

11:48 1 something I -- so in -- because I want to make sure I'm
11:48 2 right, and I may not be.
11:48 3 There's a difference in my head of
11:48 4 whether or not -- and I'll make sure we're saying --
11:48 5 meaning the same thing by "material."
11:48 6 There is a difference in my head between
11:48 7 whether or not what was given to the Patent Office was
11:48 8 material or -- I think what you just said, and I want
11:48 9 to make sure I understand it -- that it was material to
11:48 10 the allowance meaning but-for it -- that particular
11:48 11 statement or whatever was done was given, it would not
11:48 12 have been issued.
11:48 13 Are those the same thing, or am I --
11:48 14 MS. DURIE: If I understand Your Honor
11:48 15 correctly, they are not, and the law is the latter.
11:48 16 So under U.S. Water Services, Inc. versus
11:49 17 Novozymes, this is 843 F.3d 1345, a Federal Circuit
11:49 18 case from 2016 --
11:49 19 THE COURT: Okay.
11:49 20 MS. DURIE: It said: To prove the
11:49 21 element of materiality, a party claiming inequitable
11:49 22 conduct -- but it is the same standard for Walker
11:49 23 process -- ordinarily must show that the patentee
11:49 24 withheld or misrepresented information that any absence
11:49 25 of the withholding or misrepresentation would have

11:49 1 prevented a claim -- a patent claim from issuing.
11:49 2 THE COURT: Okay.
11:49 3 MS. DURIE: So it is a but-for
11:49 4 materiality test.
11:49 5 The problem here is that the issue the
11:49 6 examiner was considering when the declaration was
11:49 7 submitted was a prior art issue. It was whether the
11:49 8 claim should issue over Chen and DeSimone.
11:49 9 The declaration was submitted. There was
11:49 10 a rejection. There was continued prosecution.
11:49 11 Ultimately, the claims issued.
11:49 12 Defendants are making no argument here
11:49 13 that the claims are invalid as a function of Chen and
11:49 14 DeSimone. The only argument they're making is an
11:49 15 enablement argument. There was no pending enablement
16 rejection.
11:49 17 So there is no potential theory of
11:50 18 materiality pursuant to which that declaration was the
11:50 19 but-for cause.
11:50 20 THE COURT: I'm sorry. I didn't mean to
11:50 21 interrupt you. So if there was no pending issue on
11:50 22 enablement --
11:50 23 MS. DURIE: Correct.
11:50 24 THE COURT: -- then it would follow, from
11:50 25 your perspective, that whatever was cited in this case

11:50 1 would not have been the material -- what was material
11:50 2 to the issuance of the patent.
11:50 3 MS. DURIE: Correct.
11:50 4 In other words, in order to make out this
11:50 5 claim, they would need to show both that the statements
11:50 6 in the declaration were false and to advance in this
11:50 7 case a theory of invalidity, proving that what was
11:50 8 provided in the declaration was material to that theory
11:50 9 of invalidity --
11:50 10 THE COURT: Right.
11:50 11 MS. DURIE: -- and that the claims would
11:50 12 not otherwise have issued. There was another failure
11:50 13 of proof on that.
11:50 14 In addition, with respect to intent to
11:50 15 deceive, as the Court knows, the standard for intent to
11:50 16 deceive is that an intent to deceive has to be the
11:51 17 single most plausible inference. And here, again, that
11:51 18 standard has just not been met.
11:51 19 An intent to deceive --
11:51 20 THE COURT: I'm sorry to keep
11:51 21 interrupting you. Hopefully my questions are --
11:51 22 MS. DURIE: Your questions are the most
11:51 23 helpful.
11:51 24 THE COURT: So with respect to that
11:51 25 element, why is that issue the -- whether or not it was

11:51 1 to deceive, why is that a jury issue at all, and why is
11:51 2 that not for me to decide as an equitable matter?
11:51 3 MS. DURIE: So I think the issue here is
11:51 4 because this is an antitrust case --
11:51 5 THE COURT: Uh-huh.
11:51 6 MS. DURIE: -- and there is a jury issue
11:51 7 with respect to Walker process fraud, I think it is
11:51 8 correct that that predicate becomes a jury issue
11:51 9 because the defendants are seeking damages for their
11:51 10 claim.
11:51 11 THE COURT: Okay.
11:51 12 MS. DURIE: Having said that, the
11:51 13 standard for intent to deceive remains that there must
11:52 14 be evidence that is separate and apart from the mere
11:52 15 fact of the misrepresentation, if there were one,
11:52 16 right?
11:52 17 There must be additional evidence from
11:52 18 which an intent to deceive is the single most
11:52 19 reasonable inference, rather than merely one of the
11:52 20 inferences that might be drawn.
11:52 21 THE COURT: So that's where I play the
11:52 22 role as a gatekeeper to decide whether or not there's
11:52 23 sufficient evidence to allow the jury --
24 MS. DURIE: Correct.
11:52 25 THE COURT: -- to debate and find one way

11:52 1 or the other.

11:52 2 MS. DURIE: That is exactly right,

11:52 3 Your Honor.

11:52 4 THE COURT: Okay.

11:52 5 MS. DURIE: And finally, I would note

11:52 6 there has also been a complete failure of proof with

11:52 7 respect to damages for this claim.

11:52 8 No number has been put forward with

11:52 9 respect to what damages were incurred specifically as a

11:52 10 function of Walker process fraud.

11:52 11 THE COURT: So why -- why is it necessary

11:52 12 for them -- and I'm not arguing for them. I'm going to

11:52 13 get to hear from someone, Mr. Mueller or someone.

11:52 14 But I think I recall them putting in

11:53 15 evidence that showed how they were -- I'm not saying

11:53 16 they were damaged. It's not my call. But I heard the

11:53 17 evidence that I assumed they were putting on to prove

11:53 18 how they were damaged by loss of -- to me, it was sort

11:53 19 of -- a lot of it was a loss of potential sales.

11:53 20 What -- why do they have to -- A, do you

11:53 21 think they put on sufficient evidence -- leaving aside

11:53 22 the second they didn't give a number, do you think that

11:53 23 they put on sufficient evidence from which a jury could

11:53 24 determine a number, which is one question? And then

11:53 25 also, if you want to argue why they had to give a

11:53 1 number. I see those as two different things.
11:53 2 MS. DURIE: Understood. Let me take the
11:53 3 second question first, if I may.
11:53 4 THE COURT: Okay.
11:53 5 MS. DURIE: Damages for Walker process
11:53 6 fraud are the harm that flow specifically from having
11:53 7 to defend against the patent infringement allegations.
11:54 8 So it is typically attorneys' fees. That would be the
11:54 9 damages for Walker process fraud.
11:54 10 Here, there was conclusory testimony that
11:54 11 was elicited that simply said the witness was being
11:54 12 compensated for his work on the case.
11:54 13 But no testimony was elicited with
11:54 14 respect to any specific quantum of fees that was
11:54 15 attributable to the defense of the case, and that would
11:54 16 have needed to be proffered in order to make out a
11:54 17 viable damages claim specifically for Walker process
11:54 18 fraud.
11:54 19 THE COURT: Okay. So if you're right,
11:54 20 why would the fact that it is a Walker process claim
11:54 21 get it, take it out of the norm that ordinarily I would
11:54 22 think it would be me who would determine what those
11:54 23 fees were?
11:54 24 Now, I could see the jury answering yes
11:54 25 in favor of the allegation. And then it would be up to

11:55 1 me to determine the attorneys' fees that were relevant
11:55 2 to -- and that would be done on affidavit and --
11:55 3 MS. DURIE: Right.
11:55 4 THE COURT: -- and what was attributable
11:55 5 to that and not the patent case.
11:55 6 MS. DURIE: I think that is generally
11:55 7 true when one is seeking fees as a remedy as -- for
11:55 8 fees as such, but here, the fees are the damages.
11:55 9 THE COURT: Okay.
11:55 10 MS. DURIE: And so I think they would
11:55 11 need to have put forward sufficient evidence at trial
11:55 12 from which a jury could determine that there was
11:55 13 quantifiable damages.
11:55 14 THE COURT: So your position is that they
11:55 15 would have had to at least enter into -- I'm sorry --
11:55 16 enter into evidence some evidence of the -- and maybe
11:55 17 even more in this case because there was a total number
11:55 18 of fees that they've expended having to defend the
11:55 19 patent claim.
11:55 20 But there would be separate fees for
11:55 21 prosecuting the -- now that I've said that, let me ask
11:55 22 you this: Would it be fair for plaintiff -- for the
11:56 23 defendant in this case to ask for all of the fees that
11:56 24 they spent both in defending the patent case and
11:56 25 prosecuting the Walker process claim? Because it's

11:56 1 one -- it's one and the same.

11:56 2 MS. DURIE: So I would say -- I would say

11:56 3 not exactly and certainly not what it spent prosecuting

11:56 4 the rest of its antitrust case.

11:56 5 THE COURT: Sure. I get that.

11:56 6 MS. DURIE: And I would just say -- and

11:56 7 this is the agreed-upon portion of the jury

11:56 8 instructions. As Your Honor knows, there's a lot we

11:56 9 don't agree about, but this one thing we do agree

11:56 10 about.

11:56 11 In arriving at the amount of the award,

11:56 12 you should include any damages suffered by ClearCorrect

11:56 13 because of lost profits, meaning profits ClearCorrect

11:56 14 would have made, or fees or costs that it incurred in

11:56 15 defending against any patent that you may find to have

11:56 16 been procured from the Patent Office by fraud.

11:56 17 THE COURT: And your argument is that

11:56 18 they did not put on any evidence that a jury could --

11:57 19 and I'm leaving aside they didn't put on a number, but

11:57 20 that they didn't even put on sufficient evidence from

11:57 21 which the jury could calculate a number.

11:57 22 MS. DURIE: Correct.

11:57 23 And this is -- I think you can think of

11:57 24 it like any tort damages. Here, the damages for the

11:57 25 Walker process antitrust are the fees. The jury would

11:57 1 have to have a reason to base this in the record to
11:57 2 arrive at that damages award, and there is none.
11:57 3 I also, Your Honor, want to make a
11:57 4 Rule 50 motion on enablement, but I don't know whether
11:57 5 I should move forward or whether it would be helpful to
11:57 6 do this piecemeal.
11:57 7 THE COURT: Go ahead.
11:57 8 MS. DURIE: So with respect to
11:57 9 enablement, Your Honor, we're moving under Rule 50(a)
11:57 10 for judgment as a matter of law on enablement.
11:57 11 Dr. Spiegelberg's testimony on this point
11:57 12 was conclusory. He testified generally that there were
11:57 13 a large number of possible combinations of the claim,
11:57 14 but he failed to tie any asserted difficulty in
11:57 15 constructing those combinations to any claim --
11:58 16 THE COURT: I'm going to deny the one on
11:58 17 enablement. I'm going to deny your motion on
11:58 18 enablement. I may take it up post trial depending on
11:58 19 what the jury does. But for now, I'm going to deny
11:58 20 that.
11:58 21 MS. DURIE: Understood.
11:58 22 And presumably we can supplement the
11:58 23 record --
24 THE COURT: Of course.
11:58 25 MS. DURIE: -- with respect to the bases.

1 THE COURT: Yes.
11:58 2 MS. DURIE: Thank you.
11:58 3 Then I will hand it over to my colleague
11:58 4 to address the antitrust issues. Thank you.
11:58 5 THE COURT: Okay.
11:58 6 MR. MUELLER: We just need to address
11:58 7 that first before the remaining issues or --
11:58 8 THE COURT: I'm not sure what the
11:58 9 remaining issues are. So I'm -- let me go ahead and
11:58 10 take that up all at once and then --
11 Yes, ma'am.
11:58 12 MS. AGUILAR: Good afternoon, Your Honor.
11:58 13 Diane Aguilar on behalf of Align Technologies.
11:58 14 Your Honor -- excuse me one moment,
11:58 15 Your Honor.
11:58 16 Your Honor, just to briefly address your
11:58 17 question, I have a Rule 50(a) motion that we want to
11:59 18 present on Align on the antitrust anticompetitive
11:59 19 conduct. That's the iTero, the contracts. It's a bit
11:59 20 lengthy. So I actually think that for efficiency sake,
11:59 21 it might be better for co-counsel to address
11:59 22 Ms. Durie's arguments.
11:59 23 THE COURT: That's fine too. Give me
11:59 24 just one second.
11:59 25 (Off-the-record bench conference.)

11:59 1 THE COURT: I'm sorry. Thank you.
11:59 2 Yes, sir.
11:59 3 MR. MUELLER: Yes, Your Honor. So with
11:59 4 respect to the Walker process claims, if I could just
11:59 5 briefly step through what we believe the evidence has
11:59 6 shown and why that is sufficient to get to the jury on
11:59 7 those issues.
11:59 8 The first is we believe that no
12:00 9 reasonable jury could fail to find and certainly a
12:00 10 reasonable juror, singular, could find that Align
12:00 11 fraudulently procured the materials patents, and those
12:00 12 are the '613, '384, '090, and '091.
12:00 13 Your Honor saw extensive testimony last
12:00 14 week about declarations that were submitted to the
12:00 15 Patent Office in 2016 and 2019. The event that
12:00 16 happened between those two declarations was the
12:00 17 announcement of the Zendura FLX material in 2018.
12:00 18 There is voluminous evidence about the
12:00 19 reaction within Align to the announcement of Zendura
12:00 20 FLX. Your Honor has seen document after document
12:00 21 identifying it as a competitive threat to SmartTrack,
12:00 22 which is the plaintiff's material. Those statements
12:00 23 came from the chief executive officer on down.
12:00 24 After the reaction to Zendura FLX
12:00 25 internally, Align went back to the Patent Office and

12:01 1 Dr. Li submitted a new declaration. I won't walk
12:01 2 through all the differences, but Your Honor saw there's
12:01 3 difference after difference in the text of the 2016
12:01 4 versus the 2019.
12:01 5 And in particular, the grammar of the
12:01 6 2019 declaration was broadened. In the 2016
12:01 7 declaration, there was explicit crystal-clear language
12:01 8 referring to the discovery of SmartTrack and how that
12:01 9 material met the performance criteria of Align and in
12:01 10 particular the soft-hard-soft configuration.
12:01 11 That language was changed. And as
12:01 12 Dr. Spiegelberg walked through methodically last week,
12:01 13 the broader language would have covered 23 materials
12:01 14 that did not meet the testing metrics of elongation,
12:01 15 time stress-relaxation, durability, and thermoform
12:01 16 ability. In fact, some of those materials performed
12:01 17 worse than the control sample.
12:01 18 Dr. Spiegelberg testified from a
12:01 19 scientific perspective, based on his years of
12:01 20 experience and all his work on this case, that those
12:02 21 representations to the Patent Office in the 2019
12:02 22 declaration were not accurate. And I'm quoting from
12:02 23 the trial transcript. This is at Page 782 (sic),
12:02 24 Line 22, through 719, Line 12. He was asked:
12:02 25 Question: Now, having reviewed the

12:02 1 actual testing data -- this is the Align testing
12:02 2 data -- that wasn't submitted to the Patent Office,
12:02 3 what, if anything, did you conclude about the accuracy
12:02 4 of the statement we're looking at in the revised
12:02 5 declaration?
12:02 6 Answer: It is not accurate.
12:02 7 Question: What are the reasons it's not
12:02 8 accurate?
12:02 9 Answer: The various materials do not
12:02 10 have superior properties over the previous material.
12:02 11 And his testimony continued. But we put
12:02 12 on ample scientific evidence of the technical
12:02 13 inaccuracy of the representations made in the 2019
12:02 14 declaration, again, which was made against the backdrop
12:02 15 of the internal communications at Align expressing
12:03 16 clear concern about the competitive threat posed by the
12:03 17 new Zendura FLX product announced in 2018.
12:03 18 As another example, in the 2018
12:03 19 declaration, there was that sentence Your Honor may
12:03 20 recall that began, "Only," "Only, only the materials
12:03 21 that were developed that corresponded to the SmartTrack
12:03 22 material met the performance criteria."
12:03 23 That sentence was reworded in the 2019
12:03 24 declaration to try to make it broader.
12:03 25 Now, the easiest way for the Patent

12:03 1 Office to be able to assess the technical accuracy of
12:03 2 2019 would have been to have the testing data. It
12:03 3 wasn't submitted. In 2019, there was no reason it
12:03 4 couldn't have been.
12:03 5 I'll note parenthetically Mr. Lahlouh,
12:03 6 the developer of Zendura FLX, did submit his testing
12:03 7 data comparing his hard-soft-hard material to
12:03 8 SmartTrack. So it certainly was possible to submit it
12:03 9 to the Patent Office, but Dr. Li and Align did not.
12:04 10 So we think this record of clear
12:04 11 misrepresentations against the backdrop of --
12:04 12 THE COURT: So jump ahead, if you would,
12:04 13 or at least address, if you would, the -- counsel's
12:04 14 argument that you can establish that this was a, my
12:04 15 words, but-for reason that the patent was allowed.
12:04 16 MR. MUELLER: And the answer to that,
12:04 17 Your Honor, is DTX-323, which is the notice of
12:04 18 allowance for the first patent where the declaration
12:04 19 was made, the '613.
12:04 20 And the notice of allowance cites
12:04 21 Dr. Li's declaration. Dr. Li's declaration says: The
12:04 22 applicant's affidavit -- if we scroll down -- the
12:04 23 applicant's affidavit was also found persuasive in the
12:04 24 reasons for the notice of allowance.
12:04 25 And, Your Honor, if I may have a moment.

12:04 1 THE COURT: Sure.

12:04 2 MR. MUELLER: So Ms. Durie mentioned some

12:05 3 rejections. Well, the easiest way to see if this was

12:05 4 material is to look at the actual allowance which, of

12:05 5 course, followed all of the rejections that Ms. Durie

12:05 6 mentioned.

12:05 7 If we cut to the end of the story, and

12:05 8 that's right here, here's the notice of allowance. And

12:05 9 the notice of allowance at the end, at the end of the

12:05 10 prosecution events that Ms. Durie mentioned, stated:

12:05 11 The applicant's affidavit was also found persuasive.

12:05 12 In particular, attention to the statement of, quote,

12:05 13 the appliances recited in the claims of the '665

12:05 14 application exhibit unexpectedly positive results over

12:05 15 previously known appliances.

12:05 16 These unexpected results are evidenced by

12:05 17 clinical studies that were performed comparing the

12:05 18 efficacy of orthodontic appliances as described and

12:05 19 claimed in the '665 application with that of previously

12:05 20 known appliances.

12:05 21 That is precisely the section of the

12:06 22 declaration that Dr. Spiegelberg found to be

12:06 23 scientifically false and inconsistent with the testing

12:06 24 data that was not submitted to the Patent Office.

12:06 25 So if we look at the string of events

12:06 1 here, we have the CEO expressing concern over a new
12:06 2 material. We have the company going back to the Patent
12:06 3 Office. We have a declaration being changed in
12:06 4 significant ways. We have testing data that
12:06 5 contradicts that new language not being submitted to
12:06 6 the Patent Office. We have the examiner relying on the
12:06 7 new language and the notices of allowance.
12:06 8 This is more than enough for a reasonable
12:06 9 juror to find --
12:06 10 THE COURT: Okay. So let's jump ahead to
12:06 11 something that makes sense to me. On the verdict form,
12:06 12 the question will be did -- what is the question you
12:06 13 will want me to ask them about the Walker process?
12:06 14 Does it just say did they violate -- what will the
12:06 15 question be?
12:06 16 MR. MUELLER: Yes, Your Honor.
12:06 17 So the way we have it worded, and the
12:06 18 parties have agreed that a proposed structure for
12:07 19 Your Honor's consideration would first list the patent
12:07 20 merits questions, noninfringement and so on.
12:07 21 THE COURT: Right.
12:07 22 MR. MUELLER: And then Section 2, which
12:07 23 would follow Section 1 --
12:07 24 THE COURT: And put a pin in that.
12:07 25 If the answer to the question did they

12:07 1 infringe, do you infringe, if that's found yes, does
12:07 2 that necessarily mean then there's no -- that you can't
12:07 3 win on your Walker -- can --
12:07 4 MR. MUELLER: No.
12:07 5 THE COURT: So there's no -- regardless
12:07 6 of how they answer infringement, yes or no, they still
12:07 7 are going to continue to answer this question?
12:07 8 MR. MUELLER: That's exactly right.
12:07 9 That's exactly right.
12:07 10 And in a nutshell, the reason why,
12:07 11 Your Honor, is that we think this evidence is a very,
12:07 12 very clear attempt to broaden the claims beyond where
12:07 13 they should have been.
12:07 14 THE COURT: Okay.
12:07 15 MR. MUELLER: But we don't think the
12:07 16 broadened claims reach our products.
12:07 17 THE COURT: Okay. But you're not -- you
12:07 18 don't have an -- so you don't have an invalidity claim
12:07 19 that they're going to answer, right?
12:07 20 MR. MUELLER: We do. The enablement
12:07 21 claim will be in the first half.
12:07 22 THE COURT: Oh, got it.
12:07 23 MR. MUELLER: Yeah. So it would be
12:07 24 noninfringement and enablement as Section 1, and
12:08 25 willfulness if they reached it.

12:08 1 THE COURT: And so they will go through,
12:08 2 and the first question they'll answer is do they
12:08 3 infringe -- do you infringe?
12:08 4 MR. MUELLER: Correct.
12:08 5 THE COURT: Next question will be is the
12:08 6 patent valid?
12:08 7 MR. MUELLER: The next one is willfulness
12:08 8 if they find infringement.
12:08 9 THE COURT: Okay.
12:08 10 MR. MUELLER: The third one is
12:08 11 invalidity.
12:08 12 THE COURT: Okay. And are you all
12:08 13 objecting to the inclusion of the willfulness question?
12:08 14 MR. MUELLER: You know, Your Honor, we
12:08 15 might be, at the conclusion of the evidence, moving
12:08 16 ourselves on Rule 50 if there's been, we think, no
12:08 17 evidence of intent. And the way it's structured, that
12:08 18 would be the same.
12:08 19 THE COURT: Okay. Typically I -- it's
12:08 20 pretty rare anyone has made it to a jury question about
12:08 21 willfulness.
12:08 22 Okay. Let's leave that aside. So
12:08 23 infringement, then willfulness, and then is the
12:08 24 enablement question next?
12:08 25 MR. MUELLER: Correct.

12:08 1 THE COURT: Okay. And that's a
12:08 2 regardless also?
12:08 3 MR. MUELLER: Absolutely.
12:08 4 THE COURT: Because you have a -- I
12:08 5 assume you have a counterclaim of --
12:08 6 MR. MUELLER: I'm not sure if -- I'm
12:08 7 actually forgetting if we have a counterclaim.
12:09 8 THE COURT: So typically -- well, here's
12:09 9 my -- what I've done in the past. If you have a
12:09 10 counterclaim -- and you'll figure this out. If you
12:09 11 have a counterclaim of enablement, then regardless of
12:09 12 the finding on infringement, I'll submit it.
12:09 13 If you don't have a counterclaim, if it's
12:09 14 just a defense to infringement in your affirmative
12:09 15 defenses, then I'm not going to have them answer the
12:09 16 validity question.
12:09 17 MR. MUELLER: We have no objection to
12:09 18 that, Your Honor.
12:09 19 THE COURT: Okay. So I'm not --
12:09 20 eventually I'm going to get to the question we're
12:09 21 trying to answer.
12:09 22 So let's say infringement, yes or no;
12:09 23 willfulness, yes or no; invalidity, yes or no. What
12:09 24 comes next?
12:09 25 MR. MUELLER: Next, Your Honor, would be

12:09 1 this Walker process section.
12:09 2 THE COURT: Okay.
12:09 3 MR. MUELLER: And basically both sides
12:09 4 have been discussing a special interrogatory in that
12:09 5 section. The wording is a little bit different. The
12:09 6 basic difference is that we have it worded as a single
12:09 7 question that refers to Align, the company, because for
12:09 8 Walker process it's an institutional claim.
12:10 9 Inequitable conduct, which would be for Your Honor post
12:10 10 trial is Dr. Li.
12:10 11 THE COURT: Right.
12:10 12 MR. MUELLER: But for the -- for this
12:10 13 particular claim, it's the company.
12:10 14 THE COURT: Could -- could I find
12:10 15 inequitable conduct on her part if the jury finds no on
12:10 16 the Walker process claim?
12:10 17 MR. MUELLER: I mean, that would be for
12:10 18 Your Honor. That'd be for Your Honor. But --
12:10 19 THE COURT: As a matter of law. But it
12:10 20 would be -- it would be something I would consider.
12:10 21 MR. MUELLER: Absolutely.
12:10 22 THE COURT: Got it.
12:10 23 MR. MUELLER: Absolutely.
12:10 24 And then in the question of damages which
12:10 25 Ms. Durie mentioned, if I could just say a few words

12:10 1 about that.

12:10 2 So the damage for the Walker process

12:10 3 claim is the fact that ClearCorrect and Straumann have

12:10 4 had to defend themselves against these patents which we

12:10 5 believe were procured by fraud for anticompetitive

12:10 6 effect.

12:10 7 And so it is correct that one measure of

12:10 8 such damages would be attorneys' fees. We have not

12:10 9 presented that evidence to the jury, but we

12:10 10 presented -- and we were very careful about this --

12:10 11 that there was cost to the company. And the particular

12:11 12 costs that we identified was -- this morning was when

12:11 13 Dr. Perryman testified that he had billed time for his

12:11 14 work responding to the materials patents. He also

12:11 15 noted Dr. Spiegelberg had done the same. Those are

12:11 16 costs to the company.

12:11 17 Now, do we need the jury to make a

12:11 18 specific finding on those costs? We don't. And in

12:11 19 fact, we might ask the jury for $1 on principle. But

12:11 20 that gets us to the jury as a matter of evidence. We

12:11 21 have put on concrete proof of harm to the company,

12:11 22 economic harm, associated with these very patents.

12:11 23 THE COURT: And so the failure to put on

12:11 24 evidence of damages does not prevent you from being

12:11 25 able to put on the case.

12:11 1 MR. MUELLER: Well, we did present
12:11 2 evidence, and we could ask for --
12:11 3 THE COURT: No. I'm saying -- but I
12:11 4 didn't hear any evidence -- I mean, I heard what he
12:11 5 said, but -- and I -- eventually he -- the other side
12:11 6 beat out of him, you know, how much he made per hour,
12:11 7 but there wasn't, I think, any tethering to how much
12:11 8 time of that -- and with Dr. Perryman, it was unlikely
12:12 9 they would have ever gotten that.
12:12 10 So -- but I am -- I don't know how -- if
12:12 11 you went the $1 route, I understand that. I don't see
12:12 12 how -- I don't know that I heard anything from
12:12 13 Dr. Perryman that would allow the jury to accurately --
12:12 14 MR. MUELLER: We're happy to do the $1
12:12 15 route. We're happy with the $1 route, and certainly
12:12 16 there's ample evidence to support the $1.
12:12 17 THE COURT: Yeah. I get that. And I
12:12 18 think that might take care of it. So we've dealt with
12:12 19 that.
12:12 20 Is there anything else you need to argue?
12:12 21 MR. MUELLER: Not unless Your Honor has
12:12 22 any further questions.
12:12 23 THE COURT: I don't.
12:12 24 I'm going to deny the Rule 50 motion with
12:12 25 respect to the Walker process claim.

12:12 1 Next?
12:12 2 And I'll get to you in one second.
12:12 3 Mr. Mueller, do you -- does your side
12:12 4 have any Rule 50 motions after she's done?
12:12 5 MR. MUELLER: Your Honor, we'd just like
12:12 6 to do a pro forma renewal of our earlier --
12:13 7 THE COURT: Why don't you just say you're
12:13 8 renewing them right now, and I'll deny it.
12:13 9 MR. MUELLER: That'd be fair, Your Honor.
12:13 10 I would just note one -- two things very
12:13 11 quickly. One, there's a willfulness issue that
12:13 12 Your Honor has alluded to. We would like to take that
12:13 13 up before the final jury charge.
12:13 14 THE COURT: And I will.
12:13 15 MR. MUELLER: Okay. And then the second
12:13 16 thing is, and we can do this later as well, for some of
12:13 17 the damages theories, they were actually contingent on
12:13 18 intent. And that's bound up with the same willfulness
12:13 19 issues. I think we can take those up later, but I did
12:13 20 just want to make sure to reserve the rights --
12:13 21 THE COURT: I'd like to hear all of the
12:13 22 evidence before I rule on the willfulness.
23 MR. MUELLER: Understood.
12:13 24 THE COURT: I'm sorry. You've gotten up
12:13 25 twice. You've been very polite. Thank you.

12:13 1 MS. AGUILAR: Good afternoon again,
12:13 2 Your Honor.
12:13 3 THE COURT: Yes, ma'am.
12:13 4 MS. AGUILAR: Diane Aguilar, that's
12:13 5 A-g-u-i-l-a-r, on behalf of Align Technologies.
12:13 6 Your Honor, Align moves under Rule 50(a)
12:13 7 for a judgment as a matter of law on Straumann's
12:13 8 monopolization and attempted monopolization claims.
12:13 9 The monopolization claim has four
12:13 10 elements. The parties have agreed on what those four
12:13 11 elements are. Mr. Perryman walked through them. And
12:14 12 Align respectfully submits that Straumann has failed to
12:14 13 prove each of the elements as a matter of law.
12:14 14 I'm going to start with the
12:14 15 monopolization claim, Your Honor.
12:14 16 The monopolization claim fails for
12:14 17 multiple independent reasons. First, Straumann has
12:14 18 failed to prove a legally cognizable market. Its
12:14 19 proposed market, the market for doctor-directed clear
12:14 20 aligners, excludes obvious teeth-straightening
12:14 21 substitutes, including braces and direct-to-consumer
12:14 22 alternatives.
12:14 23 Straumann has failed to present
12:14 24 sufficient evidence that those products are not
12:14 25 reasonably interchangeable with doctor-directed clear

12:14 1 aligners.
12:14 2 THE COURT: So I haven't done an
12:14 3 antitrust case since I've been on the bench.
12:14 4 For the verdict form, is -- are you all
12:14 5 going to get up in your closing arguments and say we've
12:15 6 proven all of this, so answer yes or no on one
12:15 7 antitrust question, or does the jury decide, for
12:15 8 example, here whether or not there was this market?
12:15 9 Who -- how -- what is my role in this?
12:15 10 MS. AGUILAR: Your Honor, the verdict --
12:15 11 there's a dispute in verdict forms. Align's position
12:15 12 is that the jury should decide each four of the
12:15 13 individual elements for both the monopolization claim.
12:15 14 The relevant market question is the same
12:15 15 for both monopolization and attempted monopolization so
12:15 16 that we wouldn't have the jury tick through it again
12:15 17 when it gets to attempted monopolization.
12:15 18 THE COURT: The way you want to do it,
12:15 19 if, for example -- would that be the first question
12:15 20 they would answer?
12:15 21 MS. AGUILAR: Yes, Your Honor.
12:15 22 THE COURT: So are those questions
12:15 23 conditional, meaning if they found "no" on that
12:15 24 question, would they stop there or --
12:15 25 MS. AGUILAR: Yes, Your Honor. We

12:16 1 believe that that would end the inquiry, and they
12:16 2 should sign the verdict form.
12:16 3 THE COURT: And if they were asked -- and
12:16 4 this is saving us time back there. If they were to --
12:16 5 it would certainly allow on appeal the review of
12:16 6 whether or not the jury found on each of those
12:16 7 issues -- what they found on each of those issues.
12:16 8 MS. AGUILAR: That's correct, Your Honor.
12:16 9 And we believe that's consistent with the ABA model
12:16 10 verdict form.
12:16 11 THE COURT: Okay.
12:16 12 MS. AGUILAR: And, Your Honor, the second
12:16 13 element of the monopolization claim is willful
12:16 14 maintenance monopoly power in -- excuse me -- is that
12:16 15 Align possesses monopoly power in a relevant market.
12:16 16 That would be the second element that Straumann needed
12:16 17 to prove, and we believe that Straumann has failed to
12:16 18 put forward evidence that Align possesses monopoly
12:17 19 power in any relevant market.
12:17 20 Straumann has not shown that Align has
12:17 21 the power to control prices or exclude competition. We
12:17 22 just heard from Mr. Perryman that there are something
12:17 23 like two dozen new entrants into the market and that
12:17 24 prices have been declining during the relevant time
12:17 25 period.

12:17 1 THE COURT: Is that -- again, I'm --
12:17 2 Judge "Hippo" Garcia, who was on the bench starting in
12:17 3 1979, had an antitrust case. And he once told me he
12:17 4 knew more about how to perform brain surgery than he
12:17 5 did about antitrust. And I don't know that I'm in
12:17 6 exactly the same position, but it's not far removed.
12:17 7 So here, again, on that particular
12:17 8 question, does the fact that -- and Lino Graglia, who
12:18 9 taught me antitrust law at UT, would be very sad at
12:18 10 this.
12:18 11 But does the -- for example, does the
12:18 12 fact that prices have gone down as a matter of law mean
12:18 13 that there's not -- I mean, like I'm trying to come up
12:18 14 with an analogy.
12:18 15 But, you know, like if AT&T's prices had
12:18 16 gone down because of the entrance of other competitors,
12:18 17 would that alone mean they are not monopolizing?
12:18 18 MS. AGUILAR: Your Honor, Align's
12:18 19 position is yes. The definition of monopoly power --
12:18 20 and this is Supreme Court case law, this is United
12:18 21 States versus DuPont -- holds that monopoly power --
12:18 22 that definition of monopoly power is the ability to
12:18 23 control prices and exclude competitors.
12:18 24 THE COURT: Got it.
12:18 25 MS. AGUILAR: And I don't want to speak

12:18 1 out of turn because I know there's a charging
12:18 2 conference. But I believe that that's --
12:18 3 THE COURT: No, no, no. This is -- we
12:19 4 would be -- this is better because I want this on the
12:19 5 record. And this will help inform me about how to do
12:19 6 the verdict form. So this is great.
12:19 7 MS. AGUILAR: Okay. I love antitrust
12:19 8 law, Your Honor. So I'm happy to field all of these
12:19 9 questions.
12:19 10 THE COURT: That makes me a little sad.
12:19 11 (Laughter.)
12:19 12 MS. AGUILAR: I believe there is a jury
12:19 13 instruction that has that exact language that both of
12:19 14 the parties agree to.
12:19 15 THE COURT: Okay.
12:19 16 MS. AGUILAR: Okay. The third element of
12:19 17 a monopolization claim, Your Honor, is another
12:19 18 independent reason why Straumann's monopolization claim
12:19 19 fails. That is that they have failed to provide
12:19 20 evidence that is legally sufficient of anticompetitive
12:19 21 conduct.
12:19 22 THE COURT: I'd skip on to the next one
12:19 23 on that one.
12:19 24 MS. AGUILAR: If I may, just one point,
12:19 25 Your Honor.

12:19 1 In the Fifth Circuit, anticompetitive
12:19 2 conduct is defined as conduct that has no other
12:19 3 legitimate -- no other legitimate justification that is
12:20 4 rational.
12:20 5 THE COURT: I'd still keep going on that
12:20 6 one.
12:20 7 MS. AGUILAR: Okay. Your Honor, as to
12:20 8 the iTero --
12:20 9 THE COURT: I mean, you may win on --
12:20 10 when you argue that to the jury.
12:20 11 MS. AGUILAR: Of course, Your Honor.
12:20 12 THE COURT: I don't think it's a standard
12:20 13 for a Rule 50 motion.
12:20 14 MS. AGUILAR: Understood, Your Honor.
12:20 15 THE COURT: I can grant that.
12:20 16 I mean, who really knows what a moat is?
12:20 17 So.
12:20 18 MS. AGUILAR: Understood, Your Honor.
12:20 19 I do want to talk about Straumann's
12:20 20 argument that the iTero should have been designed
12:20 21 differently or to provide less choice friction.
12:20 22 That is squarely a refusal to deal
12:20 23 theory. And under Trinko, there is no duty to aid a
12:20 24 competitor. And there is a narrow exception to the
12:20 25 duty to deal, and that exception requires that Align

12:20 1 had abandoned a prior voluntary profitable course of
12:21 2 dealing, and there has been no evidence that Align has
12:21 3 done so.
12:21 4 THE COURT: I remember that evidence
12:21 5 pretty well.
12:21 6 MS. AGUILAR: And, Your Honor, we would
12:21 7 argue that any argument as to how the iTero was
12:21 8 designed cannot as a matter of law make out an
12:21 9 exclusive dealing claim.
12:21 10 THE COURT: Okay.
12:21 11 MS. AGUILAR: To the extent, Your Honor,
12:21 12 that Straumann is seeking to advance a Microsoft-type
12:21 13 exclusive dealing argument, we would argue that
12:21 14 Straumann has failed to show that type product market
12:21 15 is a competitive threat to the time product market,
12:21 16 meaning the scanner does not compete with clear
12:21 17 aligners.
12:21 18 And I can say a little bit more about
12:21 19 that, Your Honor.
12:21 20 THE COURT: I actually understand that
12:21 21 argument.
12:21 22 MS. AGUILAR: Second, Your Honor, Align's
12:21 23 discounting programs are above cost loyalty discount
12:21 24 programs, which as a matter of law are lawful and
12:22 25 cannot constitute anticompetitive conduct. Align's

12:22 1 special markets or individual doctors' agreements fail
12:22 2 for similar reasons.
12:22 3 And lastly, Your Honor, I want to address
12:22 4 Straumann's position that it -- excuse me. I want to
12:22 5 address that Straumann cannot prove the anticompetitive
12:22 6 conduct element by aggregating lawful conduct.
12:22 7 Labeling independent lawful conduct as a
12:22 8 course of conduct does not make it exclusionary. And
12:22 9 at a minimum, we would ask that if the Court is not
12:22 10 inclined --
12:22 11 THE COURT: I think that has to be true.
12:22 12 I mean, whatever you just said has to be correct.
12:22 13 MS. AGUILAR: Yes.
12:22 14 THE COURT: But I'm not sure what you're
12:22 15 asking me to -- if you're asking me I think to assume
12:22 16 that there was evidence of any illegal conduct, I'll
12:23 17 ask them.
12:23 18 But if what you all did, if each element
12:23 19 was truly lawful and they tried to aggregate it to make
12:23 20 it unlawful, they're not going -- even I can understand
12:23 21 that.
12:23 22 And so I don't think you need to argue
12:23 23 that one very -- I'll hear from them about why you're
12:23 24 wrong that they're arguing that lawful conduct has been
12:23 25 aggregated.

12:23 1 MS. AGUILAR: Well, Your Honor, this will
12:23 2 come to a head during the jury instruction -- when we
12:23 3 talk about the jury instruction conference. I believe
12:23 4 Straumann has a position that a course of conduct in
12:23 5 and of itself can be considered as anticompetitive.
12:23 6 We would argue that each theory of
12:23 7 conduct has to be evaluated separately.
12:23 8 Yes, Your Honor.
12:23 9 THE COURT: Well, are they going to
12:23 10 argue -- are they going to argue that there were parts
12:23 11 of the prior course of conduct that were illegal?
12:23 12 Because what I hear you saying is that
12:24 13 if -- that they can't come in and argue that you all's
12:24 14 course of conduct was legal and then transform it into
12:24 15 illegal monopolization. But -- so I may hear from
12:24 16 them, but --
12:24 17 MS. AGUILAR: Yes, Your Honor. Let me
12:24 18 give you an example.
12:24 19 THE COURT: Tell me -- give me the
12:24 20 heads-up about what's coming in the charge conference.
12:24 21 MS. AGUILAR: Let me give you an example,
12:24 22 Your Honor. If the jury were to find or Your Honor
12:24 23 were to find that the Advantage Program, the discount
12:24 24 program, there's nothing unlawful about that --
12:24 25 THE COURT: Right.

12:24 1 MS. AGUILAR: -- that should then not be
12:24 2 considered in the sort of course of conduct theory,
12:24 3 right? That needs to be set aside as a lawful business
12:24 4 practice. Same for if --
12:24 5 THE COURT: So but in terms of the
12:24 6 ultimate question that's being answered, I'm not sure
12:24 7 what you're saying.
12:24 8 Are you saying, for example, on closing
12:24 9 argument, they can't make an argument that -- about the
12:24 10 fact you all had that program, which was legal but it
12:25 11 ultimately led to a claim of monopolization, or what is
12:25 12 it you're arguing to me?
12:25 13 I understand what you're saying, but I'm
12:25 14 not understanding how it impacts the Rule 50 motion.
12:25 15 If my question makes sense.
12:25 16 MS. AGUILAR: Yes, Your Honor. That
12:25 17 makes sense.
12:25 18 If Your Honor were to now, for -- and I
12:25 19 know your -- if Your Honor were to say that -- to rule
12:25 20 that you agree with Align, that for example there's
12:25 21 nothing unlawful about a low price above cost discount
12:25 22 program, and that is all the evidence that Straumann
12:25 23 has put forth with respect to some of the discount
12:25 24 programs --
12:25 25 THE COURT: Then you win.

12:25 1 MS. AGUILAR: -- then we win, and that
12:25 2 gets away from the jury.
12:25 3 THE COURT: I got it. That, I
12:25 4 understand.
12:25 5 MS. AGUILAR: Okay. Thank you, Your
12:25 6 Honor.
12:25 7 The fourth independent reason that a
12:25 8 monopolization claim fails, that Straumann's
12:25 9 monopolization claims fails is lack of substantial
12:26 10 foreclosure.
12:26 11 Straumann has offered no reliable
12:26 12 conduct-specific foreclosure number tied to the iTero,
12:26 13 the Advantage Program, the special markets program, the
12:26 14 individual doctors' agreements, or any other challenged
12:26 15 practice.
12:26 16 The fifth independent failure is lack of
12:26 17 evidence of harm to competition.
12:26 18 Straumann did not prove reduced
12:26 19 market-wide output, higher consumer prices, diminished
12:26 20 market-wide quality, or other competitive impairment.
12:26 21 At most, Straumann has tried to prove harm to
12:26 22 ClearCorrect that is legally insufficient. The
12:26 23 antitrust laws protect competition, not a single
12:26 24 competitor.
12:26 25 And the final independent reason the

12:26 1 monopolization claim fails, Your Honor, is that
12:26 2 ClearCorrect has failed to prove that any of Align's
12:27 3 conduct proximately caused injury to its business.
12:27 4 And there are several reasons for that.
12:27 5 Straumann cannot recover antitrust damages for losses
12:27 6 caused by its own product, service, leadership,
12:27 7 manufacturing, execution failures.
12:27 8 And, Your Honor, one important note here
12:27 9 is Straumann's expert, Dr. Taylor, on the stand
12:27 10 testified that in the end, he always used his
12:27 11 professional judgment when prescribing aligners. And
12:27 12 there has been no evidence that any doctor has set
12:27 13 aside their professional ethical obligations when
12:27 14 prescribing aligners and that that is not the reason
12:27 15 Align has always been what is prescribed.
12:27 16 Your Honor, I'm going to move on to
12:27 17 attempted -- the attempted monopolization claim.
12:27 18 As we -- as I discussed, the
12:27 19 monopolization claim fails because Straumann has failed
12:28 20 to prove a legally cognizable relevant market.
12:28 21 There's also no dangerous probability of
12:28 22 monopoly power. Again, that is the ability to increase
12:28 23 prices or exclude competitors. And there is no
12:28 24 anticompetitive conduct, and there's no causation.
12:28 25 There are additional reasons the

12:28 1 attempted monopolization claim fails.

12:28 2 First, Straumann has not proved specific

12:28 3 intent to achieve monopoly power in the relevant

12:28 4 market. The evidence Straumann relies on shows

12:28 5 ordinary competitive intent. Align wanted to sell more

12:28 6 Invisalign, improve iTero, protect its patents, retain

12:28 7 customers, and compete for doctors and DSOs.

12:28 8 Second, Straumann has not proved a

12:28 9 dangerous probability that Align would achieve monopoly

12:28 10 power. And Straumann did not prove substantial

12:28 11 foreclosure from any of the challenged practices.

12:29 12 Your Honor, because Texas antitrust law

12:29 13 is construed in harmony with federal antitrust law, the

12:29 14 Texas claim fails with the Sherman Act claims as well.

12:29 15 And there are other independent reasons why the Texas

12:29 16 claim fails.

12:29 17 The Texas statute is directed at

12:29 18 competition occurring wholly within the state of Texas

12:29 19 and to the benefit of Texas consumers. It does not

12:29 20 support out-of-state injury absent a showing that the

12:29 21 relief promotes competition within Texas and benefits

12:29 22 Texas consumers.

12:29 23 Straumann has made no such showing. At

12:29 24 most, the evidence shows that ClearCorrect manufactures

12:29 25 aligners in Texas, but there has been no showing of

12:29 1 harm related to that facility, much less harm to
12:29 2 competition in Texas.
12:29 3 Straumann did not present any evidence
12:29 4 from a practicing doctor in Texas or a DSO in Texas
12:29 5 that -- regarding the special market agreements or any
12:29 6 of the agreements somehow prevented them from ordering
12:30 7 ClearCorrect or any other competing aligner.
12:30 8 And with that, Your Honor, I rest.
12:30 9 THE COURT: So let me ask you the
12:30 10 question I don't think we're supposed to ask in the
12:30 11 secret page of the judge handbook. But that's the one
12:30 12 that we always think about, which is, why wouldn't I be
12:30 13 smarter to deny your motion now and see what the jury
12:30 14 does and deal with this afterwards if the jury were to
12:30 15 come back with, you know, a finding of no in your favor
12:30 16 on all those issues. You'd be in much better position
12:30 17 on appeal than you would be if I ruled in your favor.
12:30 18 MS. AGUILAR: Your Honor, there -- there
12:31 19 are specific findings that the jury must make. And as
12:31 20 Your Honor knows, what the jury deliberates, it's a
12:31 21 black box. And we would not have visibility into
12:31 22 exactly why --
12:31 23 THE COURT: Well, what I'm saying is two
12:31 24 things.
12:31 25 One, I'm probably with you on the idea of

12:31 1 splitting out the questions for the jury. So to take
12:31 2 away -- I'm also a fan of the not black box. I know
12:31 3 there are -- you know, for example, that's why -- I
12:31 4 think I'm not going to be contradicted by what I've
12:31 5 done in the past. But I think that's why if there are
12:31 6 multiple claims being asserted in a patent, I think
12:31 7 I've always put all the claims in and not just said, do
12:31 8 they infringe a patent.
12:31 9 So I'm kind of with you there.
12:31 10 My question was slightly -- was very
12:31 11 different, which is, if the jury -- if I grant your
12:31 12 Rule 50 motion, then it goes up on appeal on a --
12:31 13 one -- not only one review in terms of error, but also
12:31 14 they sort of step into my shoes here.
12:32 15 If the jury comes back in your favor and
12:32 16 says no, no -- rules against defendant and everything,
12:32 17 that's a jury decision that is much more difficult.
12:32 18 And I would still have the power to, if I thought the
12:32 19 jury got it wrong, to make that decision.
12:32 20 So if you don't want -- you don't -- this
12:32 21 is a question I'll say you don't have to answer because
12:32 22 it's a tough question to answer because I know what
12:32 23 your client wants is for me to grant the Rule 50
12:32 24 motion. And they want you to say, no, Judge, you
12:32 25 should grant it.

12:32 1 But if you have any thoughts, I'd be
12:32 2 happy to hear them.
12:32 3 MS. AGUILAR: Yes, Your Honor. Of course
12:32 4 we would request that you grant our Rule 50 motion.
12:32 5 There's a -- there's a few issues with
12:32 6 the -- a failure of proof for Straumann.
12:32 7 One is that they only have one damages
12:32 8 number for the anticompetitive conduct. So they only
12:33 9 have the --
12:33 10 THE COURT: I've dealt with that. I'm
12:33 11 not persuaded by that because they're going to say --
12:33 12 they kind of admit that, so.
12:33 13 MS. AGUILAR: Okay. Thank you, Your
12:33 14 Honor.
12:33 15 THE COURT: And so -- and the Circuit --
12:33 16 the Circuit can decide however they want to. If they
12:33 17 get $1, you know, you all can fight over that.
12:33 18 But anything else?
12:33 19 MS. AGUILAR: There's nothing else,
12:33 20 Your Honor. Thank you so much.
12:33 21 THE COURT: Okay. And, Mr. Mueller, are
12:33 22 you up?
12:33 23 MR. MUELLER: Mr. Ford's going to address
12:33 24 any questions you have on these issues, Your Honor.
12:33 25 THE COURT: Well, I think this is the

12:33 1 first time I've gotten to hear from him, so I'm
12:33 2 delighted.
12:33 3 But so everyone knows, clearly we're
12:33 4 running longer than I anticipated, which probably shows
12:33 5 a sign of bad judging on my part. So -- but I've
12:33 6 looked at the number of hours you have left, and I
12:33 7 think we're obviously on track to finish with the
12:33 8 evidence and be able to charge tomorrow.
12:33 9 So we're going to -- when we finish the
12:33 10 Rule 50 arguments, we're not going to do the jury
12:34 11 charge immediately -- conference immediately
12:34 12 afterwards. We're going to have the -- when the jury
12:34 13 gets back at 1:15, we'll resume evidence. And I'll let
12:34 14 the jury go at 4:00 today, and we'll take up and we'll
12:34 15 do the jury charge conference.
12:34 16 Now, you all think about this because I
12:34 17 again want to protect your record as much as possible.
12:34 18 We may have exhausted a lot of the issues, arguments.
12:34 19 You may have previewed for me a lot of the arguments
12:34 20 we're going to have over the jury charge by what we're
12:34 21 arguing about.
12:34 22 But given what we're -- what's gone on
12:34 23 here, I would be happy if you all would prefer to do
12:34 24 the charge conference on the record and out here as
12:34 25 opposed to the way I ordinarily do it and just let you

12:34 1 make objections.
12:34 2 Think about it. You don't need to tell
12:34 3 me now. I'll do -- Kristie needs extra work anyway.
12:35 4 And so -- so you all think about what's
12:35 5 best for you, and I'll be happy to do the charge
12:35 6 conference out here, if you think that is better for
12:35 7 your clients, or if you want to do it informally, it's
12:35 8 easier to do it informally. And then you can just make
12:35 9 your objections, but I'll do whatever you all think is
12:35 10 best.
12:35 11 Yes, sir.
12:35 12 MR. FORD: Your Honor, Mark Ford. And
12:35 13 actually, we have met. I've done some arguments for
12:35 14 you --
12:35 15 THE COURT: Oh, no. I'm saying in this
12:35 16 case. No. I remember you well. That's why I'm so
12:35 17 eager to have you step up. I didn't -- I don't recall
12:35 18 you being -- standing up in this trial, have you?
12:35 19 MR. FORD: I have not. I have not.
12:35 20 THE COURT: Okay. I was a little worried
12:35 21 I was turning into Joe Biden there for a moment, so --
12:35 22 but...
12:35 23 MR. FORD: So I'm happy to go through
12:35 24 each of the issues Ms. Aguilar met. But I thought I
12:35 25 would first start with the one for which you had the

12:35 1 questions which concerning aggregating conduct.
12:35 2 We agree that if conduct is not
12:36 3 anticompetitive, that if a jury decides that one of the
12:36 4 three species of conduct is not anticompetitive, it
12:36 5 doesn't aggregate with the others, right?
12:36 6 The difference is this: For our claim,
12:36 7 what we have to show is that the conduct as a whole
12:36 8 resulted in substantial foreclosure, meaning reducing
12:36 9 marketplace opportunities to rivals by at least
12:36 10 40 percent. You saw Dr. Perryman put on a figure that
12:36 11 it was 76 percent.
12:36 12 Now, when it's that type of analysis,
12:36 13 what the Court -- the jurors don't separately evaluate
12:36 14 each piece of anticompetitive conduct to determine
12:36 15 whether it alone reached the 40 percent.
12:36 16 If the Court -- if the jury decides that
12:36 17 the iTero conduct was restricted, consumer choice was
12:36 18 anticompetitive, that the exclusionary conduct did as
12:36 19 well, that the Advantage Program did as well, the
12:36 20 instruction that -- is that you look at the overall
12:36 21 effect of all that conduct.
12:37 22 THE COURT: So let me challenge you there
12:37 23 a bit. Let's talk about the -- I'm saying bonus
12:37 24 points. I'm not sure exactly -- the program they had
12:37 25 where they -- essentially the six-month program.

12:37 1 So was there -- is there something
12:37 2 illegal about -- you said anticompetitive.
12:37 3 MR. FORD: Yes.
12:37 4 THE COURT: I mean, it seems -- why --
12:37 5 let me ask you this, try it this way: Why is that
12:37 6 anticompetitive as opposed to competitive?
12:37 7 MR. FORD: Sure. So this is a recent --
12:37 8 THE COURT: I mean, I have -- I fly only
12:37 9 on American Airlines, if I can, because I have all my
12:37 10 miles on American. I don't see -- so Delta is not
12:37 11 getting my business because American has made it better
12:37 12 for me through a miles program.
12:37 13 So I don't see that as anticompetitive.
12:38 14 I see that as competitive because it makes me as a
12:38 15 consumer happier.
12:38 16 MR. FORD: Yeah. And I think that
12:38 17 program is. But here, but American is not a
12:38 18 monopolist, and the American AAdvantage program
12:38 19 doesn't --
12:38 20 THE COURT: Well, now here's the deal.
12:38 21 I'm not going to let you get away with -- no offense --
12:38 22 saying they're a monopolist, therefore you look at
12:38 23 everything they did and they can't do that because
12:38 24 they're a monopolist.
12:38 25 And how do I prove they're a monopolist?

12:38 1 Well, you look at everything that they did and that
12:38 2 makes them a monopolist.
12:38 3 So I'm going to start off: Why do you --
12:38 4 why do you start off that they are a monopolist?
12:38 5 MR. FORD: Sure. So the two steps to
12:38 6 determine whether someone's a monopolist is, first, to
12:38 7 define the relevant product market and then to
12:38 8 determine within that market, do they have a dominant
12:38 9 share supported by --
12:38 10 THE COURT: And have you all agreed on
12:38 11 that market?
12:38 12 MR. FORD: We don't agree on that market.
12:38 13 THE COURT: I was going to say, in your
12:38 14 world -- that's my point, is in your world, they are a
12:38 15 monopolist. In the plaintiff's world, they're not --
12:38 16 Mr. Durst, you can just shake -- in your
12:39 17 world, you're not a monopolist, right?
12:39 18 MR. DURST: In the real world, we're not
12:39 19 a monopolist.
12:39 20 (Laughter.)
12:39 21 THE COURT: Understood. And so -- and so
12:39 22 that's my problem, is, I get that I have to -- for you
12:39 23 to move forward with the -- because they're a
12:39 24 monopolist, when they do X, Y, and Z, you can combine
12:39 25 those things.

12:39 1 And again, I know very little about
12:39 2 antitrust law. I'm struggling here. But that seems to
12:39 3 me by accepting your argument, I'm accepting your
12:39 4 argument and that they are a monopolist. And that
12:39 5 seems to me kind of why we're all here.
12:39 6 MR. FORD: Exactly.
12:39 7 So the first question the jury's going to
12:39 8 answer is: Has ClearCorrect proven by a preponderance
12:39 9 of the evidence that the relevant antitrust market is
12:39 10 doctor-directed clear aligner markets?
12:39 11 If they say yes, they move on. If they
12:39 12 say no, we agree that there's no liability. But if
12:39 13 they say yes, then the jury has decided we have --
12:40 14 through Dr. Perryman's evidence and a host of other
12:40 15 evidence, we have demonstrated that relevant antitrust
12:40 16 market --
12:40 17 THE COURT: So how -- when you stand
12:40 18 up -- one of you stands up to say, answer Question
12:40 19 No. 1 yes, here is the evidence, what is the evidence
12:40 20 you're going to put on?
12:40 21 MR. FORD: So if you could turn to
12:40 22 Slide 3.
12:40 23 So the first piece of evidence we would
12:40 24 put on is the econometric evidence that Dr. Perryman
12:40 25 put in. The fundamental question for a relevant market

12:40 1 is whether that hypothetical monopolist, i.e., like a
12:40 2 company that hypothetically owned all of it, whether
12:40 3 they could profitably raise prices 5 percent.
12:40 4 Now, Dr. Perryman did an econometric
12:40 5 analysis that showed they could. They can challenge
12:40 6 it, but it's in evidence, and it is sufficient for a
12:40 7 jury. And that alone is enough for the jury to base it
12:40 8 on.
12:40 9 Then there are other factors a jury can
12:40 10 consider, like the characteristics of the products. So
12:40 11 here, where Dr. Taylor talked about all the various
12:41 12 differences. And importantly, how consumers, a lot of
12:41 13 the vast majority -- if you look at the last bullet --
12:41 14 the vast majority of patients that wanted clear
12:41 15 aligners wouldn't go to braces.
12:41 16 And so that supports the point that
12:41 17 someone who is a monopolist in the clear aligner space,
12:41 18 if that were the market, could raise the price.
12:41 19 You go to the next slide.
12:41 20 In addition to that, you look at the way
12:41 21 the companies themselves view the market. And so here,
12:41 22 we have admissions from the CEO of Align that what they
12:41 23 have is a market that is beyond -- in his words, beyond
12:41 24 the wire and brackets market. It focuses on the
12:41 25 hundreds of millions of additional patients.

12:41 1 THE COURT: So let me fast-forward just a
12:41 2 little bit. Is what happens that you put on all this
12:41 3 evidence -- I get what you're saying now.
12:41 4 To me, what you're saying now is
12:41 5 different than what counsel for plaintiff was arguing,
12:42 6 and what I mean by that is what you're saying now goes
12:42 7 to answer Question No. 1, and -- which they are a
12:42 8 monopolist. It seems to me if at that point, then you
12:42 9 want to show -- then is it at that point where you say:
12:42 10 And to further their monopoly, they had the program,
12:42 11 they had these other things, which for a nonmonopolist,
12:42 12 American Airline, would be okay. But if you find that
12:42 13 they are a monopolist based on these factors, then look
12:42 14 at this other conduct by them which otherwise would be
12:42 15 legal, but as a monopolist, for them, it's not?
12:42 16 MR. FORD: That is exactly right. There
12:42 17 is one step in between.
12:42 18 THE COURT: Okay. That's what I'm --
12:42 19 MR. FORD: Once we define the relevant
12:42 20 market, that just says, okay. What is the market we're
12:42 21 looking at?
12:42 22 We then -- ClearCorrect needs to prove
12:43 23 that Align has a dominant share of that market and that
12:43 24 there are barriers to entry and expansion.
12:43 25 THE COURT: So who decides what the

12:43 1 relevant market is? Do I decide that, or does the jury
12:43 2 answer that?
12:43 3 MR. FORD: The jury answers that. That
12:43 4 would be the first question that you instruct them when
12:43 5 you're going over monopolization. You first have to
12:43 6 define the relevant market. Here's how you do it.
12:43 7 Here's what ClearCorrect alleges. Here's what Align
12:43 8 alleges. Here's the standard that you can apply.
12:43 9 THE COURT: Okay.
12:43 10 MR. FORD: And then once -- the next is
12:43 11 whether Align has monopoly power within that market
12:43 12 that you found. Now, if they side for us, they move on
12:43 13 to the next question.
12:43 14 And there it's a market share assessment
12:43 15 largely.
12:43 16 And, you know, if we go to Slide 7, the
12:43 17 evidence we have here is that Dr. Perryman did, frankly
12:43 18 at this point, an unrebutted market share analysis, if
12:43 19 the market is the doctor-directed clear aligner market,
12:43 20 showing that throughout the relevant period, it is well
12:43 21 above the threshold to be considered a monopoly.
12:44 22 And we also --
12:44 23 THE COURT: So let me ask you this -- and
12:44 24 I may have you sit down for just a second and hear a
12:44 25 response.

12:44 1 At the Rule 50 stage -- sorry. I'm
12:44 2 trying to get this right. At the Rule 50 stage, if you
12:44 3 have put on -- if defendant -- you're plaintiff --
12:44 4 you're counterplaintiff, whatever --
12:44 5 MR. FORD: Antitrust plaintiff.
12:44 6 THE COURT: You're the antitrust
12:44 7 plaintiff. If you have put on sufficient evidence
12:44 8 including what you just said that would allow the jury
12:44 9 to define what the relevant market is, then at a
12:44 10 minimum, in your opinion, it would be error on my part
12:44 11 to grant a Rule 50 motion because at a minimum, you
12:44 12 have evidence and the jury ought to be able to decide
12:44 13 that because everything else cascades from that?
12:44 14 MR. FORD: That's exactly right. I would
12:44 15 never accuse you of error, but what I will say is we
12:44 16 have ample evidence --
12:45 17 THE COURT: Hey, I got reversed. I just
12:45 18 found out a week or two ago the Supreme Court reversed
12:45 19 the panel I was on, Federal Circuit, nine to zero. So
12:45 20 how many district judges have been reversed nine to
12:45 21 zero? You know, I mean, that's kind of a big deal.
12:45 22 MR. FORD: Just let it roll off your
12:45 23 back.
12:45 24 So what I would say is we have more than
12:45 25 sufficient evidence that a reasonable juror could find

12:45 1 in our favor.

12:45 2 THE COURT: Okay. Let me hear a response

12:45 3 from opposing counsel, as I slowly peel the onion and

12:45 4 my understanding.

12:45 5 Why shouldn't -- given the evidence

12:45 6 that's in the record, why shouldn't the jury have the

12:45 7 opportunity to answer the question of what the relevant

12:45 8 market is, and why should I take it from their hands?

12:45 9 MS. AGUILAR: So, Your Honor, there are

12:45 10 four elements to a monopolization claim. The first one

12:45 11 is what is the relevant market?

12:45 12 And that may go to the jury to decide, is

12:45 13 it the clear aligner market or is it the

12:45 14 teeth-straightening market?

12:45 15 But the second element is does Align have

12:45 16 monopoly power in a relevant market, whatever market --

12:46 17 in that relevant market.

12:46 18 So does -- that's where we think there is

12:46 19 insufficient evidence. I mean, we think there's

12:46 20 insufficient evidence on both. But the conversation

12:46 21 we're having here --

12:46 22 THE COURT: So is it -- I'm sorry to

12:46 23 interrupt.

12:46 24 Is it your position -- this may make more

12:46 25 sense to me, then. Is it your position -- I get that

12:46 1 you don't think there's sufficient evidence if the
12:46 2 relevant market is you all's relevant market.
12:46 3 Is your position that there is no -- is
12:46 4 there's not sufficient evidence of monopoly even in
12:46 5 what --
12:46 6 MS. AGUILAR: Correct, Your Honor.
12:46 7 THE COURT: Okay. I'm done with you.
12:46 8 MS. AGUILAR: I'm sorry.
12:46 9 THE COURT: I get, then, what your
12:46 10 position is, and I'll go back to --
12:46 11 MS. AGUILAR: Your Honor, if I could just
12:46 12 say one thing.
13 THE COURT: Sure.
12:46 14 MS. AGUILAR: The parties have agreed on
12:46 15 what monopoly power is. The definition is the power to
12:46 16 control prices and exclude competition.
12:46 17 And the parties have both agreed that
12:46 18 market share alone is insufficient to prove monopoly
12:46 19 power. And all the evidence that they have put forth
12:46 20 is about market share, not the power to control prices
12:46 21 or to exclude competition.
12:47 22 Thank you, Your Honor.
12:47 23 THE COURT: So but this at least limits
12:47 24 you to only needing to argue why, under your
12:47 25 evidence -- I'm sorry, under your relevant market what

12:47 1 evidence there is to show that there's monopolization
12:47 2 because I understand their argument now.
12:47 3 MR. FORD: If you go back to 7.
12:47 4 So the -- what she just -- Ms. Aguilar
12:47 5 just described is the definition of monopoly power.
12:47 6 But it's not the test for how you prove monopoly power
12:47 7 through what we call indirect evidence.
12:47 8 You know, we can't -- there's ample case
12:47 9 law. So it's really difficult to figure out if they
12:47 10 can do that directly. So what you do is you first see
12:47 11 if they have a dominant share of the market. She
12:47 12 hasn't rebutted that. We have presented evidence of
12:47 13 that.
12:47 14 That is not alone enough. But the other
12:47 15 piece, if you go to the next slide, is that that
12:47 16 position is protected by barriers to entry which would
12:47 17 prevent significant and quick entry and growth by other
12:48 18 competitors.
12:48 19 THE COURT: And your argument here would
12:48 20 be that we've heard testimony that at least 20 other
12:48 21 companies have come in.
12:48 22 MR. FORD: Yes, but they haven't come in
12:48 23 with any significant growth because we show many have
12:48 24 come in, many have fallen off, few have -- none have
12:48 25 reached any scale, right?

12:48 1 So you need to have the ability to come
12:48 2 in and discipline the monopolist, right?
12:48 3 So Dr. Perryman's example of being the
12:48 4 only hotdog stand in the neighborhood, he could
12:48 5 probably raise prices. But it's easy to set up a
12:48 6 hotdog stand the next day and discipline that.
12:48 7 THE COURT: What about the fact -- let me
12:48 8 shift you over to something else that's -- what about
12:48 9 the argument they made that the fact that -- you
12:48 10 reminded me of it with the if they raise prices on the
12:48 11 hotdogs. What about their argument -- I don't think
12:48 12 you all debate that overall prices have come down
12:48 13 despite the fact that they have monopoly.
12:48 14 I think I asked and I think I got the
12:48 15 answer that that in and of itself would be, as a matter
12:49 16 of law, proof that they're not a monopoly.
12:49 17 And do you have a response to that?
12:49 18 MR. FORD: It most certainly is not proof
12:49 19 that they're not a monopoly.
12:49 20 If you listen closely to the definition,
12:49 21 it is the power to raise prices, right? It doesn't
12:49 22 mean you necessarily raise prices. A monopolist can
12:49 23 own the market.
12:49 24 THE COURT: Well, but logically, I mean,
12:49 25 you know, if I were a lawyer and I thought I could

12:49 1 raise my price, I would. And if I'm lowering my price,
12:49 2 logically it seems to me that it's because I'm -- I
12:49 3 can't get the price I want.
12:49 4 And if I were a monopoly, if I were the
12:49 5 only lawyer, you know, then I -- so help me out here
12:49 6 why it's just --
12:49 7 MR. FORD: Yeah. There's a few reasons,
12:49 8 Your Honor.
12:49 9 One is in Align's case, creating a
12:49 10 broader delta between --
12:49 11 THE COURT: I just couldn't hear you.
12:49 12 MR. FORD: Creating a broader delta
12:50 13 between the list price and the effective price
12:50 14 increases the power of their Advantage Program, right?
12:50 15 So the consequence of not hitting a tier
12:50 16 is much more significant.
12:50 17 THE COURT: Okay. I got it.
12:50 18 MR. FORD: So that's one way you would do
19 it.
12:50 20 The second way, candidly --
12:50 21 THE COURT: And the program, while maybe
12:50 22 legal, is also having a downward impact on the revenue
12:50 23 and price, right?
12:50 24 MR. FORD: The way they're executing the
12:50 25 program has the effect of making it look like there's a

12:50 1 reduced average price, but that is a tactic to lock in
12:50 2 the market.
12:50 3 The other reason you may show it is a
12:50 4 monopolist may, for example, have -- may be the only
12:50 5 seller in the market and may lower price just to
12:50 6 demand, i.e., increase the number of people who can
12:50 7 afford the product, right? They may have -- they may
12:50 8 be the only aligner manufacturer in the world, and they
12:50 9 may make a decision that if I lower the price $10, I'm
12:50 10 going to get more volume.
12:50 11 But whatever their decision is, whether
12:51 12 it's rational or not, the test is if -- this -- you'll
12:51 13 see this in the instructions -- if we show they have
12:51 14 substantial market share and they're protected by
12:51 15 barriers to entry which avoid quick entry, they have
12:51 16 what the law calls monopoly power.
12:51 17 So the next thing -- and I was going to
12:51 18 move on to the anticompetitive conduct, but you had
12:51 19 asked Ms. Aguilar to move on. So I can skip over it if
12:51 20 you'd like.
12:51 21 THE COURT: If you'll hold on just one
12:51 22 second.
12:51 23 MR. FORD: Okay.
12:51 24 (Off-the-record bench conference.)
12:52 25 THE COURT: Okay. I'm good. I'm going

12:52 1 to deny the plaintiff's Rule 50 motion.
12:52 2 MR. FORD: Thank you.
12:52 3 THE COURT: So now, so I've done the
12:52 4 plaintiff's Rule 50 motion. Mr. Mueller, I think I've
12:52 5 done your renewal of your motion, and we will take up
12:52 6 willfulness at the end of all the evidence.
12:52 7 So -- and we'll resume the trial at 1:15
12:52 8 when the jury gets back and break at 4:00 and do the
12:52 9 jury charge conference. Location to be determined by
12:52 10 the lawyers.
12:52 11 I'll start with the plaintiff. Is there
12:52 12 anything else we -- is there anything we need to take
12:52 13 up before we --
12:52 14 MR. DURST: No.
12:52 15 MR. MUELLER: Not a question, Your Honor.
12:52 16 I'll just note we're fine with the informal conference.
12:52 17 We think that might be useful.
12:52 18 THE COURT: Mr. Durst?
12:52 19 MR. DURST: I was leaning the other way,
12:52 20 but I probably need to talk to my experts.
12:53 21 THE COURT: Just let me know. And if I
12:53 22 do -- if I do default, I'll default towards making a
12:53 23 record if that's what one party or the other wants.
12:53 24 And so you're up -- you're up next?
12:53 25 MR. DURST: We are. We intend to call

12:53 1 our witness on validity, Your Honor.
12:53 2 THE COURT: Okay.
12:53 3 MR. DURST: Ms. Reitman, Dr. Reitman.
12:53 4 THE COURT: Oh, Reitman. Got it. Got
12:53 5 it.
12:53 6 I can't wait for Berbalk and his seven
12:53 7 minutes of fame. I think some of you at least are
12:53 8 optimistic about how much time you have left and the
12:53 9 witnesses that we have, but I'll let you figure that
12:53 10 out. So.
12:53 11 MR. DURST: We are mindful, Your Honor.
12:53 12 MR. TUBACH: The only other issue,
12:53 13 Your Honor -- sorry to keep prolonging this -- is we do
12:54 14 have some 1006 exhibits that we are going to seek to --
12:54 15 move to admit.
12:54 16 THE COURT: Do you want to do that now?
12:54 17 MR. TUBACH: Not with this immediate
12:54 18 witness but with the one after that, I believe.
12:54 19 THE COURT: Is there an objection to
12:54 20 these?
12:54 21 MR. MUELLER: There is, Your Honor.
12:54 22 These are -- we can go through them now or later,
12:54 23 Your Honor. These are, I think you'll see quite
12:54 24 clearly demonstratives, not proper 1006 exhibits. So
12:54 25 we're happy to take it up now or later.

12:54 1 THE COURT: So the fight is over whether
12:54 2 they come into evidence or just --
12:54 3 MR. TUBACH: That's exactly right.
12:54 4 THE COURT: Okay. Got it. And I'm even
12:54 5 surprised I knew what 1006 meant. So which --
12:54 6 MR. TUBACH: It's a large number,
12:54 7 Your Honor.
12:54 8 THE COURT: And it's not 1006 documents,
12:54 9 right? Got it.
12:54 10 So just give me the nature of what the
12:54 11 documents are and maybe an example.
12:54 12 MR. TUBACH: Absolutely, Your Honor.
12:54 13 Give me just one --
12:54 14 THE COURT: If I were on their side,
12:54 15 given the number of exhibits in this case, I would be
12:54 16 begging you to add more to it. And so I'm not sure why
12:54 17 he wants to keep them out.
12:54 18 MR. TUBACH: These are documents that
12:55 19 summarize voluminous records, and that's the 1006
12:55 20 standard.
12:55 21 THE COURT: I got it. Okay. But if you
12:55 22 give me an idea of just what they cover so I know why
23 you want them in.
12:55 24 MR. TUBACH: So, for example, sales like
12:55 25 revenue numbers, the chart, for example, at the end

12:55 1 with the -- that would be a 1006 summary because it's
12:55 2 summarizing lots of data, right?
3 THE COURT: Sure.
12:55 4 MR. TUBACH: So that's the kind of thing
12:55 5 that we're seeking to introduce. I'm not sure why they
12:55 6 think it's not voluminous, but we think it is.
12:55 7 MR. MUELLER: I can show some examples,
12:55 8 Your Honor.
9 THE COURT: Okay.
12:55 10 MR. MUELLER: So these are very similar
12:55 11 to Dr. Perryman's demonstratives. These are all
12:55 12 demonstratives.
12:55 13 THE COURT: This is not a 1006 exhibit.
12:55 14 MR. TUBACH: Your Honor, can I at least
12:55 15 make the pitch?
12:55 16 THE COURT: You can make the pitch, but
12:55 17 do your best. But that's -- that's not, in my opinion,
12:55 18 a 1006.
12:55 19 MR. TUBACH: Well, for example, this one
12:55 20 is --
12:55 21 THE COURT: Well, put on the record which
12:55 22 one it is.
12:55 23 MR. TUBACH: Oh, sorry. PTX-3064. Thank
24 you, Your Honor.
12:56 25 This is one line which looks like it's

12:56 1 real simple, but it's actually annual revenue of five
12:56 2 or six different companies over a period of two, four,
12:56 3 six, seven years.
12:56 4 Now, I don't think anyone is suggesting
12:56 5 that we would have to introduce all of that evidence
12:56 6 separately and then talk to the jury about that
12:56 7 separate evidence rather than introducing this as a
12:56 8 voluminous summary. Voluminous doesn't mean it has to
12:56 9 be a garage full.
12:56 10 THE COURT: I'm not going to allow you to
12:56 11 admit these as -- you can use them as demonstratives
12:56 12 but not as exhibits. I'm not -- I'm not going to
12:56 13 permit you to enter them as exhibits.
12:56 14 And so you're -- if you're making a
12:56 15 motion to allow that, I'll overrule it. But you can
12:56 16 use them as demonstratives.
12:56 17 MR. TUBACH: Okay. So I think we have
12:56 18 made the motion. I'll just -- formally we do move to
12:56 19 admit all of those.
12:56 20 THE COURT: Okay. Why don't you do this.
12:56 21 Why don't you get -- if Jen will let you do it this
12:56 22 way. Why don't you get me a formal list of what you
12:56 23 would wish to offer by number. And -- I just want to
12:57 24 protect your record.
12:57 25 MR. TUBACH: Thank you. I really

12:57 1 appreciate it. I think we already filed a two-page.
12:57 2 THE COURT: If you have filed that, check
12:57 3 with Mr. Mueller, who's never, ever agreeable. But if
12:57 4 he was willing to agree on this one issue, that we can
12:57 5 do it this way as opposed to you doing it a longer way,
12:57 6 then your record is protected.
12:57 7 If we have it, they agree that we have
12:57 8 it. And I'm overruling, I'm not going to permit them
12:57 9 to be admitted as exhibits but only as demonstratives.
12:57 10 MR. TUBACH: Thank you, Your Honor.
12:57 11 THE COURT: As long as the record's clear
12:57 12 as to which documents those are, then I'm good.
12:57 13 MR. TUBACH: Thank you.
12:57 14 THE COURT: Anything else?
12:57 15 MR. MUELLER: Nothing else from us,
12:57 16 Your Honor. Thank you.
12:57 17 THE COURT: Okay. Thank you.
12:57 18 (Recess taken.)
01:17 19 THE BAILIFF: All rise.
01:17 20 THE COURT: Please remain standing for
01:17 21 the jury.
01:17 22 (Jury entered the courtroom.)
01:17 23 THE COURT: Thank you. You may be
01:17 24 seated.
01:17 25 Counsel, you may call your next witness.

01:17 1 MR. HUNG: Your Honor, we call
01:17 2 Dr. Maureen Reitman back to the stand.
01:17 3 And while she's walking up, Your Honor, I
01:17 4 forgot to admit DTX-384 -- sorry -- PTX-384. And
01:18 5 there's no objection to its admission.
01:18 6 MR. MUELLER: No objection, Your Honor.
01:18 7 THE COURT: They'll be admitted.
01:18 8 MR. HUNG: Thank you.
01:18 9 DIRECT EXAMINATION
01:18 10 BY MR. HUNG:
01:18 11 Q. Dr. Reitman, welcome back.
01:18 12 A. Thank you.
01:18 13 Q. I understand that you're here to respond to
01:18 14 Dr. Spiegelberg's opinions on validity and inequitable
01:18 15 conduct; is that right?
01:18 16 A. Yes.
01:18 17 Q. Do you agree with his opinions?
01:18 18 A. No. I do not.
01:18 19 Q. And to be clear for the jury, we're back on
01:18 20 the patent case, right?
01:18 21 A. Yes.
01:18 22 Q. All right. Let's start with the validity.
01:18 23 There are four patents that we looked at, and let's
01:18 24 just remind the jury. Just give me a second.
01:18 25 There are four patents that we looked at,

01:18 1 right?
01:18 2 A. Yes. There are.
01:18 3 MR. HUNG: If we go to Slide 48,
01:18 4 Mr. Smith.
01:18 5 BY MR. HUNG:
01:18 6 Q. Did you hear Dr. Spiegelberg testify that the
01:18 7 material patents are invalid if they are infringed?
01:19 8 A. Yes. I did.
01:19 9 Q. Do you agree with that opinion?
01:19 10 A. No. I do not.
01:19 11 Q. Why not?
01:19 12 A. The invalidity issue and the infringement
01:19 13 issue, validity and infringement are different issues
01:19 14 in this case.
01:19 15 Q. Well, can you remind the jury what the
01:19 16 infringement issues are? And let's go to Slide 49 to
01:19 17 help.
01:19 18 A. Yes. So there are 4 patents and 11 claims,
01:19 19 and for all of them, the infringement issue is
01:19 20 basically if the soft layer of Zendura FLX has an
01:19 21 elongation at break greater than 200 percent.
01:19 22 Q. And now let's go to Claim 1 of the '090
23 patent.
01:19 24 Are there any other arguments for
01:19 25 noninfringement?

01:19 1 A. Yes. But they're limited to these two
01:19 2 patents. So for these two patents, there's the
01:19 3 question of blending of the layers. That's the
01:19 4 "consisting of" term.
01:19 5 Q. Are those the only two noninfringement issues
01:19 6 in this case?
01:20 7 A. Yes.
01:20 8 Q. For these four patents, are there any other
01:20 9 noninfringement issues?
01:20 10 A. No.
01:20 11 Q. Do those issues have anything to do with
01:20 12 whether the patents are valid?
01:20 13 A. No.
01:20 14 Q. What's the issue on validity?
01:20 15 A. The question on validity is enablement, and
01:20 16 that's basically do the patents tell you how to make
01:20 17 the materials to make the aligners.
01:20 18 Q. Okay. I want to make sure the jury
01:20 19 understands what the validity issues are. We've heard
01:20 20 a lot about written description, whether Align's 2012
01:20 21 and 2017 applications describe materials with the
01:20 22 hard-soft-hard configuration.
01:20 23 Is that one of the issues for validity?
01:20 24 A. No. In this case there is no issue of written
01:20 25 description.

01:20 1 Q. Did the patent examiner find that the original
01:20 2 application described the full scope of the claims,
01:20 3 described the full scope of the claims that Align is
01:20 4 asserting here?
01:20 5 A. Yes. They did.
01:20 6 Q. Is Straumann challenging that finding?
01:21 7 A. No. They are not.
01:21 8 Q. So to confirm, do the patent applications that
01:21 9 Align filed before Zendura FLX describe a multi-layer
01:21 10 material that is one soft layer, one hard layer, and a
01:21 11 third layer that can be hard or soft?
01:21 12 A. Yes. They did.
01:21 13 Q. Did the examiners consider whether the claimed
01:21 14 inventions were new and nonobvious when Align filed its
01:21 15 patents?
01:21 16 A. Yes. That is one of the things they
01:21 17 considered and determined.
01:21 18 Q. Is Straumann challenging those determinations?
01:21 19 A. No.
01:21 20 Q. Okay. Let's turn to the core issue on
01:21 21 validity and enablement. Okay?
01:21 22 Do the examiners consider that issue, whether
01:21 23 the materials patents taught one to make and use the
01:21 24 patented invention?
01:21 25 A. Yes. They considered it as they were deciding

01:21 1 to issue the patent.
01:21 2 Q. Do you think they got it right?
01:21 3 A. Yes.
01:21 4 Q. Why do you think the patents enable someone to
01:21 5 make and use the claimed invention?
01:21 6 A. Well, because the claims tell you the
01:22 7 materials you want for the layers. They tell you that
01:22 8 you grab a Layer 1 material. That's a copolyester with
01:22 9 certain properties, including -- with certain
01:22 10 properties, and then the TPU elastomer layer with
01:22 11 certain properties, and then the third layer. So they
01:22 12 tell you what to pick.
01:22 13 And then to make the multi-layer sheet from
01:22 14 that is just a matter of standard polymer processing.
01:22 15 And then to thermoform the sheet is, again, just
01:22 16 standard thermoforming.
01:22 17 Q. Now, we have Claim 1 of the '090 up. So let's
01:22 18 just stick with this.
01:22 19 And using this claim, can you just describe
01:22 20 what you just said?
01:22 21 A. Yes. So the claim tells you that you need a
01:22 22 multi-layer sheet. It tells you that you need a first
01:22 23 layer. That's the hard copolyester. And it has
01:22 24 properties, including, for example, an elongation at
01:22 25 break of greater than 70 percent.

01:23 1 And then there's the second layer. They tell
01:23 2 you it's the TPU elastomer. That's the soft layer.
01:23 3 And among the properties that it needs is the
01:23 4 elongation at break of greater than 200 percent.
01:23 5 And then you need a third layer.
01:23 6 Q. Okay. Let's do a hypothetical. Pretend
01:23 7 you're using these inventions to make SmartTrack.
01:23 8 How would you do it?
01:23 9 A. Well, I would follow the instructions. So I
01:23 10 would first go to like a polymer database. That's
01:23 11 often how we pick the materials. And I'd be looking
01:23 12 for the first layer.
01:23 13 So I would set my filters at copolyester.
01:23 14 Then I would add flexural modulus greater than
01:23 15 150,000 PSI. Then I'd add an elongation at yield of
01:23 16 greater than 4 percent.
01:23 17 Then I'd add tensile modulus greater than
01:23 18 150,000 PSI. Then I'd add tensile strength at yield
01:23 19 between 400 and 6,500 PSI. And then I'd add elongation
01:23 20 at break of greater than 70 percent. And then I'd get
01:24 21 a list, and I could pick from that narrowed-down list.
22 Then I'd go do the same thing for the second
01:24 23 layer. I'd switch my material to TPU. I would filter
01:24 24 on ultimate tensile strength greater than 5,000 PSI and
01:24 25 elongation at break greater than 200 percent.

01:24 1 Then I'd also put in a filter for hardness in
01:24 2 the range of 60A to 85D on the Shore scale, and then
01:24 3 I'd get my list and I could pick those.
01:24 4 So once I have those materials, for
01:24 5 SmartTrack, my third layer, I could pick the TPU again.
01:24 6 So I know the materials I'm going to use. Then I just
01:24 7 go make the sheet using standard polymer processing.
01:24 8 So if I have the material -- if I have the
01:24 9 equipment myself, I can -- I can actually just make it.
01:24 10 If I don't have the equipment, I can use a contract or
01:24 11 a toll manufacturer to do that for me because it's a
01:24 12 standard approach.
01:24 13 Q. All right. I want to take us back to
01:25 14 Dr. Spiegelberg's "if" opinion. Okay?
01:25 15 When he said the patent claims are invalid if
01:25 16 they're infringed, what did you understand him to be
01:25 17 saying?
01:25 18 A. Basically, he says you have to do undue
01:25 19 experimentation because you have to wait until after
01:25 20 you make a sheet of something you think might work and
01:25 21 then run the test on the sheet and then back out the
01:25 22 properties and see if you got what you wanted and
01:25 23 that's difficult.
01:25 24 Q. In your binder is PTX-959.
01:25 25 Can you take a look at that and let me know if

01:25 1 you recognize that, ma'am?
01:25 2 A. Yes. I recognize this.
01:25 3 MR. HUNG: Can we offer this?
01:25 4 MR. MUELLER: No objection.
01:25 5 THE COURT: Admitted.
01:25 6 MR. HUNG: Now, let's put this up, Slide
01:25 7 3. This is PTX-959.
8 BY MR. HUNG:
01:25 9 Q. Using this document, which is TREX discussing
01:25 10 SmartTrack, explain why Dr. Spiegelberg's approach to
01:26 11 enablement is wrong.
01:26 12 A. So this is a test report on TREX, which is the
01:26 13 SmartTrack material, and it shows you that if you test
01:26 14 the multi-layer sheet, you don't get the right values
01:26 15 for the individual layers.
01:26 16 So you can see here, elongation is recorded as
01:26 17 92 percent. And what's happening there is the
01:26 18 copolyester is breaking. It's the weak link when you
01:26 19 pull on it. And, therefore, you're not getting the
01:26 20 measure of properties of the second layer.
01:26 21 So if you do this, the values you get give you
01:26 22 the wrong information for the layers. And the reason
01:26 23 we know that -- one of the reasons we know that this is
01:26 24 not the way to do it is because the patents are
01:26 25 covering SmartTrack. And so with this number, it would

01:26 1 say the patents don't cover SmartTrack. And so it
01:27 2 doesn't make sense to do it this way. So that's how we
01:27 3 know.
01:27 4 Q. Okay. After you've selected the materials, we
01:27 5 just talked about that, what do you do next?
01:27 6 A. Well, as I said, you would make the
01:27 7 multi-layer either directly or with a contract or toll
01:27 8 manufacturer.
01:27 9 Q. Okay. Help the jury understand, what's a
01:27 10 contract or toll manufacturer?
01:27 11 A. These are companies -- manufacturing companies
01:27 12 that manufacture things for other people. So the
01:27 13 reason we like them is because they have the equipment,
01:27 14 and the equipment is expensive.
01:27 15 So you can go to them. So you don't have to
01:27 16 buy and maintain and operate the equipment yourself or
01:27 17 try and keep the equipment fully loaded.
01:27 18 Also, the contract manufacturers have the
01:27 19 know-how, the standard know-how, and so it's very
01:27 20 efficient to go to them for the portion of time,
01:27 21 machine time, that you need.
01:27 22 Q. Is it common to use these kind of companies?
01:28 23 A. Yes. In fact, Align and Bay Materials both
01:28 24 use these types of companies.
01:28 25 MR. HUNG: Let's go back to that claim,

01:28 1 Slide 2, Claim 1 of the '090 patent.
2 BY MR. HUNG:
01:28 3 Q. We've heard lots of discussions about
01:28 4 development criteria. Do you have to meet specific
01:28 5 criteria when making the multi-layer sheet and then the
01:28 6 aligner?
01:28 7 A. Well, no. The claims are not about
01:28 8 multi-layer sheet properties. It's really about the
01:28 9 layer properties. So the criteria are related to
01:28 10 layers, not the end sheets or the aligners from them.
01:28 11 Q. Now, Dr. Reitman, Bay Materials, and
01:28 12 Mr. Lahlouh were able to make a multi-layer material,
01:28 13 right?
01:28 14 A. Yes.
01:28 15 Q. How does that inform your opinion on whether
01:28 16 making the patent materials is hard?
01:28 17 A. Just as an example of the -- it's standard
01:28 18 polymer processing, so it was not difficult to do.
01:28 19 Q. Take a look at PTX-46.
01:29 20 How does that -- it's been admitted. How does
01:29 21 this support your opinion that it's not hard to make
01:29 22 the claimed materials?
01:29 23 A. So this is a report from Mr. Lahlouh, and you
01:29 24 can see that he said that he looked at Invisalign's
01:29 25 patents which tells him that it's a three-layer

01:29 1 construction with a hard copolyester and a soft TPU,
01:29 2 and that based on that information, he and Ray -- so
01:29 3 that's Ray Stewart, his boss -- predicted and then
01:29 4 built three SmartTrack simulate constructions.
01:29 5 Q. All right. Let's take a look at another
01:29 6 document, PTX-51.
01:29 7 Do you recognize this document?
01:29 8 MR. MUELLER: May we approach at sidebar?
01:29 9 THE COURT: Sure.
01:29 10 (Bench conference.)
01:29 11 MR. MUELLER: Your Honor, this is a
01:30 12 document we discussed with you yesterday morning, and
01:30 13 you may recall -- I can show it to you.
01:30 14 It's a very short e-mail between John
01:30 15 Lahlouh and Ray Stewart. It's from Ray Stewart.
01:30 16 Notably it's dated 2019. There's a reference to a
01:30 17 knockoff.
01:30 18 We know one thing. It had nothing to do
01:30 19 with the product in this case which was released the
01:30 20 year before in 2018. Your Honor told Align if it had
01:30 21 any basis to link this to enablement, to give us a
01:30 22 cite. They never did. It's not in Dr. Reitman's
01:30 23 report. The only reason they're trying to use it is to
01:30 24 object that we're not offering it.
01:30 25 MR. HUNG: So, first of all, they filed a

01:30 1 MIL on this, and they lost in the MIL. That's why it
01:30 2 should come in. It's cited twice, cited in Paragraphs
01:30 3 146 right here and --
01:30 4 MR. MUELLER: Sir, it's not enablement.
01:30 5 MR. HUNG: And it's also here.
01:30 6 THE COURT: I'll allow it in.
01:30 7 (Bench conference concludes.)
8 BY MR. HUNG:
01:31 9 Q. Dr. Reitman, turning back to PTX-51 in your
01:31 10 binder, the exhibit I just mentioned, can you see
01:31 11 whether you recognize that e-mail?
01:31 12 A. Yes, I do.
01:31 13 Q. And what is it?
01:31 14 A. It is an e-mail between Mr. Lahlouh and Ray
01:31 15 Stewart, the two that were just talking, and it shows
01:31 16 that they are talking about just basically changing
01:31 17 layers around, that they know how to place different
01:31 18 layers in different positions.
01:31 19 MR. HUNG: We'd offer it.
01:31 20 MR. MUELLER: Nothing further on this
01:31 21 one, Your Honor, beyond what we've said.
01:31 22 THE COURT: Admitted.
01:31 23 MR. HUNG: All right. Let's publish it.
01:31 24 THE COURT: I'm sorry, I thought I'd
01:31 25 already admitted it at the bench. So apologies.

01:31 1 BY MR. HUNG:
01:31 2 Q. Dr. Reitman, can you walk through this
01:31 3 document and explain how this informs your opinions
01:31 4 that it's not hard to make the claimed -- the patented
01:31 5 invention?
01:31 6 A. So this e-mail basically says that they know
01:31 7 that they can move the TPU around as layers. They're
01:32 8 saying what if we put the TPU on the outside to make a
01:32 9 knockoff of SmartTrack. And that's putting TPU on the
01:32 10 outside of a copolyester.
01:32 11 Q. Now, let's go to -- thank you.
01:32 12 MR. HUNG: Let's go to Dr. Li's
01:32 13 declaration. That's DTX-84, already admitted.
01:32 14 BY MR. HUNG:
01:32 15 Q. Dr. Spiegelberg offered certain opinions where
01:32 16 he says this is hard to make because, look, you see
01:32 17 headings like "not predictable," "no reasonable
01:32 18 expectation of success," "unexpected efficacy."
01:32 19 Do those headings and these discussions that
01:32 20 you see in Dr. Li's declaration affect your view that
01:32 21 one knows how to make the patented inventions?
01:32 22 A. No. I mean, these headings reflect what
01:32 23 people understood before the invention.
01:32 24 So before the invention, it was hard to
01:32 25 predict if it was going to be a good aligner material,

01:32 1 if you were going to get better results. But the
01:33 2 patent actually teaches you, gives you instructions for
01:33 3 how to make something that does give you the improved
01:33 4 performance.
01:33 5 So these headers make complete sense for
01:33 6 before the invention, and then with the invention you
01:33 7 get -- you have an expectation of improved results.
01:33 8 And that's actually borne out in the data.
01:33 9 Q. All right. Let's switch to the second topic,
01:33 10 Dr. Li's declaration. Dr. Li, who's still sitting
01:33 11 patiently in the gallery.
01:33 12 MR. HUNG: And let's pull up PTX-32.7.
13 BY MR. HUNG:
01:33 14 Q. And can you walk through what you understand
01:33 15 Dr. Spiegelberg's opinions to be on this second issue?
01:33 16 A. So on the second issue, Dr. Spiegelberg
01:33 17 basically says that Dr. Li lied in her declaration and
01:33 18 that she withheld data from the Patent Office with the
01:33 19 intent to deceive them.
01:33 20 Q. Do you agree with those opinions?
01:33 21 A. No. I do not.
01:33 22 MR. HUNG: All right. Let's pull up
01:33 23 DTX-422, which is the red line copy that defendants
01:34 24 created of comparing the two declarations.
25 BY MR. HUNG:

01:34 1 Q. Dr. Spiegelberg says: Look, her declaration
01:34 2 language changed between 2017 and 2019.
01:34 3 What do you say on that?
01:34 4 A. Well, the 2019 declaration is actually a
01:34 5 different declaration on a different set of claims
01:34 6 responding to a different set of questions from the
01:34 7 examiner. So I would expect it to be different.
01:34 8 Q. In your experience, is it unusual to submit
01:34 9 different sets of claims from an original application?
01:34 10 A. No. That's pretty common.
01:34 11 Q. Now, let's look at that declaration from
01:34 12 Dr. Li without the red line. And can you remind --
01:34 13 actually, let's take a step back.
01:34 14 You read this, right, the whole declaration?
01:34 15 A. Yes.
01:34 16 Q. Did anything trouble you in this declaration?
01:34 17 A. No. It all seemed reasonable.
01:34 18 Q. Can you remind the jury, now focusing on
01:34 19 Paragraph 2, why was she submitting this declaration to
01:34 20 the Patent Office?
01:35 21 A. Basically the Patent Office had rejected the
01:35 22 claims, and she was explaining that the declaration is
01:35 23 because the Patent Office thought that her coworkers'
01:35 24 work, Chen and DeSimone, was similar.
01:35 25 And so this declaration is to show that the

01:35 1 invention is actually different than the work of Chen
01:35 2 and DeSimone, her coworkers.
01:35 3 Q. You were here again when Dr. Spiegelberg
01:35 4 testified on this declaration, right?
01:35 5 A. Yes.
01:35 6 Q. Is he challenging every sentence of this
01:35 7 12-page declaration?
01:35 8 A. No. I think it's just two sentences.
01:35 9 Q. Right. Let's look at the first sentence.
01:35 10 Thank you.
01:35 11 This sentence refers to -- begins "We found."
01:35 12 Can you explain to the jury why this sentence is true?
01:35 13 A. Well, the invention is the multi-layer
01:35 14 materials with hard and soft polymer layers that give
01:36 15 you beneficial properties. And I looked at the
01:36 16 underlying data. I actually analyzed all the
01:36 17 information, and this is what the data tells you.
01:36 18 Q. Does every multi-layer material, according to
01:36 19 the claims, need to meet all of these characteristics
01:36 20 you see here, the elongation, time stress-relaxation,
01:36 21 durability, thermoform ability?
01:36 22 A. No, the improvement is for the properties on
01:36 23 balance. So what we're looking to do is to make a
01:36 24 better overall product, and so it's the combination
01:36 25 that matters.

01:36 1 Q. Did you test Dr. -- did you look at Dr. Li's
01:36 2 spreadsheets to see if her statements were consistent
01:36 3 with her testing?
01:36 4 A. Yes. I did.
01:36 5 MR. HUNG: Can we put up PTX-1746? I
01:36 6 understand it's just a demonstrative. We're not going
01:36 7 to offer it. The spider graphs.
01:36 8 MR. MUELLER: No objection, Your Honor.
01:36 9 MR. HUNG: As a demonstrative.
01:36 10 THE COURT: Admitted.
01:36 11 BY MR. HUNG:
01:36 12 Q. Now, these are spider graphs. Can you explain
01:37 13 what these are and -- yeah, what they are?
01:37 14 A. Okay. There's a lot on here. But I think
01:37 15 these are really helpful because this is a way to look
01:37 16 at comparisons when you care about multiple things at
01:37 17 the same time.
01:37 18 So you can see that the graphs, they're
01:37 19 five-sided. That's because I'm looking at things --
01:37 20 five things at a time.
01:37 21 On the left-hand side, I have a graph that's
01:37 22 for dual-layer materials. That's the two layers.
01:37 23 On the right-hand side, I have the three-layer
01:37 24 materials. But the setups are basically the same.
01:37 25 MR. MUELLER: And, Your Honor, I'm sorry,

01:37 1 just one note for the record. These are
01:37 2 demonstratives, not for admission.
01:37 3 THE COURT: Correct.
01:37 4 A. So the five things that I care about here, and
01:37 5 I've done a lot of other analysis as well, but I'm
01:37 6 showing you this. The two at the bottom, elongation at
01:37 7 break and elongation at yield, that actually is for the
01:37 8 whole sheet. And that relates to durability.
01:37 9 In the middle, the working range and the
01:37 10 stress relaxation, that relates to tooth positioning.
01:38 11 And at the top, the tensile modulus, that
01:38 12 relates to comfort. Okay. So these are five of the
01:38 13 things that we care about.
01:38 14 The red dotted line is for EX30. That's the
01:38 15 state of the art. That's where we're starting. And it
01:38 16 was a pretty good material for some of the things, but
01:38 17 we know that it's not as good as we want it to be in
01:38 18 stress relaxation.
01:38 19 So you can see a green arrow that's going to
01:38 20 take that red dotted line out toward the edges. I want
01:38 21 to make that higher.
01:38 22 We also know that EX30 is uncomfortable. We
01:38 23 would like to bring the tensile modulus down. So
01:38 24 that's why at the top you see the green arrow where
01:38 25 it's coming down towards the middle.

01:38 1 So our goal is to take the red and to reshape
01:38 2 it to get something on balance that's better.
01:38 3 The blue line is SmartTrack. So you can see
01:38 4 that SmartTrack did that. It got better at stress
01:38 5 relaxation. It got better in working range, and it
01:38 6 reduced the tensile modulus. So that was better.
01:38 7 But what you can see in this -- these two
01:39 8 graphs is these are the rest of those 23 materials. So
01:39 9 these are the things from Dr. Li's data. Each dot on
01:39 10 there reflects a lot of tests, and they show that all
01:39 11 of these materials also on balance are better than
01:39 12 EX30.
01:39 13 And that's why I reached the conclusions that
01:39 14 I did.
01:39 15 BY MR. HUNG:
01:39 16 Q. All right. Let's turn to the second sentence
01:39 17 that Dr. Spiegelberg challenges from this 12-page
01:39 18 declaration, Paragraph 5. The sentence that says,
01:39 19 "During evaluation of the over 250 materials."
01:39 20 Can you explain why this sentence is true?
01:39 21 A. Well, because it -- that's what the data also
01:39 22 says, right? So the -- all of those materials on
01:39 23 balance, like I just showed you, are better than EX30.
01:39 24 So the goal of this work was to be better than EX30.
01:39 25 It turns out that they also -- also meet the

01:39 1 product requirements for SmartTrack later, but all of
01:40 2 these are better than EX30, which was actually where we
01:40 3 started.
01:40 4 Q. Let's pause here.
01:40 5 Did the Patent Office allow the claims right
01:40 6 after she submitted this declaration?
01:40 7 A. No. There was some back-and-forth. Actually,
01:40 8 the claims were rejected several more times.
01:40 9 Q. Now, you might have a huge exhibit in your --
01:40 10 or maybe just portions of it, JTX-9 in your binder, can
01:40 11 you identify that?
01:40 12 A. Yes. This looks to be part of the file
01:40 13 history for the '613 patent. It's actually about a
01:40 14 thousand pages. I have, I think, a portion of it here.
01:40 15 MR. HUNG: We'd like to offer JTX-9.
01:40 16 MR. MUELLER: No objection, Your Honor.
01:40 17 THE COURT: Admitted.
01:40 18 BY MR. HUNG:
01:40 19 Q. To help the jury, if it were a thousand pages,
01:40 20 what does that show? What is that thing?
01:40 21 A. So this is going to tell you about the
01:40 22 communications between the inventor and the Patent
01:40 23 Office. And so if you look at this presentation file,
01:40 24 first you have the -- Align is submitting the '613
01:41 25 application, which is a continuation of the 2012

01:41 1 application in 2017. Okay? So that's where we're
01:41 2 starting for the '613.
01:41 3 Two years later, the examiner looks at it and
01:41 4 rejects it. And so Align reads the rejection and
01:41 5 prepares a response in which the claims are amended and
01:41 6 Dr. Li's declaration is provided. Okay?
01:41 7 But then the examiner rejects it again. Align
01:41 8 amends again. The examiner rejects again. And then
01:41 9 Align meets with the Patent Office to answer questions
01:41 10 about the invention. This just makes it easier to get
01:41 11 everything out and discussed.
01:41 12 About a week later, Align amends the claims
01:41 13 based on that meeting, and then the Patent Office
01:41 14 grants the patent.
01:41 15 Q. You just mentioned a meeting. Is that normal?
01:41 16 A. Yes. It's pretty normal to have that kind of
01:42 17 communication in a process like this.
01:42 18 Q. All right. Help the jury understand, because
01:42 19 they may not go through the thousand pages, what's the
01:42 20 takeaway from this timeline?
01:42 21 A. Well, one of them is that the examiners
01:42 22 rejected the claims twice before they ultimately --
01:42 23 after the declaration before they ultimately issued it.
01:42 24 So the declaration was not enough. There were two
01:42 25 rejections and other changes and discussions before the

01:42 1 patent was issued.
01:42 2 Q. All right. Let's look at the notice of
01:42 3 allowance, which is the reasons the examiner says why
01:42 4 he or she's granting the patent.
01:42 5 MR. HUNG: And let's pull that up.
01:42 6 That's JTX-9 at Page 7150 to 7157.
7 BY MR. HUNG:
01:42 8 Q. And can you explain what the examiner said in
01:42 9 its notice of allowance?
01:42 10 A. Well, remember, the first rejection was
01:42 11 actually related to whether or not the prior work by
01:42 12 Chen and DeSimone was different. And what this says is
01:42 13 that the examiner concluded that the invention is
01:43 14 different than that prior work.
01:43 15 Q. In this case, is Straumann challenging whether
01:43 16 DeSimone and Chen invalidate the patented claims?
01:43 17 A. No. They are not.
01:43 18 Q. All right. Let's end with spreadsheets, okay?
01:43 19 A. Okay.
01:43 20 MR. HUNG: Let's put up JTX-77.
21 BY MR. HUNG:
01:43 22 Q. This is her first spreadsheet. And
01:43 23 Dr. Spiegelberg says that Dr. Li should have submitted
01:43 24 this spreadsheet to the Patent Office.
01:43 25 What's your view on that?

01:43 1 A. I don't think that would have been helpful
01:43 2 because the raw data like this is just a lot of data.
01:43 3 What's more helpful would be a synthesized summary of
01:43 4 what was found, which is what she did communicate to
01:43 5 the Patent Office.
01:43 6 Q. Here's the second spreadsheet. Let's talk
01:43 7 about that, JTX-79. Dr. Spiegelberg says she should
01:43 8 have submitted this spreadsheet too.
01:44 9 First, can you remind the jury what this
01:44 10 spreadsheet is?
01:44 11 A. This is related to the commercialization of
01:44 12 SmartTrack as a product. And so it was created to show
01:44 13 why SmartTrack was commercialized compared to the other
01:44 14 things that they made.
01:44 15 Q. Is this backwards-looking? Was this made in
01:44 16 advance?
01:44 17 A. No. This is backwards-looking. So they've
01:44 18 now selected SmartTrack as the version that they want
01:44 19 to make into a commercial product. And what they're
01:44 20 doing is they're building a document that says this is
01:44 21 why we picked SmartTrack of all of the things that we
01:44 22 have developed.
01:44 23 Q. This might be confusing. In this spreadsheet
01:44 24 is a reason to reject.
01:44 25 What does "reject" mean there?

01:44 1 MR. HUNG: Go back.
01:44 2 A. That means reject compared to turning this
01:44 3 into the SmartTrack product. It's not the same thing
01:44 4 as reject for not being better than the prior art.
01:45 5 This is related to the SmartTrack. This is -- this is
01:45 6 different than the comparison to EX30.
01:45 7 And that's why it wouldn't be relevant to the
01:45 8 application because the EX30 is what you're comparing
01:45 9 to for is my patent doing something good. So this is
01:45 10 about I've already made a lot of things that are better
01:45 11 than what's EX30, this is why I picked the SmartTrack.
01:45 12 BY MR. HUNG:
01:45 13 Q. All right. Now, SmartTrack being the best,
01:45 14 out of all the things she tested, does that mean the
01:45 15 patents should be limited to SmartTrack?
01:45 16 A. No. And they aren't.
01:45 17 Q. Data. Were you here when Mr. Lahlouh came and
01:45 18 stacked all of his notebooks on the witness stand?
01:45 19 A. Yes.
01:45 20 Q. Do inventors normally submit notebooks to the
01:45 21 Patent Office?
01:45 22 A. No. Not in my experience.
01:45 23 Q. Did Mr. Lahlouh, as far as you know?
01:45 24 A. No. I think he said he didn't, and you can
01:45 25 look at the front of his patents to see if he did, and

01:45 1 he didn't.
01:45 2 Q. Now, Dr. Li provided other information to the
01:46 3 Patent Office, right?
01:46 4 A. Yes. As part of the application, she did.
01:46 5 Q. Charts?
01:46 6 A. Yes. Charts.
01:46 7 Q. Okay. Let's pull those up.
01:46 8 These are charts from all four of the patents,
01:46 9 that are in every patent.
01:46 10 Can you tell the jury what these charts
01:46 11 depict?
01:46 12 A. Yes. So this is telling you basically that
01:46 13 the material of the invention is better than the prior
01:46 14 art, and it describes it in a couple of different ways.
01:46 15 So M2 is the material of the invention. M1 is the
01:46 16 prior art.
01:46 17 So in the top two graphs, these are related to
01:46 18 stress relaxation. You start at a high stress and then
01:46 19 the stress sort of decays with time. And what you can
01:46 20 see is, on the left, proportionally, the decay is much
01:46 21 worse with the prior art. The invention is much
01:46 22 better.
01:46 23 In an absolute sense, on the right, again, the
01:46 24 invention is better and that includes that initial
01:46 25 force related to comfort.

01:47 1 In the lower left on Figure 7, it's telling
01:47 2 you about the working range, and you can see that
01:47 3 Material 2 gives you a better working range. It also
01:47 4 has a lower initial force, again, related to comfort.
01:47 5 In Figure 8 on the lower right, you can see
01:47 6 the comparison over time again. So that comparison of
01:47 7 initial force and then how much force you're losing,
01:47 8 and in this case, it's compared to the biologically
01:47 9 acceptable working range, so how long can you keep that
01:47 10 force above the biological threshold without being
01:47 11 uncomfortably high in your initial force.
01:47 12 So these are reflections of the data and show
01:47 13 the comparison and improvement over the prior art if
01:47 14 you follow the instructions for the layers.
01:47 15 Q. Did Dr. Li submit other information to the
01:47 16 Patent Office, for example, about clinical studies?
01:47 17 A. Yes. She did.
01:48 18 MR. HUNG: Okay. So let's pull that up.
01:48 19 Next slide.
20 BY MR. HUNG:
01:48 21 Q. Okay. This is from her declaration.
01:48 22 Paragraph 11.
01:48 23 What did she say on clinical study results?
01:48 24 A. So this also shows that the aligner materials
01:48 25 provide improved aligner results clinically. So there

01:48 1 was a clinical study of over a thousand patients, and
01:48 2 they saw significantly improved results. Very exciting
01:48 3 in terms of performance.
01:48 4 Q. Was this the only clinical study information
01:48 5 she provided?
01:48 6 A. No. She also included a retrospective study,
01:48 7 so that's a backwards-looking study, of about 58,000
01:48 8 patients, again, demonstrating the improved performance
01:48 9 for aligners when they are made from these materials
01:48 10 described in the patent.
01:48 11 Q. Can you summarize for the jury's benefit your
01:48 12 two opinions, first on enablement and then on
01:49 13 inequitable conduct?
01:49 14 A. There's definitely enough information in these
01:49 15 patents to know how to use the patent, how to make
01:49 16 these things. And I do not see any evidence of
01:49 17 inequitable conduct by Dr. Li or Align in the
01:49 18 submissions.
01:49 19 MR. HUNG: Thank you very much,
01:49 20 Dr. Reitman.
01:49 21 CROSS-EXAMINATION
01:49 22 BY MR. MUELLER:
01:49 23 Q. Good afternoon, Dr. Reitman.
01:49 24 A. Good afternoon.
01:49 25 Q. Dr. Reitman, I take it your testimony today is

01:49 1 that the prosecution or the back-and-forth with the
01:50 2 Patent Office for the patents in this case was
01:50 3 standard, nothing to see here.
01:50 4 Is that a fair characterization?
01:50 5 A. Well, I didn't see anything that was unusual.
01:50 6 So yes.
01:50 7 Q. Nothing unusual. This is simply an ordinary
01:50 8 patent prosecution with typical statements made by the
01:50 9 patent applicant; is that fair?
01:50 10 A. Looking at this from a technical perspective,
01:50 11 I did not see anything unusual as it relates to the
01:50 12 issues at hand here.
01:50 13 Q. Now, you understand our position in this case
01:50 14 is that this is far from usual and that the larger
01:50 15 circumstances surrounding the back-and-forth with the
01:50 16 Patent Office as well as the particular statements made
01:50 17 to the Patent Office were very unusual? You understand
01:50 18 that's our position?
01:50 19 A. I think I understand that. Yes.
01:50 20 MR. MUELLER: And if we go to DDX-8.8.
01:50 21 BY MR. MUELLER:
01:51 22 Q. You've seen this over the course of this
01:51 23 trial, this demonstrative, DDX-8.8?
01:51 24 A. I have seen this in the courtroom, yes.
01:51 25 Q. And there's been testimony about the market

01:51 1 share in the U.S. market for doctor-directed clear
01:51 2 aligners over the course of this trial, correct?
01:51 3 A. I think so.
01:51 4 Q. And you understand that our position is that
01:51 5 Align has a monopoly position and has been using
01:51 6 anticompetitive conduct to suppress competition? Do
01:51 7 you understand that's our position?
01:51 8 A. I think so.
01:51 9 Q. And you understand, Dr. Reitman, that one of
01:51 10 the ways, and there are others, but one of the ways we
01:51 11 contend that's happened is by making false
01:51 12 representations to the Patent Office to try to obtain
01:51 13 patents to hurt a competitor, namely ClearCorrect, and
01:51 14 the Zendura FLX material? Do you understand that's our
01:51 15 position?
01:51 16 A. Yes. I think I do.
01:51 17 Q. Now, you also know, Dr. Reitman, that when the
01:51 18 Zendura FLX material was released in 2018, it was
01:51 19 immediately identified at the very highest level of
01:52 20 Align as a competitive threat, correct?
01:52 21 A. I am aware that there was discussion about its
01:52 22 presence on the market and activity in the market, yes.
01:52 23 Q. But more than that, it was identified at the
01:52 24 highest level of the company, the chief executive
01:52 25 officer, as a competitive threat to the SmartTrack

01:52 1 material used by Align, true?
01:52 2 A. I think that's what's been communicated. Yes.
01:52 3 Q. Well, let's just refresh ourselves, if we
01:52 4 could, Dr. Reitman.
01:52 5 MR. MUELLER: Let's go to DTX-2867. This
01:52 6 is an admitted exhibit.
7 BY MR. MUELLER:
01:52 8 Q. Here, we have an executive management
01:52 9 committee presentation from April of 2019, right?
01:52 10 A. Yes. That is my understanding.
01:52 11 Q. And this was after the Zendura FLX material
01:52 12 had been announced and released by Bay Materials,
01:52 13 correct?
01:52 14 A. I believe so. Yes.
01:53 15 MR. MUELLER: Let's go to Page 2, if we
16 could.
17 BY MR. MUELLER:
01:53 18 Q. And in the bottom of the page under "Where are
01:53 19 we with two months into the year," there's a bullet
01:53 20 point under "external." And it says: Bay Materials
01:53 21 hard-soft-hard structure big threat to superiority of
01:53 22 SmartTrack.
01:53 23 Right?
01:53 24 A. Yes. I see that bullet point.
01:53 25 Q. Now, Dr. Reitman, that's part of the relevant

01:53 1 context for what happened next in the Patent Office.
01:53 2 Would you agree?
01:53 3 A. I don't know.
01:53 4 Q. Well, Dr. Reitman, don't you know that the
01:53 5 chief executive officer and other top executives were
01:53 6 in touch with Dr. Li about Zendura FLX?
01:53 7 A. Broadly speaking, I think there's information
01:53 8 about that.
01:53 9 Q. Well, in fact, there's exhibits that have been
01:53 10 introduced, and we asked Dr. Li about it last week, she
01:53 11 was in touch with top executives at the company about
01:53 12 Zendura FLX, true?
01:53 13 A. I don't remember exactly what she said, but I
01:54 14 think there was communication about the products. So
01:54 15 yes.
01:54 16 Q. And what happened next was the company went
01:54 17 back to the Patent Office, true?
01:54 18 A. I think the timeline shows that, yes.
01:54 19 There -- that's the sequencing just in time. Yeah.
01:54 20 Q. And in fact, what happened was Dr. Li then
01:54 21 submitted a new declaration to the Patent Office after
01:54 22 communications among the executives and with her about
01:54 23 the competitive threat of Zendura FLX, true?
01:54 24 A. Well, the timeline for the patent response is
01:54 25 what we just showed. I do think it occurs after in

01:54 1 time what you're talking about.
01:54 2 Q. And in her 2016 declaration, Dr. Li, her 2016
01:54 3 declaration before Zendura FLX, she was focused on
01:54 4 soft-hard-soft, correct?
01:54 5 A. Well, sure, because that was for a different
01:54 6 set of claims.
01:54 7 Q. Dr. Reitman, in her 2016 declaration, yes or
01:55 8 no, Dr. Li was focused on soft-hard-soft?
01:55 9 A. Yes. Yes. I think that's true for 2016.
01:55 10 Q. And the 2016 declaration had followed years
01:55 11 and years and years and years of research and
01:55 12 development by Dr. Li, correct?
01:55 13 A. Yes. There had been a number of years and
01:55 14 many experiments.
01:55 15 Q. She had conducted over 260 experiments over a
01:55 16 period of years, right?
01:55 17 A. Yes.
01:55 18 Q. And she in fact worked with 19 other companies
01:55 19 outside of Align, right?
01:55 20 A. I believe that's true for that program. Yes.
01:55 21 Q. And after all that work, Dr. Li told the
01:55 22 Patent Office --
01:55 23 MR. MUELLER: Let's go to DTX-462 at
01:55 24 Pages -- at Paragraph 5.
25 BY MR. MULLER:

01:55 1 Q. This is her 2016 declaration. And I want to
01:55 2 focus on the "During evaluation of the over 250
01:55 3 materials."
01:55 4 Do you see that sentence?
01:55 5 A. Yes. I do see that.
01:56 6 Q. And she said: Only, only the materials of
01:56 7 instant claims met Align's development criteria.
01:56 8 Correct?
01:56 9 A. Yes. That's what's written there.
01:56 10 Q. And, Dr. Reitman, as we talked about last
01:56 11 week, at that time back in 2016 when this was
01:56 12 submitted, under oath, the instant claims were
01:56 13 soft-hard-soft, true?
01:56 14 A. I don't recall all of them, but yes. They
01:56 15 included those.
01:56 16 Q. And then things changed. In 2019, Dr. Li
01:56 17 submitted a new declaration, correct?
01:56 18 A. Yes.
01:56 19 Q. And tried to broaden the language, right?
01:56 20 A. Well, it addressed different claims, so it's
01:56 21 different language.
01:56 22 Q. Dr. Li -- sorry, Dr. Reitman, Dr. Li changed
01:56 23 the language in her 2019 declaration. That "only"
01:56 24 sentence was changed, right?
01:56 25 A. It is a different sentence for a different

01:57 1 purpose. Yes.
01:57 2 Q. So the language was changed, and in fact the
01:57 3 patent examiner relied on the new language in the new
01:57 4 declaration, right?
01:57 5 A. The examiner had it to consider. Yes.
01:57 6 MR. MUELLER: So let's pull up PDX-32.13.
01:57 7 BY MR. MUELLER:
01:57 8 Q. And this is a slide you used with Mr. Hung,
01:57 9 correct?
01:57 10 A. Yes.
01:57 11 Q. And you showed various back-and-forths and
01:57 12 rejections, right?
01:57 13 A. Yes.
01:57 14 Q. But at the end of the timeline, the examiner
01:57 15 issued something called a notice of allowance, right?
01:57 16 A. Yes.
01:57 17 Q. And the notice of allowance is when the claims
01:57 18 were actually allowed, true?
01:57 19 A. Yes.
01:57 20 Q. So let's take a look at what the examiner
01:57 21 said.
01:57 22 MR. MUELLER: This is DTX-323, and let's
01:57 23 go to Page 3, which is Page 7 of the PDF. I think it's
01:58 24 actually Page 7 of this document.
25 BY MR. MUELLER:

01:58 1 Q. And I want to go to exactly what the patent
01:58 2 examiner said.
01:58 3 I'm sorry, the top paragraph there: The
01:58 4 applicant's affidavit was also found persuasive. In
01:58 5 particular, attention to the statement of the
01:58 6 appliances recited in the claims of the '665
01:58 7 application exhibit, unexpectedly positive results over
01:58 8 previously known appliances.
01:58 9 Do you see that?
01:58 10 A. Yes.
01:58 11 Q. It goes on to say: These unexpected results
01:58 12 are evidenced by clinical studies that were performed
01:58 13 comparing the efficacy of orthodontic appliances as
01:58 14 described and claimed in the '665 application with that
01:58 15 of previously known appliances.
01:58 16 Right?
01:58 17 A. Yes.
01:58 18 Q. Now, in this 2019 declaration, the new one,
01:58 19 that's the one being referred to right there, true?
01:58 20 A. I believe so.
01:58 21 Q. So when it says "the applicant's affidavit,"
01:58 22 that's that new 2019 declaration, right?
01:59 23 A. Yes, with the clinical studies.
01:59 24 Q. And so what the examiner was saying is this
01:59 25 was found persuasive and is referring to the testing

01:59 1 described in that declaration, correct?
01:59 2 A. It's referring to the clinical studies.
01:59 3 Q. And, Dr. Reitman, Dr. Reitman, we can agree
01:59 4 that at this time in 2019 and after, Dr. Li and Align
01:59 5 were trying to get more than soft-hard-soft, true?
01:59 6 A. The four new patents had different claims than
01:59 7 the other patents that had already issued. Yes.
01:59 8 Q. Dr. Reitman, was Align and Dr. Li trying to
01:59 9 get patent coverage of something greater than
01:59 10 soft-hard-soft, yes or no?
01:59 11 A. The new claims are different than the old
01:59 12 claims, and they do cover more than soft-hard-soft.
01:59 13 Q. Okay. And the truth is, Dr. Li had test after
01:59 14 test after test after test where she had failed to find
01:59 15 a material that met her performance criteria. And in
02:00 16 fact, the only one, as she told the Patent Office back
02:00 17 in 2016, that met her performance criteria was
02:00 18 soft-hard-soft, true?
02:00 19 A. No. What she said is materials meeting the
02:00 20 claims and the data shows that the improvements that
02:00 21 lead to the clinical performance were present in all of
02:00 22 these other materials as well.
02:00 23 Q. Dr. Reitman, the claims back then were
02:00 24 soft-hard-soft, correct?
02:00 25 A. For the earlier patents, yes.

02:00 1 Q. And one thing that Dr. Li could have done to
02:00 2 be transparent and upfront with the Patent Office is
02:00 3 said, "Here's data. You decide."
02:00 4 That never happened, correct?
02:00 5 A. The individual data points were not produced,
02:00 6 but the summary does reflect what the data tells you.
02:00 7 Q. Dr. Reitman, did Dr. Li provide her
02:01 8 spreadsheets to the Patent Office, yes or no?
02:01 9 A. No. I already explained that.
02:01 10 Q. Now, you mentioned John Lahlouh, who is the
02:01 11 gentleman who testified last week. He worked at Bay
02:01 12 Materials for years and years, and he was at the center
02:01 13 of the development of Zendura FLX, right?
02:01 14 A. Yes.
02:01 15 Q. He also had a patent application for the
02:01 16 Patent Office, correct? In fact, more than one, but he
02:01 17 had a patent application on his own material, true?
02:01 18 A. Yes.
02:01 19 Q. And he did disclose his data to the Patent
02:01 20 Office, didn't he?
02:01 21 A. There is some information in the application,
02:01 22 not the notebooks, but it talks about using data sheets
02:01 23 and getting properties like he has.
02:01 24 Q. Well, let's take a look. This is his patent,
02:01 25 DTX-595. Let's go to Table 3.

02:01 1 A. What tab is this, please?
02:01 2 Q. Sure. This is Tab 25, and I'll put it on the
02:01 3 screen, Table 3.
02:01 4 Here, we have Mr. Lahlouh telling the Patent
02:02 5 Office how his new material, the hard-soft-hard,
02:02 6 compares to various other benchmarks in the industry,
02:02 7 right?
02:02 8 A. There are ranges of results for a couple of
02:02 9 properties. Yes.
02:02 10 Q. And one of those, as he testified, was a
02:02 11 material that was designed to be a benchmark
02:02 12 representing SmartTrack, right?
02:02 13 A. I don't remember.
02:02 14 Q. Let's go to the abstract of his patent, this
02:02 15 same document.
02:02 16 He told the Patent Office that "improved
02:02 17 dental appliances and polymeric sheet compositions are
02:02 18 disclosed. The polymeric sheet compositions are useful
02:02 19 for making dental appliances having outer layers
02:02 20 comprised of a material having a modulus of from about
02:02 21 1,000 MPA to 2,500 MPA, hard, two of those, and an
02:02 22 inner core" -- and I won't read the whole thing. I'll
02:03 23 cut to soft. He told the Patent Office, "I have a
02:03 24 hard-soft-hard invention."
02:03 25 Right?

02:03 1 A. He says hard and soft. Yes.
02:03 2 Q. And he disclosed testing data to make sure
02:03 3 they had that data in assessing his invention, true?
02:03 4 A. There is -- there are some graphs and data in
02:03 5 here. Yes.
02:03 6 Q. Now, let me ask you about a document that
02:03 7 Mr. Hung showed you, and this is PTX-51.
02:03 8 MR. MUELLER: Let's pull it up.
9 BY MR. MUELLER:
02:03 10 Q. And before I do, we can agree that one thing
02:03 11 that folks in the industry do across the board, Align,
02:03 12 Bay Materials, other companies, is what's called
02:03 13 benchmarking, right?
02:03 14 A. Benchmarking is relatively common. Reverse
02:03 15 engineering is not. But --
02:03 16 Q. Dr. Reitman, if you could please stay with my
02:03 17 question.
02:03 18 Benchmarking is known in the industry,
02:03 19 correct?
02:03 20 A. Yes.
02:03 21 Q. And that's a form of competitive analysis,
02:03 22 right?
02:03 23 A. Yes.
02:03 24 Q. And it's done by Align, true?
02:03 25 A. I believe so.

02:03 1 Q. It's done by Dr. Li; isn't that true?
02:03 2 A. I believe so.
02:03 3 Q. So let's pull this up again, PTX-51.
02:03 4 And you showed this to the jury. And there's
02:04 5 this language here, "Make a knockoff of SmartTrack."
02:04 6 Do you see that?
02:04 7 A. Yes.
02:04 8 Q. Now, again, making a benchmark of a known
02:04 9 thing is something that's done in the industry, true?
02:04 10 A. No. Benchmarking is testing of something that
02:04 11 you acquire or buy.
02:04 12 Q. Well, Dr. Reitman, let's make sure the ladies
13 and gentlemen of the jury aren't confused about why you
14 showed this to them.
02:04 15 You weren't suggesting that Mr. Lahlouh and
02:04 16 his colleagues were copying or making some form of
02:04 17 SmartTrack to sell as their own, were you?
02:04 18 A. For this analysis, I am speaking to the
02:04 19 enablement issue.
02:04 20 Q. Dr. Reitman?
02:04 21 THE COURT: Dr. Reitman.
02:04 22 BY MR. MUELLER:
02:04 23 Q. If you look at the date on the document, what
02:04 24 is it?
02:04 25 A. 2019.

02:04 1 Q. When was Zendura FLX released?
02:04 2 A. 2018.
02:04 3 Q. The year before this, right?
02:04 4 A. Yes.
02:04 5 Q. And so one thing we can be crystal clear on
02:04 6 and absolutely certain of is this has utterly nothing
02:04 7 to do with Zendura FLX, correct?
02:04 8 A. This has to do with multi-layer --
02:05 9 THE COURT: Answer his question.
02:05 10 A. I don't know how fully this relates to Zendura
02:05 11 FLX because Zendura FLX has many attributes.
02:05 12 BY MR. MUELLER:
02:05 13 Q. Dr. Reitman, I asked you this last week. I'm
02:05 14 going to ask you this again.
02:05 15 You've reviewed a lot of material in this
02:05 16 case, correct?
02:05 17 A. Yes.
02:05 18 Q. You've reviewed lab notebooks from
02:05 19 Mr. Lahlouh, correct?
02:05 20 A. Yes.
02:05 21 Q. Including the portion that counsel asked
02:05 22 Mr. Lahlouh about last week?
02:05 23 A. Yes.
02:05 24 Q. Including portions that they showed to you?
02:05 25 A. Yes.

02:05 1 Q. Including portions that they showed to
02:05 2 Dr. Spiegelberg on cross-examination, right?
02:05 3 A. Yes.
02:05 4 Q. You saw there was some references to contacts
02:05 5 between Bay Materials and Align over the years, right?
02:05 6 A. There's definitely interaction in the lab
02:05 7 notebooks between Bay Materials and Align.
02:05 8 Q. And, Dr. Reitman, you saw references to LE30
02:05 9 and various code names for various samples, right?
02:05 10 A. Yeah. The code name LE30 was in the notebook.
02:05 11 Q. Right. And, Dr. Reitman, after reviewing all
02:05 12 those materials, all those materials, you offered this
02:06 13 jury no opinion that Mr. Lahlouh had set out to
02:06 14 intentionally copy the Align patents or SmartTrack,
02:06 15 correct?
02:06 16 A. I think what I told you is that I don't have
02:06 17 an opinion about that.
02:06 18 Q. Right. And, Dr. Reitman, so you as the
02:06 19 technical expert, having reviewed all of these
02:06 20 materials, including materials that counsel have
02:06 21 brought in front of the jury, you've reviewed all of
02:06 22 it, right?
02:06 23 A. I believe so. Yes.
02:06 24 Q. And you've presented no opinion, none, that
02:06 25 Mr. Lahlouh or his colleagues copied the Align patents

02:06 1 or SmartTrack in making the Zendura FLX, true?
02:06 2 A. I did not say that specifically. I conveyed
02:06 3 the other activities which you can judge for yourself.
02:06 4 Q. And, Dr. Reitman, last question. This is not
02:06 5 the only case in which you testified on behalf of
02:06 6 Align, right?
02:06 7 A. No.
02:06 8 Q. And you've had more than one, correct?
02:06 9 A. I've had one other case in which I had --
02:06 10 Q. So this is not the only case in which you've
02:06 11 testified for Align, true?
02:06 12 A. Correct.
02:06 13 Q. And your billing rate is $1,065 an hour,
02:07 14 right?
02:07 15 A. No.
02:07 16 Q. Over a thousand?
02:07 17 A. Yes.
02:07 18 MR. MUELLER: Nothing further. Pass the
02:07 19 witness.
02:07 20 REDIRECT EXAMINATION
02:07 21 BY MR. HUNG:
02:07 22 Q. Dr. Reitman, who decides the question of
02:07 23 whether Bay Materials, Straumann, and ClearCorrect
02:07 24 copied my client's patented SmartTrack material? Who
02:07 25 makes that decision? Is it you?

02:07 1 A. No. It's the jury.
02:07 2 Q. But if we're going to talk about the evidence,
02:07 3 let's just go through it quickly.
02:07 4 Do you recall what year, was it 2006, that Bay
02:07 5 Materials and Align split, parted ways? Does that
02:07 6 sound right to you?
02:07 7 A. That is my recollection, yes.
02:07 8 Q. And do you remember seeing in 2013 that
02:07 9 reference to that secret confidential code name, LE30,
02:07 10 in Dr. Spiegelberg's (sic) notebook?
02:07 11 A. In Mr. Lahlouh's notebook?
02:07 12 Q. Mr. Lahlouh's, yes.
02:07 13 A. I did see that.
02:08 14 Q. Referring to chopping up Invisalign which had
02:08 15 come out a day before or a few weeks before at most?
02:08 16 You remember seeing that?
02:08 17 A. Right. They used aligners with the code name
02:08 18 two days after launch. Yes. I saw that.
02:08 19 Q. Now, I know copying is within a jury's
02:08 20 province, not yours.
02:08 21 Do you remember seeing that document? It's
02:08 22 about creating simulates and looking at the Invisalign
02:08 23 patent?
02:08 24 MR. MUELLER: I'm going to object to
02:08 25 leading, Your Honor.

1 THE COURT: Sustained.
02:08 2 BY MR. HUNG:
02:08 3 Q. Do you remember seeing documents relating to
02:08 4 simulates, creating simulates, ma'am?
02:08 5 A. Yes.
02:08 6 Q. And what do those documents say about creating
02:08 7 simulates?
02:08 8 A. Well, they reflect looking at the Invisalign
02:08 9 product, looking at the Invisalign patents eventually,
02:08 10 and making the -- the multilayers with the hard and
02:08 11 soft components.
02:08 12 So those documents show that looking at the
02:08 13 aligners, for example, the -- his daughter's aligners,
02:08 14 he was able to do materials characterization, which is
02:09 15 not benchmarking, and then make the same thing and then
02:09 16 later make changes in terms of the order of the layers
02:09 17 or not depending on what he wanted to do.
02:09 18 Q. Let's remind the jury about the materials that
02:09 19 Mr. Lahlouh selected.
02:09 20 MR. HUNG: Let's put up PTX-46. And
02:09 21 let's go to that second slide where it talks about FTIR
02:09 22 analysis and the materials for XL being the same, cover
02:09 23 page of PTX-46. Can we blow that up?
24 BY MR. HUNG:
02:09 25 Q. FTIR matches Invisalign's outer layers.

02:09 1 Now, Dr. Reitman, is this the document
02:09 2 discussing creating simulates?
02:09 3 A. Yes.
02:09 4 MR. HUNG: And can you highlight those
02:09 5 first two bullets?
6 BY MR. HUNG:
02:09 7 Q. And can you tell the jury what Mr. Lahlouh is
02:09 8 reporting in this report as he is memorializing what he
02:09 9 did for Zendura FLX?
02:09 10 A. Yes. So he did chemical characterization of
02:10 11 the outer layer of the Invisalign product and
02:10 12 determined that it was a TPU elastomer of a particular
02:10 13 type.
02:10 14 Then he did the FTIR of the inner layer of the
02:10 15 Invisalign product, and he determined that that was
02:10 16 the -- a match for what he had been using for the outer
02:10 17 layers. So he did chemical characterization to say
02:10 18 what is this and how does it match up with what I'm
02:10 19 making.
02:10 20 MR. HUNG: Let's put up PTX-51, the
02:10 21 knockoff -- the e-mail referring to a knockoff.
22 BY MR. HUNG:
02:10 23 Q. Is it common for you to see documents like
02:10 24 this in evidence, Dr. Reitman, referring to knockoffs,
02:10 25 creating a knockoff?

02:10 1 A. I don't think I've seen language like that
02:10 2 before --
02:10 3 Q. Do you --
02:10 4 A. -- in like a project like this.
02:10 5 Q. Do you view this as benchmarking?
02:10 6 A. No.
02:11 7 Q. Why not?
02:11 8 A. This is -- this is I see something, I want to
02:11 9 make it, I know how to do that.
02:11 10 MR. MUELLER: I object. Lack of
02:11 11 foundation. She's speculating as to the state of mind
02:11 12 for something she knows nothing about.
02:11 13 THE COURT: If you could have her explain
02:11 14 what she means.
02:11 15 BY MR. HUNG:
02:11 16 Q. Yeah. Why when you -- why when you see this
02:11 17 e-mail do you not understand this to refer to
02:11 18 benchmarking?
02:11 19 A. Because this isn't about how does my product
02:11 20 compare to something that I bought or I'm going to
02:11 21 compete against in the marketplace. This is I have
02:11 22 some materials. Can I switch them around in order to
02:11 23 make a different person's product?
02:11 24 Q. And who is sending this and who is receiving
02:11 25 this?

02:11 1 A. This is from Mr. Stewart, who's the general
02:11 2 manager and Mr. Lahlouh's boss, and it's to
02:11 3 Mr. Lahlouh.
02:11 4 MR. HUNG: Let's go to the declaration,
02:11 5 which I think is DTX-323. And let's go to Page 7.
02:12 6 And let's highlight that paragraph that
02:12 7 Mr. Mueller discussed with you. First paragraph on
02:12 8 top.
02:12 9 BY MR. HUNG:
02:12 10 Q. What is this paragraph discussing, ma'am? Can
02:12 11 you explain how this relates to the clinical studies
02:12 12 that you and I discussed?
02:12 13 A. Well, this is pretty much entirely about the
02:12 14 clinical studies. So it is showing that when the
02:12 15 multi-layer sheets having hard and soft layers as
02:12 16 claimed are made into appliances, you get really good
02:12 17 results from an orthodontic point of view.
02:12 18 Q. Is this statement, this paragraph that you're
02:12 19 pointing to, does this refer at all to the two
02:12 20 sentences in the 12-page declaration that
02:12 21 Dr. Spiegelberg says were false?
02:12 22 A. No.
02:12 23 Q. Let me close with this: Have you heard any
02:12 24 evidence -- and Dr. Li's here.
02:13 25 Have you heard any evidence that makes you

02:13 1 believe that Dr. Li compromised the truth in any way in
02:13 2 submitting this declaration?
02:13 3 A. Oh, no. No. The data speaks for itself.
02:13 4 Q. Have you seen any evidence that Dr. Li
02:13 5 intended to mislead the PTO in any way, the Patent
02:13 6 Office in any way?
02:13 7 A. No. I've not seen any evidence of that.
02:13 8 Q. Have you seen any evidence that she willfully
02:13 9 withheld information from the Patent Office to mislead
02:13 10 them?
02:13 11 A. No. I have definitely not seen that.
02:13 12 Q. And having sat here in this courtroom and
02:13 13 heard her testify, have you heard anything that
02:13 14 suggests that she was untruthful in any way?
02:13 15 A. No. I have not.
02:13 16 MR. HUNG: Thank you, Dr. Reitman.
02:13 17 RECROSS-EXAMINATION
02:13 18 BY MR. MUELLER:
02:13 19 Q. Just a few more questions, Dr. Reitman.
02:13 20 Mr. Hung showed you that PTX-51 document. We
02:13 21 will not put it up. It's the 2019 e-mail, right?
02:13 22 A. Oh, yes.
02:14 23 Q. And you said this doesn't refer to
02:14 24 benchmarking, right?
02:14 25 A. That's not how I read it. Yeah.

02:14 1 Q. Now, Dr. Reitman. You didn't write this,
02:14 2 correct?
02:14 3 A. That is correct.
02:14 4 Q. You didn't receive this, right?
02:14 5 A. Correct.
02:14 6 Q. There was a gentleman on the stand here for
02:14 7 hours last week, John Lahlouh, who's the recipient of
02:14 8 this e-mail, correct?
02:14 9 A. Yes.
02:14 10 Q. Now, if Align had any sort of question to ask
02:14 11 about this or thought it was relevant in any way to
02:14 12 this jury, they had every opportunity to ask
02:14 13 Mr. Lahlouh about this last week, right?
02:14 14 A. I don't know.
02:14 15 Q. Dr. Reitman, you have been here since the
02:14 16 beginning of the trial, correct?
02:14 17 A. Mostly, yes.
02:14 18 Q. You were here when Mr. Lahlouh testified?
02:14 19 A. Yes.
02:14 20 Q. You were here when Dr. Spiegelberg testified?
02:14 21 A. Yes.
02:14 22 Q. How many questions did Align's lawyers ask of
02:14 23 those folks about this document?
02:14 24 A. I don't remember.
02:14 25 Q. The answer is zero, isn't it?

02:14 1 A. That's probably true.
02:14 2 Q. And you just now were saying this doesn't
02:14 3 appear to be benchmarking, but you, Dr. Reitman, as we
02:15 4 sit here right now -- you can take this down -- have no
02:15 5 opinion based on any of the evidence you've seen in
02:15 6 this case that Mr. Lahlouh or his colleagues copied
02:15 7 SmartTrack or copied the Align patents, correct?
02:15 8 A. I am not offering an opinion on copying
02:15 9 specifically.
02:15 10 Q. So, again, so whatever this jury hears from
02:15 11 folks in closing argument, one thing they can remember
02:15 12 is that for all the evidence that's referred to, you
02:15 13 have no opinion, none, zero, that Mr. Lahlouh or his
02:15 14 colleagues copied SmartTrack or copied the Align
02:15 15 patents, correct?
02:15 16 A. That's for them to decide.
02:15 17 Q. Dr. Reitman, you have no such opinion, true?
02:15 18 A. I have not issued an opinion about that in
02:15 19 this case. That is absolutely true.
02:15 20 MR. MUELLER: Thank you, Dr. Reitman.
02:15 21 Your Honor, I pass the witness.
22 FURTHER REDIRECT EXAMINATION
02:15 23 BY MR. HUNG:
02:15 24 Q. One last question, Dr. Reitman.
02:15 25 You began last week by telling us about your

02:15 1 degrees from MIT, correct?
02:16 2 A. Yes.
02:16 3 Q. And your -- the fact that you I think were a
02:16 4 Fellow of the polymer scientists, and I'm going to mess
02:16 5 this up -- association or something like that, right?
02:16 6 A. I'm a Fellow of the Society of Plastics
02:16 7 Engineers. Yes.
02:16 8 Q. You're here as a technical witness, right?
02:16 9 A. Yes. My job is to address science questions
02:16 10 for you so that you have what you need in order to make
02:16 11 your decisions.
02:16 12 Q. Do you think it's appropriate for a technical
02:16 13 witness as yourself, who's talking about infringement
02:16 14 and enablement and the scientific truth of statements
02:16 15 that another Ph.D. doctor made under oath, do you think
02:16 16 it's appropriate?
02:16 17 MR. MUELLER: Objection, Your Honor.
02:16 18 Leading.
19 THE COURT: Sustained.
02:16 20 BY MR. HUNG:
02:16 21 Q. Do you think it's appropriate for a person
02:16 22 like you to be offering an opinion on copying?
02:16 23 MR. MUELLER: Same objection.
02:16 24 THE COURT: Sustained.
02:16 25 BY MR. HUNG:

02:16 1 Q. Why aren't you offering an opinion on copying?
02:16 2 A. That is not part of what I'm here to do for
02:16 3 you. I have done the other science work for you, and I
02:16 4 think you have the information you need.
02:16 5 MR. HUNG: Thank you.
02:16 6 MR. MUELLER: I have nothing further for
02:16 7 Dr. Reitman, Your Honor.
02:16 8 THE COURT: Thank you, ma'am.
02:17 9 Next witness, please.
02:17 10 MR. DURST: Your Honor, Align Technology
02:17 11 calls Dr. Bobby Cohanim.
02:17 12 (The witness was sworn.)
02:17 13 DIRECT EXAMINATION
02:17 14 BY MR. DURST:
02:17 15 Q. Good afternoon, sir. Will you please
02:18 16 introduce yourself to the jury?
02:18 17 A. Yes. My name is Dr. Bobby Cohanim. I'm an
02:18 18 orthodontist in private practice in Seattle and also an
02:18 19 affiliate professor of orthodontics at the University
02:18 20 of Washington.
02:18 21 Q. And why are you here today, Dr. Cohanim?
02:18 22 A. I'm here to help the jury see the process for
02:18 23 exporting STL files from an iTero scanner, and also to
02:18 24 help the jury understand how orthodontists view
02:18 25 teeth-straightening products.

02:18 1 Q. So the first thing that you mentioned was to
02:18 2 demonstrate to the jury how files are exported from the
02:18 3 iTero Align device. Is that the first topic?
02:18 4 A. Yes.
02:18 5 Q. And the second is how orthodontists view
02:18 6 braces versus aligners?
02:18 7 A. Correct.
02:18 8 Q. All right, sir. Now, before we get into the
02:18 9 substance, I'm going to ask you some questions about
02:18 10 your background so the Court can assess your
02:18 11 qualifications for giving the testimony on other
02:19 12 questions I'm going to ask you.
02:19 13 What do you do for a living?
02:19 14 A. I'm an orthodontist.
02:19 15 Q. Where do you practice?
02:19 16 A. In Seattle.
02:19 17 Q. And what is the name of your practice?
02:19 18 A. Cohanim Smileworks.
02:19 19 Q. And your relationship with the University of
02:19 20 Washington, sir, what is that?
02:19 21 A. I've been teaching there for about 30 years
02:19 22 now. I'm an affiliate professor, and I teach there on
23 Friday mornings usually.
02:19 24 Also one quarter of the year, the winter
02:19 25 quarter, I teach a biomechanics course on Friday

02:19 1 afternoons.
02:19 2 Q. So you're teaching each quarter in the dental
02:19 3 school at the University of Washington?
02:19 4 A. In the orthodontic department.
02:19 5 Q. Now, sir, how long have you been an
02:19 6 orthodontist?
02:19 7 A. For 36 years.
02:19 8 Q. And are you an active practitioner today?
02:19 9 A. Yes.
02:19 10 Q. What is the practice of orthodontics at its
02:19 11 basic definition?
02:19 12 A. Basically it's straightening teeth.
02:20 13 Q. And you -- tell us about your academic
02:20 14 credentials, Dr. Cohanim, please.
02:20 15 A. Sure. I started my studies at the University
02:20 16 of Washington as a computer science major. And then
02:20 17 after two years, I transferred to UCLA and continued in
02:20 18 bioengineering because I decided I wanted to become an
02:20 19 orthodontist. So that's why I changed my major.
02:20 20 And then from there, I went to the University
02:20 21 of Southern California Los Angeles. That's where I got
02:20 22 my DDS degree, doctor of dental surgery.
02:20 23 And then after that, I went to my residency at
02:20 24 University of -- sorry, University of Southern
02:20 25 California as well. And also received a master's in

02:20 1 craniofacial biology.
02:20 2 Q. What is craniofacial biology?
02:20 3 A. It's basically the biology of studying the
02:20 4 development of the head and face and the teeth, jaws,
02:20 5 and how they develop and what might go wrong.
02:20 6 Q. Now, Dr. Cohanim, give us just a couple of
02:21 7 sentences here about the teaching work that you're
02:21 8 doing now at the University of Washington in terms of
02:21 9 your interaction with students in the school of
02:21 10 orthodontics as -- or the department of orthodontics as
02:21 11 well as any work in the clinic.
02:21 12 A. So aside from teaching about biomechanics in
02:21 13 the winter quarter, I'm there every Friday. And
02:21 14 usually from 8:00 to 9:00, we might have seminars where
02:21 15 the residents might present a case for treatment
02:21 16 planning or one of the instructors will present a
02:21 17 topic.
02:21 18 And then after that from 9:00 to 12:00, the
02:21 19 residents treat patients. And we're basically what you
02:21 20 can call an attending. We supervise them and help them
02:21 21 treat the patients.
02:21 22 Q. You're there every week during the school
02:21 23 year?
02:21 24 A. That's correct.
02:21 25 Q. Now, Dr. Cohanim, over the course of your

02:21 1 career -- I guess, what, 36 years now?
02:21 2 A. Yes.
02:21 3 Q. -- how many patients roughly do you estimate
02:21 4 that you have treated?
02:21 5 A. About 10,000.
02:21 6 Q. And when was the last time that you treated a
02:22 7 patient?
02:22 8 A. Last Thursday.
02:22 9 Q. Are you scheduled to see a patient again in
02:22 10 the future?
02:22 11 A. Tomorrow morning.
02:22 12 MR. DURST: Your Honor, I tender
02:22 13 Dr. Cohanim as an expert in the field of orthodontics.
02:22 14 MR. UNDERWOOD: No objection, Your Honor.
02:22 15 THE COURT: Admitted.
02:22 16 BY MR. DURST:
02:22 17 Q. Dr. Cohanim, what is malocclusion?
02:22 18 A. Sorry. A malocclusion basically means a bad
02:22 19 bite. Somebody that their teeth aren't straight or the
02:22 20 bite, the way the upper and lower teeth come together
02:22 21 is not what it should be.
02:22 22 Q. What causes a bad bite in humans?
02:22 23 A. Completely different reasons. It could be
02:22 24 your genes. It could be having injuries, losing a
02:22 25 tooth early on. There's a lot of different reasons.

02:22 1 Q. Given all the different reasons, does that
02:22 2 suggest that every patient is a little different? Have
02:22 3 you seen 10,000 different cases of bad bite?
02:22 4 A. Every case, I have to treat them differently
02:22 5 because everybody has their own particular
02:22 6 circumstances.
02:22 7 Q. Now, Dr. Cohanim, why is it important for
02:22 8 patients to seek treatment for malocclusion or bad
02:23 9 bites?
02:23 10 A. Well, those -- different things that can
02:23 11 happen if you have a malocclusion or a bad bite and you
02:23 12 don't get treatment. It could be that it could result
02:23 13 to faster wearing of your teeth. It could result in
02:23 14 you not being able to brush your teeth properly, having
02:23 15 gum recession. It could result in jaw joint pain,
02:23 16 headaches, things like that. So there's a lot of
02:23 17 different things that could happen.
02:23 18 Q. And what are the principal treatments that you
02:23 19 prescribe, sir, for a bad bite or malocclusion?
02:23 20 A. The two main ones are braces and aligners,
02:23 21 Invisalign aligners.
02:23 22 Q. Now, sir, over the course of 36 years in
02:23 23 orthodontics, have you seen changes in both braces and
02:23 24 aligners?
02:23 25 A. Yes. Aligners came around in 1999, and I took

02:23 1 the first course they offered in Seattle then. So I've
02:23 2 been using them since 1999.
02:23 3 Before that it was exclusively braces. But
02:24 4 braces have also developed over time. There's more
02:24 5 clear braces, ceramic braces. Easier lingual braces
02:24 6 that you can use. And also, like they mentioned this
02:24 7 morning, self-ligating braces.
02:24 8 And there are some braces that are digital
02:24 9 where you actually use a scan to produce the braces, 3D
02:24 10 print them, and actually premake wires for those so it
02:24 11 makes the process a lot more efficient.
02:24 12 Q. So you get -- you made reference to something
02:24 13 that we heard this morning, and I didn't understand
02:24 14 what you said. Can you say that again?
02:24 15 A. Which one, soft-ligating braces?
02:24 16 Q. And what are those?
02:24 17 A. Those are basically -- usually braces move
02:24 18 teeth by the wire that goes in there, and the wires
02:24 19 hold them with little ties. Those could be metal or
02:24 20 rubber.
02:24 21 And then with the self-ligating braces, the
02:24 22 idea is that you don't have to use those ligature wires
02:24 23 or ligation. And it both makes it so that the patient
02:24 24 has to spend less time in the chair, and also the teeth
02:24 25 are supposed to move more efficiently.

02:24 1 Q. Is that what my partner called the self- --
02:25 2 the patient-adjusting braces, you can adjust them
02:25 3 yourself?
02:25 4 A. Yes.
02:25 5 Q. All right. All right. Now, Dr. Cohanim, have
02:25 6 you seen over the years patients who maybe years ago
02:25 7 had only the option of braces? Have you seen patients
02:25 8 in that category, some of them choosing aligners?
02:25 9 A. Yes.
02:25 10 Q. And nowadays, do you have an estimate of the
02:25 11 number of cases that you see of malocclusion that could
02:25 12 be treated either with braces or with aligners?
02:25 13 A. Probably around 95 percent of the cases could
02:25 14 be treated either way.
02:25 15 Q. So 95 percent. 95 out of 100 patients that
02:25 16 you see could be treated with either braces or
02:25 17 aligners?
02:25 18 A. Correct.
02:25 19 Q. Now, in your medical opinion, Dr. Cohanim, are
02:25 20 braces and clear aligners reasonable substitutes for
02:25 21 the other?
02:25 22 A. Yes.
02:25 23 Q. How so?
02:25 24 A. Well, they're both appliances that move teeth,
02:26 25 and that's what we do.

02:26 1 Q. And how do they move teeth?
02:26 2 A. By putting pressure on the teeth in the right
02:26 3 direction.
02:26 4 Q. So both braces and aligners move teeth by
02:26 5 putting pressure on the teeth?
02:26 6 A. That's how you move teeth, yes.
02:26 7 Q. Now, we talked about how aligners have
02:26 8 competed with braces since they came along.
02:26 9 Have braces responded to the competition with
02:26 10 aligners? Have you seen that happen in the market?
02:26 11 A. Yes. I mean, there's been more developments
02:26 12 as far as clear braces and also ceramic braces. And
02:26 13 like I said, there's digital braces, rather -- you
02:26 14 know, more efficient, clear, and usually treat the
02:26 15 patients faster.
02:26 16 Q. Now, generally speaking, Dr. Cohanim, braces
02:26 17 and aligners, the price that your patients pay for
02:26 18 braces or the price they pay for aligners, how do those
02:27 19 compare?
02:27 20 A. Well, usually a price depends on what the
02:27 21 condition of the patient is, how much work, how complex
02:27 22 it is, basically. And in general, the price for the
02:27 23 braces and aligners are in the same ballpark.
02:27 24 Q. Now, Dr. Cohanim, timewise, the duration of
02:27 25 the treatment, a patient that gets braces and a patient

02:27 1 that gets aligners, compare for us in average terms or
02:27 2 summary terms, whatever you choose, the duration of,
02:27 3 say, a standard braces case and a standard aligners
02:27 4 case.
02:27 5 A. Again, it depends on the case, but in general,
02:27 6 they're about the same. In some cases aligners might
02:27 7 be slightly quicker. In other cases braces might be
02:27 8 slightly quicker.
02:27 9 Q. Now, Doctor, you spend a day a week during the
02:27 10 school year with budding or emerging or people being
02:27 11 trained to be orthodontists?
02:27 12 A. That's right.
02:27 13 Q. Are doctors -- like the orthodontists that are
02:28 14 emerging from your school, are doctors these days in
02:28 15 the United States, are they being trained on both
02:28 16 braces and aligners?
02:28 17 A. Yes.
02:28 18 Q. Now, I'd like to put on the screen,
02:28 19 Dr. Cohanim, DDX-8.19. This is a demonstrative exhibit
02:28 20 that the economist, Dr. Perryman, told the jury about
02:28 21 this morning. This apparently is something that
02:28 22 Dr. Perryman chose to use to compare aligners and
02:28 23 braces.
02:28 24 And, Dr. Cohanim, I'm going to ask you to stay
02:28 25 close to your microphone there and tell us the

02:28 1 reactions -- the reaction that you had when you saw
02:28 2 this in the courtroom for the first time today.
02:28 3 A. Well, I didn't think it was entirely accurate.
02:28 4 Q. How so?
02:28 5 A. It has four sections, the transparency, being
02:28 6 removable, emergency visits, and damage to teeth. And
02:29 7 of those, clear braces are also transparent. And you
02:29 8 can also these days have wires that are teeth colored
02:29 9 so they're not as visible.
02:29 10 Q. So in that first category, transparency, you
02:29 11 think an accurate completion of this chart would have
02:29 12 "yes" in both columns?
02:29 13 A. Yes.
02:29 14 Q. All right. What other observations did you
02:29 15 have?
02:29 16 A. Well, the second part, removable, that's
02:29 17 correct. Braces are definitely not removable. You
02:29 18 don't want to remove them yourself. So that is
02:29 19 correct.
02:29 20 Q. And what about emergency visits, do you have
02:29 21 any thoughts there?
02:29 22 A. Well, you can definitely have emergency visits
02:29 23 with aligners as well, and I've had those in my office.
02:29 24 Q. Now, damage to teeth, this is suggesting -- I
02:29 25 guess Dr. Perryman was trying to tell us that braces

02:29 1 can damage teeth and aligners do not.
02:29 2 Is that true, in your experience?
02:29 3 A. Well, first of all, braces don't damage teeth.
02:29 4 When -- the white spot lesions basically happen if a
02:29 5 patient is not brushing properly. Then they leave a
02:30 6 lot of plaque on their teeth. Then the acid can bleach
02:30 7 your teeth and turn them white.
02:30 8 Q. And that's for a patient with braces?
02:30 9 A. Braces, exactly.
02:30 10 For a patient that's wearing clear aligners,
02:30 11 if they don't follow instructions, which is what we
02:30 12 tell them to do, is remove the aligners when they're
02:30 13 eating or drinking, if they don't do that, if they
02:30 14 especially drink a lot of like anything that's acidic,
02:30 15 Coca-Cola, orange juice, Gatorade, things like that,
02:30 16 that can actually cause a lot more damage to the teeth
02:30 17 than not brushing the braces.
02:30 18 Q. Thank you, sir. Be sure to keep that
02:30 19 microphone close. Maybe even bend it down just a
02:30 20 little bit.
02:30 21 Are you a little bit nervous up there,
02:30 22 Dr. Cohanim?
02:30 23 A. This is my first time testifying to a jury.
02:30 24 Q. Let me see -- shift gears a minute and change
02:30 25 the topic.

02:30 1 MR. DURST: And, Mr. Smith, we can take
02:30 2 down that demonstrative.
3 BY MR. DURST:
02:30 4 Q. In your practice, do you see discount programs
02:30 5 being offered by companies that supply your practice?
02:30 6 A. Yes.
02:30 7 Q. Can you give us some examples of that -- how
02:30 8 that works for your orthodontic business, for the
02:31 9 practice that you have?
02:31 10 A. Well, like one of them is one you've heard
02:31 11 about so far, which is the Advantage Program Invisalign
02:31 12 offers. But beyond that, I also had a program that I
02:31 13 use for the braces from a company called American
02:31 14 Orthodontics, and they have what they call Partner
02:31 15 Advantage Program, which is basically a volume-buying
02:31 16 program, gives you discounts and also points that I can
02:31 17 use to buy other products from them.
02:31 18 And there's also a company called uLab that
02:31 19 can either help you make aligners in your office or
02:31 20 provide you with lab-made aligners. And I have a
02:31 21 contract with them that gives me discounts as well.
02:31 22 Q. So you -- did you list three or four -- I kind
02:31 23 of lost track there -- of the discount programs that
02:31 24 you're involved in?
02:31 25 A. Well, those are the three that I use.

02:31 1 Q. The three. The three.
02:31 2 Now, are discount programs common in the
02:31 3 supply of materials to orthodontic offices?
02:31 4 A. Yes.
02:31 5 Q. And do other aligner companies -- besides
02:31 6 Align and Invisalign, do other aligner companies offer
02:32 7 them?
02:32 8 A. Yes.
02:32 9 Q. Do you know if ClearCorrect offers a discount
02:32 10 program?
02:32 11 A. Yes.
02:32 12 Q. Now, why are these discounts important to you
02:32 13 and your patients?
02:32 14 A. Well, it's a way for me to help keep my
02:32 15 overhead low, and those are savings that I can pass on
02:32 16 to my patients and keep fees lower for the patients.
02:32 17 Q. So when you get discounts, does -- do your
02:32 18 patients enjoy at least some of the discount that the
02:32 19 suppliers provide to you?
02:32 20 A. Yes. That's one reason I can provide braces
02:32 21 and aligners about the same fee.
02:32 22 Q. Now, you mentioned the Advantage Program of
02:32 23 Align and that you're a member of that.
02:32 24 Tell the jury a few sentences about how that
02:32 25 program works, sir.

02:32 1 A. Well, basically, like you heard before, they
02:32 2 look at your six-month volume of patients that you
02:32 3 ordered, that you get the points for each one, and if
02:32 4 you meet the threshold basically on that, you go from
02:33 5 one level to another. And they have different levels
02:33 6 starting at, I think, bronze, and they go all the way
02:33 7 to diamond now.
02:33 8 Q. And, Dr. Cohanim, in addition to the price
02:33 9 discounts that you and the patients get from Advantage,
02:33 10 are there other benefits that you receive from the
02:33 11 Advantage Program?
02:33 12 A. There are. The main one that I use a lot is
02:33 13 continuing education benefits, basically helping me
02:33 14 learn more about how to treat efficiently with aligners
02:33 15 and give the patients the best result.
02:33 16 Q. Now, Dr. Cohanim, did you join the Advantage
02:33 17 Program voluntarily?
02:33 18 A. Yes.
02:33 19 Q. Did anyone pressure or coerce you to join that
02:33 20 program?
02:33 21 A. No.
02:33 22 Q. Did you feel any economic pressure to -- or
02:33 23 did Align exert any pressure on you to join that
02:33 24 program, sir?
02:33 25 A. No. There's no pressure. It's just a benefit

02:33 1 that I get from it.
02:33 2 Q. And would you be able to quit the program
02:33 3 tomorrow if you decided to?
02:33 4 A. I could. I actually have to renew it every
02:33 5 year.
02:33 6 Q. And now this program, this Advantage discount
02:34 7 program that you have from Align, has it ever affected
02:34 8 your clinical judgment?
02:34 9 A. No. That wouldn't be ethical.
02:34 10 Q. Now, Dr. Cohanim, you mentioned Invisalign a
02:34 11 moment ago.
02:34 12 Have you prescribed brands other than
02:34 13 Invisalign to your patients for teeth straightening?
02:34 14 A. I have. I have tried a few different brands.
02:34 15 One was OrthoClear. The other was ClearCorrect. And
02:34 16 then like I was talking about uLab, and also do
02:34 17 in-house printed aligners.
02:34 18 Q. Are you using ClearCorrect today, sir?
02:34 19 A. No.
02:34 20 Q. Why not?
02:34 21 A. I wasn't really happy with the performance and
02:34 22 the feedback from the patients that I had.
02:34 23 Q. You have a preference of all those brands that
02:34 24 you mentioned or all those different options you
02:34 25 mentioned as to clear aligners?

02:34 1 A. Definitely Invisalign.
02:34 2 Q. Pardon?
02:34 3 A. Invisalign.
02:34 4 Q. Why?
02:34 5 A. It's the one that has the most advanced
02:35 6 features. It has a lot of clinical studies behind it.
02:35 7 So that's the one I'm most comfortable prescribing to
02:35 8 the patients.
02:35 9 Q. Now, Dr. Cohanim, I want to focus your
02:35 10 attention on that, what you called your first topic.
02:35 11 It's going to be our last this afternoon. But that is
02:35 12 exporting files from an iTero scanner to a manufacturer
02:35 13 other than Align.
02:35 14 So exporting files from an iTero scanner by
02:35 15 Align to a company like ClearCorrect, another company
02:35 16 that makes aligners, I want to focus your attention on
02:35 17 that for just a few minutes.
02:35 18 A. Okay.
02:35 19 Q. Now, where in the diagnostic and treatment
02:35 20 process do you use a scanner like the iTero?
02:35 21 A. Well, usually when a patient first comes in,
02:35 22 we do a physical examination and also gather records.
02:35 23 And those records are photographs, x-rays, and also a
02:35 24 scan of their teeth.
02:35 25 And then at that point, then I can use all of

02:35 1 those to come to a diagnosis as far as what the
02:36 2 patient's malocclusion might be, how complex it is, and
02:36 3 then deciding what's the best treatment for them.
02:36 4 Q. Do you use an iTero scanner in your practice?
02:36 5 A. Yes. I do.
02:36 6 Q. Now, is there an alternative that you have in
02:36 7 your practice for doing dental impressions, alternative
02:36 8 to the iTero scanner?
02:36 9 A. Yes. I can also use PVS or what's called
02:36 10 Alginate. It's basically another goop that you can put
02:36 11 in the tray, and you can capture the patient's teeth
02:36 12 that way.
02:36 13 Q. The PVS is the goop that we've been talking
02:36 14 about for two weeks?
02:36 15 A. Yes.
02:36 16 Q. Now, have you made physical impressions with
02:36 17 PVS over years?
02:36 18 A. I have.
02:36 19 Q. And how many?
02:36 20 A. Well, myself, I've done probably hundreds, but
02:36 21 it's mostly my assistants that do both the scans and
02:36 22 the PVS or any kind of impressions, and those have been
02:36 23 probably overall maybe about 20,000.
02:36 24 Q. And have you done scans, both you personally
02:36 25 and in your practice, over the years?

02:37 1 A. Yes.
02:37 2 Q. How many of those?
02:37 3 A. Myself, about 200. My office, about 3,500.
02:37 4 Q. And, Dr. Cohanim, when was the last time that
02:37 5 you did a scan?
02:37 6 A. About two weeks ago. I had -- my staff called
02:37 7 in sick, so I couldn't -- I didn't want to reschedule
02:37 8 the patient. So I scanned them myself.
02:37 9 Q. And what do you -- what is the purpose that
02:37 10 you use scans from the iTero for? What do you use
02:37 11 those scans to do?
02:37 12 A. There's a lot of uses for it. The main one
02:37 13 initially is obviously giving a diagnosis. And beyond
02:37 14 that then, depending on what the patient needs, either
02:37 15 prescribing aligners or making an appliance for them,
02:37 16 if they need a nightguard or something like that. And
02:37 17 then when the treatment is done, then you can use that
02:37 18 scan to make retainers for them.
02:37 19 Q. So the scans can be made -- can be useful for
02:37 20 ordering aligners but also a variety of other services
02:37 21 that you provide to your patients?
02:37 22 A. Yes.
02:37 23 Q. Now, Dr. Cohanim, were you here when the
02:38 24 orthodontist from here in Waco, Dr. Bryan Taylor, when
02:38 25 he testified?

02:38 1 A. I was.
02:38 2 Q. And were you here when Straumann's lawyer was
02:38 3 asking him to do math about alleged time savings -- or
02:38 4 pardon me, the cost of time, the loss of time, from
02:38 5 uploading files?
02:38 6 Did you hear that testimony?
02:38 7 A. Yes. I did.
02:38 8 Q. Now, Straumann's lawyer asked Dr. Taylor how
02:38 9 many scans a day would be good for doing a math
10 computation.
02:38 11 Do you remember that?
02:38 12 A. Yes. I believe he asked him what was his
02:38 13 estimate of how many scans he submitted each day.
02:38 14 Q. And do you remember what Dr. Taylor used for
02:38 15 that calculation that Mr. Underwood asked him to do?
02:38 16 A. If I remember correctly, he said 15 to 20. He
02:38 17 used 15 for his math.
02:38 18 Q. 15 to 20 scans a day is what you heard
02:38 19 Dr. Taylor say?
02:38 20 A. That's what I heard him say.
02:38 21 Q. What was your reaction to that number?
02:39 22 A. It seemed like a high number, especially if he
02:39 23 was talking about submitting those for aligners.
02:39 24 Q. And why did it strike you as a high number?
02:39 25 Tell the rest of us who don't have your

02:39 1 perspective why that's a high number.
02:39 2 A. So if you're submitting 15 aligner cases a day
02:39 3 and you're doing that five days a week, that will
02:39 4 become more than 3,000 cases a year. I have, you know,
02:39 5 one office with -- I have five chairs altogether with
02:39 6 three chairs that we use regularly for seeing patients.
02:39 7 And I usually do about 100, 120 cases a year in the
02:39 8 what's called Pearl category of the Advantage tier
02:39 9 program, the top. And if you're doing 3,000, then you
02:39 10 should be in the top diamond layer. And usually those
02:39 11 are practices that have multiple locations, multiple
02:39 12 doctors, and more than one scanner.
02:39 13 Now, from what I recall reading about from his
02:39 14 prior testimony and also his report, he said that he
02:40 15 stopped using Invisalign or prescribing Invisalign
02:40 16 himself around 2020 or 2021. And at that point he was
02:40 17 a Premier provider, which was a previous version of the
02:40 18 Advantage Program. And Premier was the second level
02:40 19 above the Basic, and if he was really prescribing that
02:40 20 many, he should have been at the higher level.
02:40 21 Q. He would have been higher?
02:40 22 A. Yes.
02:40 23 Q. He would have been higher in the level.
02:40 24 And your cases per year are what number again?
02:40 25 A. About 100 to 120.

02:40 1 Q. Have you ever heard of an individual doctor
02:40 2 doing 3,000 cases a year?
02:40 3 A. Not an individual doctor, no.
02:40 4 Q. Now, let's go back to the iTero scanner for
02:40 5 just a minute.
02:40 6 Have you ordered products other than Align
02:40 7 products by using the iTero scanner?
02:40 8 A. Yes.
02:40 9 Q. Give us some examples of that, please.
02:40 10 A. One is, as far as aligners go, you will have
02:40 11 aligners. It's an aligner company. And then also I've
02:40 12 ordered nightguards, sleep appliances, and expanders
02:41 13 and devices that we use for treating patients.
02:41 14 Q. Now, when you export files, export electronic
02:41 15 files from the iTero, is there a format that doctors
02:41 16 traditionally use?
02:41 17 A. Usually the most common one is an STL format.
02:41 18 It's basically a standard format that doctors use and
02:41 19 other people use for transmitting 3-dimensional files
02:41 20 or files for 3-dimensional objects. And it's kind of
02:41 21 similar to using a PDF for printed documents or using
02:41 22 JPEG for pictures. Something like that.
02:41 23 Q. Can you generally describe, Dr. Cohanim, the
02:41 24 process for exporting an iTero -- pardon me, the
02:41 25 process for exporting an STL file from an iTero to

02:41 1 another manufacturer?
02:41 2 A. Well, the first step is to obviously scan the
02:41 3 patient. So once the scan is done and you press send,
02:41 4 then the scan is sent to the cloud. Then it becomes
02:42 5 accessible from a website called myitero.com. And
02:42 6 that's where you can access that scan from the cloud so
02:42 7 you can export it from there.
02:42 8 Q. And how long, Dr. Cohanim, how long does that
02:42 9 STL process take?
02:42 10 A. To actually export the files to your computer?
02:42 11 Q. Yes, sir.
02:42 12 A. We measured it on a video, and it's
02:42 13 45 seconds. Less than a minute.
02:42 14 Q. Now, Dr. Cohanim, have you prepared a
02:42 15 demonstration of the process of uploading -- pardon me,
02:42 16 of exporting an STL file out that was taken on an iTero
02:42 17 scanner out to another manufacturer?
02:42 18 A. I did the process of actually exporting it to
02:42 19 my computer. I didn't do the last part, submitting it
02:42 20 to another manufacturer. But I did the export process,
02:42 21 yes.
02:42 22 Q. And what -- when you said you did a
02:42 23 demonstration, how was that captured?
02:42 24 A. It was on a video.
02:42 25 Q. All right. I want to show you what is PDX-19.

02:43 1 Okay. Now, Dr. Cohanim, let's set the stage
02:43 2 for this, for what the jury is seeing. What has
02:43 3 happened prior to this?
02:43 4 Does the scan already exist?
02:43 5 A. Yeah. So what's happened is we've scanned the
02:43 6 patient and pressed send. So now this patient's scan
02:43 7 is available on the myitero website.
02:43 8 Q. So the scan went from the iTero device?
02:43 9 A. To the cloud.
02:43 10 Q. To the cloud?
02:43 11 A. Yes.
02:43 12 Q. Okay. And the scanning process, is that the
02:43 13 same for ordering Invisalign and ordering aligners from
02:43 14 any other company?
02:43 15 A. Yes.
02:43 16 Q. You have to do that for both?
02:43 17 A. Exactly.
02:43 18 Q. And that has happened before this video?
02:43 19 A. Yes.
02:43 20 Q. All right. Now, what are we looking at here
02:43 21 on the screen? What is the jury seeing?
02:43 22 A. Well, what the screen is showing basically in
02:43 23 the green, within the green border, is my desktop, what
02:44 24 I see on my computer. And the inset is a video of me
02:44 25 while I'm doing the process.

02:44 1 Q. Okay. So you had some technology that was
02:44 2 capturing and filming what was on your computer?
02:44 3 A. Yes. It was capturing what was on the
02:44 4 computer. At the same time it was using the camera on
02:44 5 my laptop to capture me as I'm doing the process.
02:44 6 Q. So as we play this video, the movement on the
02:44 7 screen is happening simultaneously with whatever is --
02:44 8 whatever is going to be shown on your face?
02:44 9 A. Correct.
02:44 10 Q. Okay. Those are going at the same time?
02:44 11 A. Yes.
02:44 12 Q. All right. And do you see that hand that's
02:44 13 there in the middle of the screen?
02:44 14 A. Yes.
02:44 15 Q. Is that -- is that Mr. Smith's cursor back
02:44 16 there?
02:44 17 A. No. That's my cursor, and it changes. The
02:44 18 way this website works, as you hover over a button or
02:44 19 something, the cursor changes from a pointer to a hand.
02:44 20 Q. And as we play the video, that cursor or hand,
02:45 21 I've seen it, it's going to move around?
02:45 22 A. Yes.
02:45 23 Q. Who in the video is moving that cursor?
02:45 24 A. That's me moving it.
02:45 25 Q. All right. So, Dr. Cohanim, I'm going to ask

02:45 1 Mr. Smith to start this video, and he's going to pause
02:45 2 it at various places so that you can explain to the
02:45 3 jury what's going on.
02:45 4 But before we do that, I want to ask you one
02:45 5 more thing. So look at the bottom of the screen,
02:45 6 Dr. Cohanim. And do you see that bar across the
02:45 7 bottom?
02:45 8 A. Yes.
02:45 9 Q. What is that going to tell us?
02:45 10 A. That's the bar from the video player that's
02:45 11 playing this video, and it kind of shows the time lapse
02:45 12 as it goes across.
02:45 13 Q. Okay. Dr. Cohanim, when you're ready to go,
02:45 14 just tell Mr. Smith to start it up.
02:45 15 THE WITNESS: You can go ahead and start.
02:45 16 A. So what I'm doing now is logging on to the
02:45 17 myitero website. And what happens when that opens is
02:45 18 it brings up a screen that has the four different
02:46 19 things on the dashboard. Orders is where I go to to
02:46 20 actually access the scan.
21 BY MR. DURST:
02:46 22 Q. So let's stop right there.
02:46 23 What is that drop-down, sir?
02:46 24 A. So the drop-down shows the location that the
02:46 25 scan was done. There are five locations in there.

02:46 1 Four are labs that I use for people that are out of
02:46 2 town that I can send them to a lab and order the scans
02:46 3 done.
02:46 4 The middle one, Cohanim Smileworks, is my
02:46 5 office. So that's the one I click on.
02:46 6 Q. Okay. And just to focus on the bar for just a
02:46 7 second, how much time has elapsed in the video at this
02:46 8 point?
02:46 9 A. 10 seconds.
02:46 10 Q. All right. Go ahead when you're ready.
02:46 11 A. Go ahead.
02:46 12 So I click on orders, and then that'll open up
02:46 13 another screen. And that screen at the bottom, it
02:46 14 shows basically patients that I've been scanning
02:46 15 recently. Might be mostly that day. And if the
02:46 16 patient that I want is in those top lines, I can
02:46 17 directly click on that. If not, then there's a search
02:46 18 bar that I can go to where the cursor is.
02:47 19 Q. Before you do -- before you fire it up again,
02:47 20 let me ask you a question about this screen.
02:47 21 So on the bottom half of the screen here that
02:47 22 we're all looking at, there's the column, second from
02:47 23 the left, called Patient name.
02:47 24 Do you see that?
02:47 25 A. Yes.

02:47 1 Q. That information is blurred out. Why is that,
02:47 2 Dr. Cohanim?
02:47 3 A. To protect the patient's privacy. According
02:47 4 to HIPAA laws, I can't let anybody see their names
02:47 5 without their permission.
02:47 6 Q. And you, when you made the video, you were
02:47 7 able to see the patient names?
02:47 8 A. Correct.
02:47 9 Q. And other than blurring out the patient names
02:47 10 there, did you make any other adjustments to this
02:47 11 video?
02:47 12 A. No.
02:47 13 Q. All right. Go ahead and proceed.
02:47 14 A. So I'm typing the patient name that I want to
02:47 15 search for. And then it'll come up, and then I
02:47 16 click -- you can click anywhere on the bar where the
02:47 17 patient's name is. And then that'll bring up the
02:47 18 export button. So you can click on that.
02:47 19 Then the next screen that comes up is -- it
02:47 20 shows options that you have, and these are preset for
02:48 21 my office at Open Shell, File Per Arch, and STL with no
02:48 22 color, which is what most labs and most aligner
02:48 23 companies require. So that's what I had preset
02:48 24 already.
02:48 25 And then when I click on that --

02:48 1 Q. Wait. Wait. Just a second. Let's stop
02:48 2 there.
02:48 3 MR. DURST: Mr. Smith, can you enlarge
02:48 4 that dialogue box again, please?
5 BY MR. DURST:
02:48 6 Q. So you have these set to Open Shell, File Per
02:48 7 Arch, and STL?
02:48 8 A. That's correct.
02:48 9 Q. You've set those previously. Why did you do
02:48 10 that?
02:48 11 A. Because that's more efficient. It takes only
02:48 12 20 seconds to do that, and from then on, every time you
02:48 13 go back for the export process, these are already
02:48 14 preselected for you so you won't have to select them
02:48 15 each time.
02:48 16 Q. And are these settings that you have yours
02:48 17 preset to -- first, did you preset them just for this
02:48 18 video?
02:48 19 A. No. They were preset for my office.
02:48 20 Q. And why are they preset to those -- to those
02:48 21 selections?
02:48 22 A. Because that's the format that both labs -- if
02:48 23 you want to make an appliance and also usually other
02:48 24 clear aligner companies as well, that's a format they
02:49 25 require.

02:49 1 MR. DURST: Okay. Mr. Smith, stop the
02:49 2 enlargement. And let's go back and follow
02:49 3 Dr. Cohanim's directions on the video.
02:49 4 A. Go ahead.
02:49 5 So click on export. And what's happening now
02:49 6 is the file is getting downloaded, a zip file that gets
02:49 7 downloaded to your computer's download folder. And you
02:49 8 can access that from the browser and you click on that.
02:49 9 BY MR. DURST:
02:49 10 Q. Okay. Now, before we run it again, at this
02:49 11 point, how much time has elapsed since you started the
02:49 12 process?
02:49 13 A. 38 seconds.
02:49 14 Q. Okay. Please proceed.
02:49 15 A. And so once you click on the zip file, then it
02:49 16 automatically opens and opens a folder on your computer
02:49 17 that has number of files on there. But the ones I need
02:49 18 are the top ones that have the .STL extension on them.
02:49 19 And those are the STL files I need.
02:49 20 And then I can -- from here, I can upload them
02:49 21 to whatever lab or clear aligner company I want to.
02:49 22 Q. And this process --
02:50 23 MR. DURST: Drop the enlargement,
02:50 24 Mr. Smith, there. This is what -- Mr. Smith, I want to
02:50 25 be back to what Dr. Cohanim was seeing on the screen.

BY MR. DURST:

02:50 Q. Dr. Cohanim, is this an accurate

02:50 representation of what you were seeing on the screen?

02:50 A. Yes.

02:50 Q. All right. This -- at this point,

02:50 Dr. Cohanim, how long is this entire process taking?

02:50 A. 45 seconds.

02:50 Q. All right. And, Dr. Cohanim, this process,

02:50 once you click on those STL files, does it then leave

02:50 the Align environment?

02:50 A. Once you -- basically, once you press the

02:50 export button and that file gets downloaded to your

02:50 computer, then you're out of the Align environment.

02:50 Q. And so after this step, after you have gotten

02:50 to this point, say you were ordering ClearCorrect, what

02:50 happens next would all be according to ClearCorrect's

02:50 protocols; is that right?

02:50 A. Yes. I would have to go to their portal and

02:50 then upload these according to their instructions.

02:50 Q. Okay. And that's all controlled by -- in the

02:51 example of ClearCorrect, that would all be controlled

02:51 by ClearCorrect, not Align?

02:51 A. Correct.

02:51 Q. All right. Is that the end of the video,

02:51 Dr. Cohanim?

02:51 1 A. It is.
02:51 2 Q. All right. So just some basics about this
02:51 3 demonstration.
02:51 4 When did you record it?
02:51 5 A. I think about ten days ago.
02:51 6 Q. And where were you when you recorded it?
02:51 7 A. At my home office.
02:51 8 Q. And the steps that happen before, I think we
02:51 9 talked about that. That was the taking of the scan?
02:51 10 A. Yes.
02:51 11 Q. And then this video went all the way through
02:51 12 the process with Align. Everything after that is on
02:51 13 ClearCorrect's or uLab or whoever the other provider
02:51 14 is, on their watch?
02:51 15 A. Correct. Once you have the STL files, then
02:51 16 you can use those to do whatever you want.
02:51 17 Q. And an STL file just like this, if you chose
02:51 18 to do so, could you submit it to ClearCorrect to order
02:51 19 clear aligners?
02:51 20 A. Yes.
02:51 21 Q. And you did that in 45 seconds?
02:51 22 A. Yes.
02:51 23 MR. DURST: Thank you, Dr. Cohanim.
02:51 24 Your Honor, I pass the witness.
02:51 25 CROSS-EXAMINATION

02:51 1 BY MR. UNDERWOOD:
02:52 2 Q. Good afternoon, Dr. Cohanim. How are you?
02:52 3 A. Good. Good afternoon.
02:52 4 Q. It's good to meet you.
02:52 5 A. Likewise.
02:52 6 Q. Would you please correct me if at any point I
02:52 7 mispronounce your name?
02:52 8 A. Sure.
02:52 9 Q. I'll do my best.
02:52 10 And is it okay if I ask you some questions
02:52 11 about the testimony you just gave?
02:52 12 A. Of course.
02:52 13 Q. Now, you have previously been hired as an
02:52 14 expert witness by Align, correct?
02:52 15 A. That's correct.
02:52 16 Q. This is not the first time you've served as an
02:52 17 expert witness for Align, right?
02:52 18 A. This is the second time.
02:52 19 Q. This is the second time?
02:52 20 A. Correct.
02:52 21 Q. And you're being paid for your work here,
02:53 22 correct?
02:53 23 A. Yes. I'm being paid for my time.
02:53 24 Q. You're being paid $7,000 a day, correct?
02:53 25 A. That's for my testimony, yes.

02:53 1 Q. No matter how much or how little you work in a
02:53 2 day, correct?
02:53 3 A. That's correct.
02:53 4 Q. No matter how long or how short your testimony
02:53 5 is, correct?
02:53 6 A. That's correct.
02:53 7 Q. $7,000 a day, right?
02:53 8 A. Yes.
02:53 9 Q. And you have done quite a bit of business with
02:53 10 Align over the years, fair to say?
02:53 11 A. As far as ordering aligners goes?
02:53 12 Q. Well, in several different respects. For
02:53 13 example, you were one of the first orthodontists in
02:53 14 Seattle to start offering Invisalign, correct?
02:53 15 A. That's correct.
02:53 16 Q. You've been an Invisalign Premier provider
02:53 17 since 2005, correct?
02:53 18 A. I was a Premier provider. Then they've
02:53 19 changed designations. But yes.
02:53 20 Q. Understood.
02:53 21 A. Yes.
02:53 22 Q. You were one of the founders or the founder of
02:53 23 what's called The Greater Seattle Invisalign Study
02:53 24 Club; is that right?
02:53 25 A. Yes.

02:53 1 Q. And that was founded 18 years ago?
02:54 2 A. Yes.
02:54 3 Q. You've attended training courses offered by
02:54 4 Align, fair?
02:54 5 A. Yes.
02:54 6 Q. And you've also authored articles that have
02:54 7 been paid for by Align, correct?
02:54 8 A. Align has funded some research that we had
02:54 9 done at the university, yes.
02:54 10 Q. Align has funded some of the research you've
02:54 11 done, correct?
02:54 12 A. Yes. Their funding goes -- basically, their
02:54 13 funding goes to my resident. They use it for expenses
02:54 14 for the research. I don't get any payment from them
02:54 15 personally.
02:54 16 Q. But just to be abundantly clear, sir, the
02:54 17 funding comes from who?
02:54 18 A. Part of the funding comes from them.
02:54 19 Q. From Align?
02:54 20 A. Yes.
02:54 21 Q. All right. Can I ask you about this STL
02:54 22 export process you just discussed?
02:54 23 A. Sure.
02:54 24 Q. Now, as an initial matter, sir, just so
02:54 25 everybody's clear, everything you showed in that video,

02:54 1 you don't have to do any of that if you're going to use
02:54 2 an iTero to submit a case with Invisalign, correct?
02:54 3 A. That's correct.
02:54 4 Q. If you're going to use an iTero to submit a
02:54 5 case with Invisalign, you can do that directly from the
02:55 6 scanner, correct?
02:55 7 A. No.
02:55 8 Q. If you're going to do an iTero to submit a
02:55 9 case from Invisalign, you do not have to go to a
02:55 10 desktop computer, correct?
02:55 11 A. That's not true.
02:55 12 Q. Well, you certainly don't have to go through
02:55 13 the iTero -- or strike that.
02:55 14 You certainly don't have to go through the STL
02:55 15 export process you just walked this jury through,
02:55 16 correct?
02:55 17 A. That's correct.
02:55 18 Q. Now, did you see Dr. Taylor's testimony
02:55 19 yesterday?
02:55 20 A. Yes.
02:55 21 MR. UNDERWOOD: And can we get DDX-11.31?
02:55 22 Go to the next one.
23 BY MR. UNDERWOOD:
02:55 24 Q. All right. Do you disagree with Dr. Taylor's
02:55 25 opinion as it's expressed here?

02:55 1 A. Yes.
02:55 2 Q. Did you also hear Mr. Miller testify
02:55 3 yesterday?
02:55 4 A. Yes.
02:55 5 Q. And did you hear what he had to say about the
02:55 6 iTero submission process?
02:55 7 A. Something similar.
02:55 8 Q. He said something similar to Dr. Taylor?
02:55 9 A. He just said -- he said that it's an easier
02:55 10 process to order Invisalign aligners from iTero.
02:55 11 Q. Dr. Cohanim, if I may?
02:56 12 A. Yes.
02:56 13 Q. What Mr. Miller said is consistent with what
02:56 14 Dr. Taylor said?
02:56 15 A. I don't think he -- he didn't have the exact
02:56 16 one-step process in there, no.
02:56 17 Q. Could we take a look at what Mr. Miller said?
02:56 18 A. Sure.
02:56 19 MR. UNDERWOOD: Can we get the trial
02:56 20 transcript at Page 1209, beginning at Line 6?
02:56 21 BY MR. UNDERWOOD:
02:56 22 Q. Okay. Mr. Miller was asked: Okay. Just so
02:56 23 we're crystal clear with this jury, that iTero scanner
02:56 24 can send data directly to Invisalign, the scanner
02:56 25 itself?

02:56 1 His answer was: Correct.
02:56 2 Did I read that correctly?
02:56 3 A. Yes.
02:56 4 Q. Mr. Miller works at Align, right?
02:56 5 A. Yes.
02:56 6 MR. UNDERWOOD: You can take that down.
7 BY MR. UNDERWOOD:
02:56 8 Q. And I think, sir, you described the process
02:56 9 you just walked through as simple and not cumbersome;
02:56 10 is that right?
02:56 11 A. Yes.
02:56 12 Q. Have you seen data from Align on the
02:57 13 percentage of doctors who actually use that process?
02:57 14 A. No. I mean, I've heard it in the courtroom.
02:57 15 I can't remember exactly what it was.
02:57 16 Q. In the courtroom you heard about that
02:57 17 evidence, didn't you?
02:57 18 A. Yes.
02:57 19 MR. UNDERWOOD: Okay. Can we get
02:57 20 DTX-208, please? And this is already in evidence.
02:57 21 BY MR. UNDERWOOD:
02:57 22 Q. Did you know, sir, that less than half a
02:57 23 percent of doctors actually undertake that STL export
02:57 24 process? Did you know that?
02:57 25 A. I heard it in the courtroom.

02:57 1 MR. UNDERWOOD: And if we can scroll
02:57 2 down, this is an e-mail between Align folks.
02:57 3 Scroll down further, Mr. Lee. Keep
02:57 4 going.
02:57 5 A. I don't know if I've seen this before.
02:57 6 BY MR. UNDERWOOD:
02:57 7 Q. Were you in the courtroom this morning during
02:57 8 Dr. Perryman's testimony?
02:57 9 A. Is that a document that he showed?
02:57 10 Q. Dr. Perryman showed it this morning.
02:57 11 A. Okay.
02:57 12 MR. UNDERWOOD: All right. Keep
02:57 13 scrolling. Go up. Keep going.
02:58 14 All right. Right there.
02:58 15 BY MR. UNDERWOOD:
02:58 16 Q. Okay. Do you see under Analytics, it says
02:58 17 "STL export data," the bottom bullet point.
02:58 18 Do you see that?
02:58 19 A. Yes.
02:58 20 Q. And do you see it says: Approximately .5
02:58 21 percent of doctors uses STL feature globally and in
02:58 22 USA.
02:58 23 Did I read that right?
02:58 24 A. That's what it says.
02:58 25 Q. And did you know that Align also tracks the

02:58 1 doctors who do the STL export process?
02:58 2 A. They can tell the number of exports you have
02:58 3 done, yes, but I don't think they can track where you
02:58 4 export them to.
02:58 5 Q. And have you seen the evidence about how Align
02:58 6 tracks that information so they can determine which
02:58 7 doctors are sending scans to their competitors?
02:59 8 A. I don't think I saw any evidence to that.
02:59 9 MR. UNDERWOOD: Can we get DTX-209, which
02:59 10 is already in evidence?
02:59 11 All right. I believe it's on Page 3.
02:59 12 All right. Scroll down. Keep going.
13 BY MR. UNDERWOOD:
02:59 14 Q. All right. It says "Thanks Joe," at the
02:59 15 bottom.
02:59 16 Do you see that?
02:59 17 A. Yes.
02:59 18 MR. UNDERWOOD: And if you can scroll up,
02:59 19 Mr. Lee, to see the top of the e-mail.
02:59 20 No, the sender of the e-mail. I
02:59 21 apologize, Mr. Lee.
22 BY MR. UNDERWOOD:
02:59 23 Q. All right. Do you see -- one more -- at the
02:59 24 bottom of that page.
02:59 25 All right. You see from Joe Hogan?

02:59 1 A. Yes.
02:59 2 Q. And that's the CEO at Align, correct?
02:59 3 A. Yes.
02:59 4 MR. UNDERWOOD: And, Mr. Lee, on the next
02:59 5 page, if you can scroll down back to where you were
02:59 6 towards the bottom.
7 BY MR. UNDERWOOD:
02:59 8 Q. All right. And do you see the second bullet
03:00 9 point from the bottom reads: Flag accounts who are
03:00 10 exporting STL files as possibly sending cases to
03:00 11 competitors.
03:00 12 Did I read that correctly?
03:00 13 A. That's what it says, but it's not the same as
03:00 14 tracking where they send it to.
03:00 15 Q. Sir, just so I may, did I read this correctly
03:00 16 when Mr. Hogan wrote: Flag accounts who are exporting
03:00 17 STL files as possibly sending cases to competitors?
03:00 18 A. Yes.
03:00 19 Q. All right. And have you talked to Align about
03:00 20 their position on whether this STL process is simple or
03:00 21 is difficult?
03:00 22 A. Have I talked to them?
03:00 23 Q. Yes, sir.
03:00 24 A. Only asked my representative, like Invisalign
03:00 25 rep, on details on how to do this in the past.

03:00 1 Q. And have you seen the evidence in this case
03:00 2 from Align about their views on whether this is a
03:00 3 simple or a difficult process?
03:00 4 A. I've seen some documents.
03:00 5 MR. UNDERWOOD: All right. Let's go to
03:00 6 DTX-402, Mr. Lee.
03:00 7 And this is also already in evidence.
03:01 8 And this is an e-mail -- scroll down,
03:01 9 Mr. Lee. Keep going.
03:01 10 Right there.
11 BY MR. UNDERWOOD:
03:01 12 Q. An e-mail from Mr. Leon Rasovsky.
03:01 13 Do you see that?
03:01 14 A. Yes.
03:01 15 Q. And at the bottom, you can see in the
03:01 16 signature it says "Align," right?
03:01 17 A. Yes.
03:01 18 Q. And if you scroll just further, his title is
03:01 19 senior director of global product management iTero.
03:01 20 Did I read that right?
03:01 21 A. Yes.
03:01 22 Q. Okay. And the bottom sentence of his e-mail
03:01 23 says: I agree with Eric that doctors today can
03:01 24 download STL files, and in theory, to save it in DPMS
03:01 25 somehow. But it is highly manual and time consuming

03:01 1 and thus will never be adopted.
03:01 2 Did I read that correctly?
03:01 3 A. Yes. But that's not my experience.
03:01 4 Q. Dr. Cohanim, this is Mr. Leon Rasovsky, an
03:01 5 employee at Align, correct?
03:01 6 A. Yes.
03:01 7 Q. And in fact, his title, his title is the
03:01 8 senior director of global product management for iTero,
03:02 9 correct?
03:02 10 A. Yes.
03:02 11 Q. This -- he is expressing his opinion in this
03:02 12 e-mail that this is a "highly manual and time
03:02 13 consuming" process, correct?
03:02 14 A. That's what he says, but that's not my
03:02 15 experience.
03:02 16 MR. UNDERWOOD: Thank you, Doctor.
03:02 17 I pass the witness.
03:02 18 THE COURT: I'm sorry, I couldn't hear
19 your answer.
03:02 20 THE WITNESS: I said that's not my
03:02 21 experience.
03:02 22 THE COURT: Okay. Thank you.
03:02 23 MR. DURST: Can we have that last exhibit
03:02 24 back up, DTX-402?
03:02 25 I'm not sure who's driving here, Mr. Lee

03:02 1 or Mr. Smith. But whichever of you is driving, could
03:02 2 you go to that last highlighting Mr. Underwood had on
03:02 3 the screen, the last bullet point that was highlighted.
03:02 4 Actually, go back one page and stop right
03:02 5 there. Just leave it right there for just a second.
6 REDIRECT EXAMINATION
7 BY MR. DURST:
03:03 8 Q. So do you see the word -- Dr. Cohanim, do you
03:03 9 see the word "Dolphin" in the middle of the screen?
03:03 10 A. Yes.
03:03 11 Q. Do you know what Dolphin is, DPMS?
03:03 12 A. It's a dental practice management software.
03:03 13 Q. Do they make aligners?
03:03 14 A. No.
03:03 15 MR. DURST: Thank you, Dr. Cohanim. No
03:03 16 further questions.
03:03 17 MR. UNDERWOOD: Nothing further,
03:03 18 Your Honor.
03:03 19 THE COURT: Thank you, sir.
03:03 20 Next witness, please.
03:03 21 MR. TUBACH: Your Honor, with the Court's
03:03 22 permission, could we take just a five-minute break? I
03:03 23 could use just five minutes.
03:03 24 THE COURT: Sure.
03:03 25 Ladies and gentlemen of the jury, we'll

03:03 1 take a quick recess and then come back.
03:03 2 THE BAILIFF: All rise.
03:03 3 (Jury exited the courtroom.)
03:03 4 THE COURT: If anyone needs to excuse
03:03 5 themselves, you're welcome to. I'll take up just
03:04 6 scheduling stuff with the others.
03:04 7 (Recess taken.)
03:04 8 THE COURT: The plaintiff has two hours
03:04 9 and 15 minutes left. The defendant has one hour and 30
03:04 10 minutes left is what we have.
03:04 11 MR. MUELLER: I'm sorry?
03:04 12 THE COURT: One hour and 30 minutes left.
03:04 13 So let's go off the record.
03:17 14 (Off-the-record discussion.)
03:18 15 (Recess taken.)
03:23 16 THE BAILIFF: All rise.
03:23 17 THE COURT: Please remain standing for
03:23 18 the jury.
03:23 19 (Jury entered the courtroom.)
03:24 20 THE COURT: Thank you. You may be
03:24 21 seated.
03:24 22 Counsel?
03:24 23 MS. DURIE: Thank you, Your Honor. We're
03:24 24 now going to play some deposition video testimony.
03:24 25 We'll now hear some testimony by video from

03:24 1 Mr. Christian Berbalk, who is the senior vice president
03:24 2 and global head of ClearCorrect sales at Straumann
03:24 3 Group. And it's two hours and 45 seconds for Align --
03:24 4 sorry, two minutes and 45 seconds for Align.
03:24 5 (Laughter.)
03:24 6 MS. DURIE: And three minutes and
03:24 7 27 seconds for Straumann.
03:24 8 (Video deposition-Christian Berbalk played as follows:
03:24 9 Q. Sir, would you mind stating your name for the
03:24 10 record?
03:24 11 A. Yes. Christian Berbalk.
03:24 12 Q. What was your first position with Straumann?
03:24 13 A. I first worked with a dental service
03:24 14 organization. So I was catering with my team to big
03:24 15 dental service organizations and dental chains in
03:25 16 Europe.
03:25 17 Q. And are dental service organizations sometimes
03:25 18 known as DSOs?
03:25 19 A. Correct.
03:25 20 Q. How long did you hold this position, sir, as
03:25 21 the head of dental service organizations for Europe?
03:25 22 A. From 2019, about a year. I then switched to
03:25 23 marketing for Europe and Western Europe in 2020.
03:25 24 Q. What was the next position you held with
03:25 25 Straumann?

03:25 1 A. I became then after this position the head of
03:25 2 growth for ClearCorrect in March 2024.
03:25 3 Q. I'm sorry, your title was the head of growth
03:25 4 for ClearCorrect?
03:25 5 A. Yes.
03:25 6 Q. And what were your responsibilities in this
03:25 7 role?
03:25 8 A. It was predominantly a commercial excellence
03:25 9 but as well, a growth enablement role. I started at
03:25 10 the beginning with a team of two mainly getting into
03:25 11 the market, learning as well about the market,
03:25 12 especially learning about our value offering and as
03:25 13 well our positioning in North America.
03:25 14 Q. When you say "market," what are you referring
03:25 15 to, what market?
03:25 16 A. The clear aligner market, providing clear
03:26 17 aligner solutions to doctors so they can provide it to
03:26 18 the patients.
03:26 19 Q. Okay. And DSOs may negotiate purchase
03:26 20 agreements on behalf of their members; is that right?
03:26 21 A. This is not how I understand it. They
03:26 22 normally negotiate frame contracts, and then there's a
03:26 23 sort of free choosing of their members which product to
03:26 24 seek.
03:26 25 Q. So help me understand a discount scheme. You

03:26 1 testified that if the customer had purchased a
03:26 2 higher -- purchases a quantity of the product, they may
03:26 3 receive a higher discount.
03:26 4 Do I have that right?
03:26 5 A. That's correct.
03:26 6 Q. And the product here, would that include clear
03:26 7 aligners?
03:26 8 A. Yes. That's correct.
03:26 9 Q. And so if a customer commits to purchasing
03:26 10 both clear aligners and intraoral scanners, they may
03:26 11 receive a higher discount?
03:26 12 Do I have that right?
03:26 13 A. Not necessarily a higher discount. They
03:26 14 receive a discount.
03:26 15 Q. Do you have any personal objections to
03:26 16 offering bundled discounts to DSOs?
03:26 17 A. From my point of view and my experience,
03:26 18 bundled deals are an industry standard and are as well
03:27 19 important for customer growth.
03:27 20 Q. Why are they important for customer growth?
03:27 21 A. Because customers would like to seek a
03:27 22 digitalization opportunity and additional aligner
03:27 23 solutions.
03:27 24 Q. And do you have any personal objections to
03:27 25 offering volume discounts in contracts with DSOs?

03:27 1 A. Volume discounts are based on agreement with
03:27 2 the dental service organizations, and we are meeting
03:27 3 customer demands.
03:27 4 Q. And so this is a way of attracting customer
03:27 5 business.
03:27 6 Do I have that right?
03:27 7 A. This is a way of collaborating and growing
03:27 8 together with the customer, an open system setup.
03:27 9 Q. So offering discounts is one way by which
03:27 10 ClearCorrect competes in the market.
03:27 11 Do I have that right?
03:27 12 A. Offering discounts is a market standard to all
03:27 13 clear aligner companies.
03:27 14 Q. Does ClearCorrect offer volume discounts to
03:28 15 DSOs in the United States?
03:28 16 A. We offer discounts to dental service
03:28 17 organizations in the United States.
03:28 18 Q. Does ClearCorrect offer bundled discounts to
03:28 19 DSOs in the United States?
03:28 20 A. ClearCorrect bundles products and intraoral
03:28 21 scanners with a discount to dental service
03:28 22 organizations in the United States.
03:28 23 Q. Does ClearCorrect expect its business partners
03:28 24 to uphold their part of the deal when it signs a
03:28 25 contract?

03:28 1 A. We agree on a joint offer. We agree as well
03:28 2 to do, both parties, our utmost to reach this
03:28 3 agreement. What we don't do and what I don't see in
03:28 4 the practice is we never penalize the customer for not
03:28 5 having reach- -- reached the commitments, and we don't
03:28 6 send invoices or penalties to the customer for not
03:28 7 having reached the commitment, according to my
03:29 8 knowledge.
03:29 9 Q. If a customer does not reach the commitment,
03:29 10 do they still receive the discount?
03:29 11 A. They have received a discount on the scanner,
03:29 12 and they receive the discount on the scanner.
03:29 13 Q. What about with respect to clear aligners?
03:29 14 A. If the clear aligners had a certain discount,
03:29 15 they receive the certain discount on the clear
03:29 16 aligners. We're not claiming the discount back.
03:29 17 Q. Based on your experience in that role, how is
03:29 18 ClearCorrect performing in terms of sales in the United
03:29 19 States?
03:29 20 A. In the United States, we are, compared to
03:29 21 other entities in our ClearCorrect business, performing
03:29 22 rather badly or rather flat to minus growth. We're
03:29 23 impacted by the competitive behavior of Align Tech not
03:29 24 allowing us to access high-producing doctors like
03:29 25 orthodontists, GPs, and dental service organizations.

03:29 1 This is as well where our customer split here
03:29 2 in the U.S. is very much geared towards very small
03:30 3 customers. We can serve to one, two, three cases and
03:30 4 they churn after six months.
03:30 5 Q. And they're what?
03:30 6 A. They churn after six months. Our share of big
03:30 7 customers and our share of high-productivity customers
03:30 8 are substantially lower here in the U.S. than in other
03:30 9 geographies. I correlate this with the competitive
03:30 10 behavior of Align Tech.
03:30 11 What we hear very often from our customers is
03:30 12 that they can shave off a few cases here and there for
03:30 13 us that are above the loyalty program level at Align
03:30 14 Tech and are not jeopardizing their current benefits.
03:30 15 What we hear as well in the market is that
03:30 16 customers are bound in exclusivity contracts. What we
03:30 17 hear as well from customers, that when we ask them
03:30 18 about these exclusivity contracts, that Align asked
03:30 19 them to sign a nondisclosure agreement and, therefore,
03:30 20 they would not like to share any further. This hampers
03:30 21 our opportunity to scale and to grow profitably in the
03:31 22 U.S.
03:31 23 (End of video deposition.)
03:31 24 THE COURT: Next witness, please.
03:31 25 MR. TUBACH: Your Honor, Align Technology

03:31 1 calls Dr. Christopher Knittel.
03:31 2 (The witness was sworn.)
03:31 3 DIRECT EXAMINATION
03:31 4 BY MR. TUBACH:
03:31 5 Q. Good afternoon, Dr. Knittel.
03:31 6 Could you introduce yourself to the ladies and
03:31 7 gentlemen of the jury?
03:31 8 A. Sure. My name's Chris Knittel.
03:31 9 Q. What do you do for a living?
03:31 10 A. I am a professor of applied economics at MIT
03:32 11 Sloan School of Business, and there I also hold the
03:32 12 George P. Shultz endowed chair.
03:32 13 Q. Can you tell us a little bit about your
03:32 14 personal background?
03:32 15 A. Yes. I grew up in the Central Valley of
16 California, rural Central Valley. I married my high
03:32 17 school sweetheart. We'll celebrate our 30th wedding
03:32 18 anniversary this August. And we have one son, and he's
03:32 19 awesome.
03:32 20 Q. How did you make your way from a small rural
03:32 21 town in Central California to MIT?
03:32 22 A. Well, I first went to college expecting to be
03:32 23 a professional baseball player. That quite didn't work
03:32 24 out. That was a local state college.
03:32 25 After that I -- or during college I majored in

03:32 1 economics. I went on to get a Ph.D. in economics from
03:32 2 UC Berkeley. And I taught in California for a while,
03:32 3 and MIT recruited me in 2011.
03:32 4 Q. And what is something people might not know
03:33 5 about you just reading your bio or your resume?
03:33 6 A. So I grew up in Merced, if you've ever heard
03:33 7 of the town. I grew up an avid hunter and fisherman,
03:33 8 and I'm still quite an active fisherman.
03:33 9 Q. You mentioned you're a professor of applied
03:33 10 economics. What does that mean?
03:33 11 A. So MIT has two economics departments,
03:33 12 actually. They have -- I guess you would call it a
03:33 13 peer economics department. That sits inside the school
03:33 14 of social sciences. And then the applied economics
03:33 15 department sits inside the business school.
03:33 16 And as the name would suggest, the faculty in
03:33 17 the applied economics group tends to work on research
03:33 18 questions that are a bit more grounded in the real
03:33 19 world.
03:33 20 Q. What are you here to testify about today?
03:33 21 A. So I'm here to testify as to whether or not
03:33 22 Align's behavior blocked Straumann/ClearCorrect in the
03:33 23 marketplace, as well as to respond to some of the
03:33 24 opinions offered by Dr. Perryman.
03:33 25 Q. Have you taught courses in industrial

03:34 1 organization?
03:34 2 A. Yes.
03:34 3 Q. What is industrial organization?
03:34 4 A. So industrial organization, we call it I/O in
03:34 5 economics. It's a subfield of economics, and it
03:34 6 studies how markets work. And by that I mean how firms
03:34 7 interact with each other, how firms make decisions as
03:34 8 to what products to offer, what -- how to price those
03:34 9 products, and then ultimately how consumers make
03:34 10 decisions as to what product to buy.
03:34 11 Q. Do you hold any research positions outside
03:34 12 your position as a professor at MIT?
03:34 13 A. Yes. I'm also a research associate at what's
03:34 14 known as the National Bureau of Economic Research.
03:34 15 That's a large group of empirical economists that work
03:34 16 on real-world questions. People outside of economics
03:34 17 might know the MBER, we call it, as the group that
03:34 18 officially calls the start and stop of recessions.
03:34 19 Q. Of recessions?
03:34 20 A. Yes.
03:34 21 Q. Has any of your research been published?
03:34 22 A. Yes.
03:34 23 Q. About how many times?
03:34 24 A. I have at least 50 publications in top
03:35 25 economics and science journals.

03:35 1 Q. Outside of the academic work that you've
03:35 2 talked about, do you do any consulting?
03:35 3 A. I do.
03:35 4 Q. And what kind of consulting do you do?
03:35 5 A. So I do two types of consulting. The first,
03:35 6 I'll work directly with companies, for example,
03:35 7 Anheuser-Busch, Delta Airlines, to help them understand
03:35 8 their consumers and how they're making decisions about
03:35 9 their products and then to help them think about how to
03:35 10 price their products better.
03:35 11 Q. But you help Anheuser-Busch price the product,
03:35 12 price its beer?
03:35 13 A. Not in the U.S. We focus on Latin America.
03:35 14 Q. Okay. Does your consulting work also include
03:35 15 working on litigation such as this?
03:35 16 A. Yeah. The second type is litigation matters
03:35 17 like this.
03:35 18 Q. Okay. And have you testified before, sir?
03:35 19 A. I have.
03:35 20 Q. Okay. Aside from litigation, have you
03:35 21 testified in any other noncourt proceedings?
03:35 22 A. Sure. I've testified in front of the U.S.
03:35 23 Congress. I've testified in front of a panel of
03:36 24 regulators in Australia as well.
03:36 25 Q. Now, how much time would you estimate you

03:36 1 spend doing research and writing versus doing your
03:36 2 consulting work?
03:36 3 A. So I -- you know, my main job is I'm a
03:36 4 professor. I would say I spend 90 percent of my time
03:36 5 teaching, doing research, working with students, and
03:36 6 university service and 10 percent consulting.
03:36 7 Q. Were you hired by Align Technology in this
03:36 8 case?
03:36 9 A. I was.
03:36 10 Q. How much are you getting paid?
03:36 11 A. My rate is $1,000 an hour.
03:36 12 Q. Okay. And do you also receive a percentage
03:36 13 that Analysis Group, the group that supports your --
03:36 14 the work that you do?
03:36 15 A. That's correct.
03:36 16 Q. Okay. And does your compensation depend at
03:36 17 all -- at all on the outcome of this case?
03:36 18 A. Absolutely not.
03:36 19 MR. TUBACH: Okay. Your Honor, we offer
03:36 20 Dr. Knittel as an expert in the field of economics.
03:36 21 MR. MUELLER: No objection, Your Honor.
03:36 22 THE COURT: Admitted.
03:36 23 BY MR. TUBACH:
03:36 24 Q. Now, Dr. Knittel, have you formed opinions in
03:36 25 this case as a result of the work that you've done?

03:36 1 A. I have.
03:36 2 MR. TUBACH: If we could put up Slide
03:37 3 PDX-9.2, please.
4 BY MR. TUBACH:
03:37 5 Q. Let's discuss these. Could you just walk us
03:37 6 through at a high level what these two opinions are?
03:37 7 A. Yeah. At a high level, I've found that
03:37 8 Align's discount programs, how they write their
03:37 9 contracts, as well as how the iTero is structured are
03:37 10 actually procompetitive. They're making the
03:37 11 marketplace operate more efficiently and ultimately
03:37 12 benefitting consumers.
03:37 13 And then the second that follows from that is
03:37 14 that Straumann did not suffer any injury or damages
03:37 15 caused by Align.
03:37 16 Q. Now, let's focus on the first one.
03:37 17 What does it meant to you, as an economist, to
03:37 18 say that behavior is procompetitive?
03:37 19 A. Yeah. So procompetitive behavior is behavior
03:37 20 by firms that is consistent with how we want markets to
03:37 21 operate. So, ultimately, that means that it's behavior
03:37 22 that leads to lower prices, more output, and more
03:37 23 innovation, all of which benefit the consumer.
03:37 24 Q. What about anticompetitive behavior, what does
03:38 25 that mean to you?

03:38 1 A. So that's literally the exact opposite. So
03:38 2 that's behavior that makes the market less efficient.
03:38 3 So that leads to higher prices which ultimately leads
03:38 4 to lower output and lower consumption and less
03:38 5 innovation.
03:38 6 Q. And what conduct does Straumann and
03:38 7 ClearCorrect allege Align engaged in here that is
03:38 8 anticompetitive?
03:38 9 A. So they allege that the discount programs that
03:38 10 Align offers are anticompetitive, how they write their
03:38 11 contracts are anticompetitive, as well as the iTero
03:38 12 scanner.
03:38 13 Q. And at a high level, what did you conclude?
03:38 14 A. I concluded that they're procompetitive and
03:38 15 are actually benefitting consumers.
03:38 16 Q. Did you investigate whether Align has blocked
03:38 17 or foreclosed ClearCorrect or other aligner companies
03:38 18 from competing?
03:38 19 A. I did.
03:38 20 Q. What did you find?
03:38 21 A. None of these three items blocked or
03:38 22 foreclosed ClearCorrect or any other aligner from
03:38 23 competing. These were programs that are offered in the
03:39 24 course of a marketplace, and the other firms in the
03:39 25 marketplace could certainly compete with -- with Align.

03:39 1 MR. TUBACH: Let's look at 9 -- PDX-9.4.
2 BY MR. TUBACH:
03:39 3 Q. What are we looking at here, Dr. Knittel?
03:39 4 A. So this is a subset of all the clear aligner
03:39 5 companies in the marketplace now, many of which have
03:39 6 entered over the last ten years.
03:39 7 Q. Okay. Are all these companies that make
03:39 8 aligners?
03:39 9 A. These are just clear aligner companies.
03:39 10 Q. And is this all of the aligner companies that
03:39 11 have been -- entered in the last ten years or so?
03:39 12 A. Just a subset.
03:39 13 Q. Now, does this include braces companies also?
03:39 14 A. These do not. Some of these companies also
03:39 15 offer braces, but these are clear aligner companies.
03:39 16 Q. Okay. Now, did you hear Dr. Perryman testify
03:39 17 that Invisalign doesn't compete with braces or
03:39 18 direct-to-consumer aligners?
03:39 19 A. I did.
03:39 20 Q. And are you here to testify about that
03:39 21 specific issue?
03:39 22 A. No. I'm not here to testify what the relevant
03:40 23 market is. I understand Dr. Jena will be testifying or
03:40 24 certainly offered a report in this case where he finds
03:40 25 that clear aligner --

03:40 1 MR. MUELLER: Your Honor, I object to his
03:40 2 commentary of Dr. Jena's report.
03:40 3 MR. TUBACH: That's fine. We'll -- I'll
03:40 4 ask another question.
03:40 5 BY MR. TUBACH;
03:40 6 Q. When you first got hired in this case, what
03:40 7 was your reaction?
03:40 8 A. So when I first got hired in this case, I
03:40 9 remembered back to when my son got braces. So we took
03:40 10 him into the orthodontist and said we want to give
03:40 11 him -- or get him braces.
03:40 12 He went through the whole fitting process. He
03:40 13 used the PVS for that. And then after that fitting
03:40 14 process, we met with the orthodontist in his office.
03:40 15 And surprisingly, he put two contracts in front of us,
03:40 16 one for braces and one for clear aligners.
03:40 17 We had never asked for clear aligners. And he
03:40 18 actually told me that they're priced exactly the same,
03:40 19 and he always prices them the same.
03:40 20 So I can't stop being an economist, so the
03:40 21 first thought in my head is --
03:40 22 MR. MUELLER: Your Honor, I object.
03:41 23 Hearsay, outside the scope of his report, and I move to
03:41 24 strike.
03:41 25 THE COURT: Overruled.

03:41 1 A. My first thought was he certainly thinks that
03:41 2 they're -- they're competing against each other.
03:41 3 BY MR. TUBACH:
03:41 4 Q. And is what you're here to talk about today,
03:41 5 does it depend at all on how the specific market is
03:41 6 defined?
03:41 7 A. It doesn't. So regardless of how we define
03:41 8 the market, Align's behavior with respect to those
03:41 9 three items is still procompetitive.
03:41 10 Q. Let's look back at this chart that we have up
03:41 11 here on the screen.
03:41 12 Would you expect every one of these companies
03:41 13 to succeed?
03:41 14 A. Not at all.
03:41 15 Q. Why not?
03:41 16 A. Well, in any marketplace, you know, there's
03:41 17 certainly companies that will do better -- better than
03:41 18 some. And, you know, some companies will thrive.
03:41 19 Others won't do so well and maybe even exit.
03:41 20 One of the reasons why economists like markets
03:41 21 or the competitive markets is that they do a good job
03:41 22 at finding the products that provide the best value to
03:42 23 consumers. And those companies flourish, and the other
03:42 24 companies either have to innovate or sometimes exit.
03:42 25 Q. Now, in the course of your work, did you get

03:42 1 data from some of these companies?
03:42 2 A. Yes. I did.
03:42 3 Q. Did you get data from ClearCorrect?
03:42 4 A. Yes.
03:42 5 Q. Did you get data from Dentsply Sirona?
03:42 6 A. Correct.
03:42 7 Q. And did you get data from Ormco which makes
03:42 8 Spark?
03:42 9 A. Yes. I did.
03:42 10 Q. And did you analyze that data to see how those
03:42 11 companies have done over time?
03:42 12 A. I did.
03:42 13 Q. And to be clear, did Dr. Perryman get the same
03:42 14 data that you did?
03:42 15 A. Yes.
03:42 16 Q. Okay. And did you prepare a chart showing us
03:42 17 what you concluded?
03:42 18 A. I did.
03:42 19 Q. Or what you found?
03:42 20 Let's take a look at that.
03:42 21 What are we seeing here?
03:42 22 A. So these are two line graphs, one for Dentsply
03:42 23 Sirona and one for Ormco. And what each line is
03:43 24 showing, it's tracking the annual revenues from
03:43 25 those -- those two companies.

03:43 1 So if we focus on the dark blue line, for
03:43 2 example, that's Ormco. Ormco entered the -- entered or
03:43 3 started selling clear aligners in 2019. And in that
03:43 4 year, they had [redacted]. But
03:43 5 by 2023, Ormco's [redacted]
03:43 6 [redacted].
03:43 7 And Dentsply Sirona shows [redacted].
03:43 8 They entered in 2020, and by [redacted]
03:43 9 [redacted]
03:43 10 Q. Why does this chart stop at 2023?
03:43 11 A. So for these two companies, that's the last
03:43 12 year we had data.
03:43 13 Q. And is Dentsply Sirona, is it new to the
03:43 14 dental field generally?
03:43 15 A. No. So Dentsply Sirona's been around for over
03:43 16 100 years. They've been selling dental products for
03:44 17 over 100 years.
03:44 18 Q. And where are they located?
03:44 19 A. In the United States.
03:44 20 Q. But what about Ormco, is Ormco new to the
03:44 21 dental field generally?
03:44 22 A. No. Similar story there. So Ormco also has
03:44 23 been in the dental industry more broadly for over
03:44 24 100 years and also headquartered in the United States.
03:44 25 Q. And are both of those large companies?

03:44 1 A. Yeah. They're multi-billion-dollar
03:44 2 international companies.
03:44 3 Q. Now, when you see established companies that
03:44 4 have never sold a product before like this enter, what
03:44 5 does that tell you about what they expect?
03:44 6 A. So, you know, certainly firms or companies
03:44 7 don't enter markets unless they expect to earn a profit
03:44 8 in -- in that industry.
03:44 9 I think the fact that these are 100-year
03:44 10 companies in an adjacent market tells us that, you
03:44 11 know, they have a better idea of what they're getting
03:44 12 into than certainly I would if I entered the clear
03:44 13 aligner industry.
03:44 14 And they're -- they're a large company, so
03:45 15 they have resources to build out the brand and so
03:45 16 forth.
03:45 17 Q. Is Straumann Group new to the dental business?
03:45 18 A. No. So they're very similar to these two
03:45 19 companies. Straumann's been around for over 100 years
03:45 20 in the dental industry broadly.
03:45 21 Q. And where are they located?
03:45 22 A. Switzerland.
03:45 23 Q. And when did Straumann get into aligners?
03:45 24 A. In -- in 2017.
03:45 25 Q. And is that when they bought ClearCorrect?

03:45 1 A. Correct.
03:45 2 Q. Did you have a chance to compare these two
03:45 3 companies' sales with ClearCorrect's sales over the
03:45 4 same time period?
03:45 5 A. I did.
03:45 6 MR. TUBACH: And let's take a look at
03:45 7 that now. PDX-9.6.
8 BY MR. TUBACH:
03:45 9 Q. What does this chart show us?
03:45 10 A. So this one shows a different story. So here,
03:45 11 red is the annual revenues of ClearCorrect. And what
03:45 12 we see is that they max out in 2019 at about
03:45 13 $65 million. But every year since 2019, their revenues
03:45 14 have actually fallen.
03:45 15 Q. Well, why did you choose these three companies
03:46 16 to put on this chart?
03:46 17 A. Well, a couple of reasons.
03:46 18 One is, as I mentioned, they're similar in
03:46 19 nature. They're old companies in the dental industry
03:46 20 at least. They've all been in adjacent industries.
03:46 21 They're also all competing in this -- with clear
03:46 22 aligners.
03:46 23 So they're all facing the same behavior that
03:46 24 Align is in terms of their discount programs, their
03:46 25 contracts, and the iTero.

03:46 1 Q. So as an economist, what, if anything, does
03:46 2 this chart tell you about whether Align is blocking
03:46 3 competition for the sale of clear aligners?
03:46 4 A. Well, it's certainly suggestive that they're
03:46 5 not. We have [redacted]
03:46 6 [redacted] -- that same behavior,
03:46 7 and one of the companies is not.
03:46 8 So it suggests that something else is going on
03:46 9 with that third company.
03:46 10 Q. Now, you've heard testimony in court here.
03:46 11 You've been in the courtroom at times, right?
03:46 12 A. Yes.
03:46 13 Q. You -- you've heard testimony in court that
03:46 14 Align sales are significantly higher than these
03:47 15 companies, right?
03:47 16 A. Yes.
03:47 17 Q. Does that change your opinion about whether
03:47 18 this chart shows robust competition?
03:47 19 A. No. So it's certainly the case that Align's
03:47 20 sales are much higher than these three companies. You
03:47 21 know, Align has had a two-decade head start. You would
03:47 22 expect them to have amassed brand loyalty, name
03:47 23 recognition, and higher revenues.
03:47 24 What this shows is in the face of Align's
03:47 25 behavior, you have [redacted]

03:47 1 [redacted]
03:47 2 [redacted].
03:47 3 Q. Now, was this the extent of the work that you
03:47 4 did in the case today?
03:47 5 A. No. This was just a starting point.
03:47 6 MR. TUBACH: All right. Let's turn to
03:47 7 the next slide, if we could.
8 BY MR. TUBACH:
03:47 9 Q. This describes or lists the three sort of
03:47 10 buckets of conduct that Dr. Perryman claims block
03:47 11 competition; is that right?
03:47 12 A. That's correct.
03:47 13 Q. Now, did -- were you here when Dr. Perryman
03:47 14 testified earlier today?
03:47 15 A. I was.
03:48 16 Q. And you heard Dr. Perryman testify that he's
03:48 17 not offering any damages at all related to the discount
03:48 18 programs?
03:48 19 A. That's correct.
03:48 20 Q. And did he also testify that he's not offering
03:48 21 any damages analysis relating to the contracts?
03:48 22 A. Yes.
03:48 23 Q. Now, he did testify that he believed that
03:48 24 those programs harmed competition in some way, right,
03:48 25 or harmed ClearCorrect?

03:48 1 A. He did.
03:48 2 Q. Now -- because they foreclosed other
03:48 3 competitors from competing?
03:48 4 A. Correct.
03:48 5 Q. Well, what is -- what does "foreclosure" mean
03:48 6 to you as an economist?
03:48 7 A. So economists use that term to represent the
03:48 8 case when a firm completely blocks a set of customers
03:48 9 from other competitors. So it means that those other
03:48 10 competitors have no chance to compete with that -- with
03:48 11 that firm.
03:48 12 Q. And is that the same thing as losing a sale?
03:48 13 A. No. Not at all.
03:48 14 Q. What's the difference?
03:49 15 A. Well, obviously every sale is either won or
03:49 16 lost by -- won by one company and lost by everybody
03:49 17 else. Foreclosure is literally not allowing those
03:49 18 other companies from even trying or even playing
03:49 19 against the winner.
03:49 20 Q. And when a company loses a sale, when a
03:49 21 customer decides to buy from a competitor, does that
03:49 22 mean there's no -- not a level playing field?
03:49 23 A. No. Even with the level playing field, every
03:49 24 sale will be won by one company and lost by the other
03:49 25 companies in the industry.

03:49 1 Q. And so what did you conclude about whether
03:49 2 Dr. Perryman's correct that these three types of
03:49 3 conduct blocked or foreclosed competition for the sale
03:49 4 of clear aligners?
03:49 5 A. None of these block or foreclose competition.
03:49 6 Q. Okay. Now, I understand they're not seeking
03:49 7 damages for the loyalty program, but I still want to
03:49 8 walk through that with you for a minute, if I could.
03:49 9 What is a loyalty program briefly?
03:50 10 A. A loyalty program is really -- you know, the
03:50 11 other term for it is a volume discount, but it's
03:50 12 basically giving higher discounts based on how much the
03:50 13 customer's buying from the company.
03:50 14 Q. And are loyalty discount programs common?
03:50 15 A. They're all over the place.
03:50 16 Q. Okay. Let's look at an example.
03:50 17 What do we have here?
03:50 18 A. Yeah. So this is a loyalty program offered by
03:50 19 Shell for their gas stations, and in this program,
03:50 20 there's three tiers. And you reach tiers by how many
03:50 21 fill-ups you've had in a three-month period.
03:50 22 So they base it on fill-ups and then also
03:50 23 fill-ups of their premium gasoline. I'm going to focus
03:50 24 on just their nonpremium gasoline.
03:50 25 But if you have fewer than six fill-ups in a

03:50 1 given three-month period, then you're in the silver
03:50 2 program. You get a 3 cent per gallon discount.
03:51 3 If you have at least 6 fill-ups but less than
03:51 4 12 fill-ups, then you'll be placed in gold tier. And
03:51 5 there you'll get a 5 cent a gallon discount.
03:51 6 And then if you have more than 12 fill-ups,
03:51 7 then you'll not only get a 10 cent per gallon discount
03:51 8 over the next three months, the entire three months,
03:51 9 but you also get a couple other benefits as well.
03:51 10 Q. So I want to ask you about that because
03:51 11 Dr. Perryman testified about the structure of the
03:51 12 discounts. And for Align's program, how is this
03:51 13 program structured in terms of when you earn the
03:51 14 discounts and when you get them?
03:51 15 A. So they're remarkably similar, actually. So
03:51 16 in Align's program, it's a six-month period that
03:51 17 determines what your tier is or your discount level is
03:51 18 in the next six months, but it's the same exact setup
03:51 19 where depending on how many Align -- Invisaligns you
03:51 20 sell in that six-month period, that'll determine what
03:51 21 your discount is in the next six-month period, just
03:51 22 like in this Shell example.
03:52 23 Q. And do you know what the period is at issue in
03:52 24 Shell?
03:52 25 A. The Shell program is three months, and Align's

03:52 1 is six months.
03:52 2 Q. I got it.
03:52 3 So whatever gas you buy from January through,
03:52 4 I guess, the end of March, that determines what your
03:52 5 discount is April through June?
03:52 6 A. Exactly.
03:52 7 Q. Okay.
03:52 8 A. And then it rolls.
03:52 9 Q. Now, is that the way that Align's discount
03:52 10 loyalty program works?
03:52 11 A. Yes.
03:52 12 Q. Okay. I think you testified, though, that the
03:52 13 period is a little different?
03:52 14 A. That's right.
03:52 15 Q. It's just six months instead of three months?
03:52 16 A. Correct.
03:52 17 Q. I got it.
03:52 18 Do other aligner companies offer discount
03:52 19 programs?
03:52 20 A. They do.
03:52 21 Q. Let's take a look at the next slide.
03:52 22 Are these -- what are these six companies?
03:52 23 A. So these are a sample of other companies that
03:52 24 offer discount programs. These are six in particular.
03:52 25 Q. And ClearCorrect offers a discount program?

03:52 1 A. Yes. They do.
03:52 2 Q. And do you know how that discount program is
03:52 3 structured?
03:52 4 A. Well, they have a variety of six-month -- or a
03:52 5 variety of discount programs. Some of their discount
03:53 6 programs are structured like that Shell example or
03:53 7 the -- Align's example.
03:53 8 Q. Now, do any of these programs, Shell program,
03:53 9 Align's program, any of these six, in your view as an
03:53 10 economist, do they block competition or foreclose
03:53 11 competition?
03:53 12 A. These discount programs are competition. You
03:53 13 know, the reason why they're being offered is to fight
03:53 14 for the customers. And in fact, the fact that you see
03:53 15 different types of discount programs is -- tells us
03:53 16 that they're also competing in the structure of their
03:53 17 discount program. They're trying to figure out what is
03:53 18 the best type of discount program to win that customer.
03:53 19 So ultimately, they actually represent
03:53 20 competition.
03:53 21 Q. So let's talk specifically about Align's
03:53 22 discount program.
03:53 23 Why do you say that doesn't block competition?
03:53 24 A. Well, for a few reasons. The first is that
03:53 25 they're voluntary, and what I mean by that is they're

03:53 1 voluntary in and out. So a doctor doesn't have to sign
03:53 2 up. But even if a doctor signed up, they could decide
03:54 3 whenever they want to exit that discount program.
03:54 4 Second, and we heard this from Mr. Miller,
03:54 5 they were designed to compete against braces and the
03:54 6 fact that braces have this advantage that you could buy
03:54 7 the components of braces in bulk, and you can't do that
03:54 8 for clear aligners.
03:54 9 And third, and probably most importantly, is
03:54 10 these discount programs lower prices, and that's a
03:54 11 hallmark of procompetitive behavior.
03:54 12 Q. Did you prepare a chart to show how prices
03:54 13 have behaved over the -- from 2016 to 2024?
03:54 14 A. Yes.
03:54 15 Q. Let's take a look at PDX-9.10.
03:54 16 What are we seeing here?
03:54 17 A. So this is the average price that doctors paid
03:54 18 for Invisalign's Comprehensive package. So the
03:54 19 Comprehensive package is their flagship package. It's
03:54 20 their most popular one.
03:54 21 So what we saw in the data is in 2016, the
03:55 22 average price that doctors were paying was $1,513. And
03:55 23 then by 2024, the last year that we had data, that
03:55 24 price for the same package has -- had [redacted].
03:55 25 Q. So in that eight-year period, Align's prices

03:55 1 for its flagship product had [redacted]?
03:55 2 A. Exactly.
03:55 3 Q. By about how much, give or take?
03:55 4 A. You're making me do math in real time.
03:55 5 Looks like [redacted].
03:55 6 Q. And so [redacted] certainly?
03:55 7 A. Sure.
03:55 8 Q. Okay. Now, over the same time period, what
03:55 9 was happening to prices generally in the economy?
03:55 10 You're an economist. You have to study recessions and
03:55 11 when they're coming?
03:55 12 A. So over the time period, I'm sure we're all
03:55 13 well aware, the actual -- the CPI, the Consumer Price
03:55 14 Index, which measures the general level of all prices
03:55 15 in the economy, actually rose by 30 percent.
03:56 16 Q. 30 percent?
03:56 17 A. Yes.
03:56 18 Q. I'm going to ask you what may be an obvious
03:56 19 question. Are these discount programs popular?
03:56 20 A. Yes. They're lowering the price you have to
03:56 21 pay. So they're popular.
03:56 22 Q. Now, you testified these programs are
03:56 23 voluntary.
03:56 24 What happens if a doctor stops buying
03:56 25 Invisalign? Are they -- what happens?

03:56 1 A. Nothing happens. That would be as if the -- a
03:56 2 driver in the Shell program started buying from
03:56 3 Chevron. They just start buying from somebody else.
03:56 4 Q. And then what price does that driver pay when
03:56 5 they go fill up their gas if they go back to Shell
03:56 6 eventually?
03:56 7 A. If they start buying less from Shell, then
03:56 8 they'll go to a lower tier. If they don't even meet
03:56 9 the silver tier, that they'll pay the posted price.
03:56 10 Q. The posted price, meaning the price at the
03:56 11 pump?
03:56 12 A. Correct.
03:56 13 Q. Okay. You heard Dr. Perryman testify earlier
03:57 14 about list prices.
03:57 15 Do you recall that?
03:57 16 A. I do.
03:57 17 Q. And that list prices had increased -- Align's
03:57 18 list prices had increased, right?
03:57 19 A. That's what I heard.
03:57 20 Q. And how is that relevant to your analysis, if
03:57 21 at all?
03:57 22 A. Well, the price that matters to the consumer
03:57 23 is the price that they're paying. So in essence, this
03:57 24 is the price that matters.
03:57 25 Q. And do you recall whether the list price went

03:57 1 up by more or less than the rate of inflation?
03:57 2 A. So over this same time period, the list price
03:57 3 did go up but by less than the rate of inflation. So
03:57 4 we call it in real terms it actually fell.
03:57 5 Q. Now, your view that this discount program is
03:57 6 not anticompetitive, is that affected at all by how
03:57 7 large Align is?
03:57 8 A. No. Whether or not Align has a large market
03:57 9 share or a small market share, this discount program is
03:57 10 competitive, just like the other discount programs from
03:57 11 the six companies we showed before.
03:58 12 Q. So just to close this out, is -- what's your
03:58 13 opinion, sir, about whether this loyalty discount
03:58 14 program forecloses or blocks competition for the sale
03:58 15 of clear aligners?
03:58 16 A. It doesn't block competition. Nothing stops
03:58 17 orthodontists or a doctor from buying clear aligners
03:58 18 from another company.
03:58 19 Q. Let's go to the next opinion, next bucket of
03:58 20 conduct that Dr. Perryman discusses. These are the
03:58 21 contracts.
03:58 22 What does Dr. Perryman's -- summarize for
03:58 23 him -- summarize for us, if you would, what his opinion
03:58 24 is about, how the contracts foreclose competition.
03:58 25 A. Dr. Perryman's opinion is that the contracts

03:58 1 foreclose competition through what he called or what's
03:58 2 called the antidiversion clauses.
03:58 3 Q. So where do these antidiversion clauses
03:58 4 appear?
03:58 5 A. So these are in contracts written with DSOs.
03:58 6 Q. Okay.
03:58 7 MR. TUBACH: Why don't we pull up the
03:58 8 next slide?
03:58 9 BY MR. TUBACH:
03:58 10 Q. Is this an example of a antidiversion clause
03:59 11 that you mentioned?
03:59 12 A. It is.
03:59 13 Q. Okay. And is this with -- I believe it says
03:59 14 the Smilist down there at the very bottom. I don't
03:59 15 know if you can read that.
03:59 16 A. I can't read it, but I'll take your word.
03:59 17 Q. Is that a DSO?
03:59 18 A. Yes.
03:59 19 Q. And the language underlined in red, could you
03:59 20 tell us what that is?
03:59 21 A. Yeah. So that says: Diversion of prospective
03:59 22 patients into non-Invisalign treatment.
03:59 23 So if you did that, then that would mean
03:59 24 you're not maintaining what Align calls good standing.
03:59 25 Q. And did you hear Mr. Miller testify about this

03:59 1 provision?
03:59 2 A. Yes.
03:59 3 Q. Okay. And as an economist, how do you think
03:59 4 about a clause like this?
03:59 5 A. Yeah. So Mr. Miller talked about bait and
03:59 6 switch. In economics, we -- that's a -- an example of
03:59 7 what we call a market failure. So, you know, we all
03:59 8 probably understand what the bait and switch is.
04:00 9 He described it pretty well, that a customer
04:00 10 goes into an orthodontist, asks for Invisalign, and
04:00 11 that orthodontist diverts them to another clear
04:00 12 aligner, potentially not telling that patient.
04:00 13 That's what economists call a market failure,
04:00 14 because if we were to allow that to happen, then think
04:00 15 what you would do if you were in Align's shoes.
04:00 16 If that was -- came prevalent, then you're
04:00 17 going to start advertising less. You're going to start
04:00 18 innovating less. Because all of that advertising, or
04:00 19 at least some of that advertising, that innovation is
04:00 20 actually being used to sell to your competitors.
04:00 21 So in the absence of contract provisions like
04:00 22 this, the marketplace actually works less well. It
04:00 23 works less efficient. So that's why these provisions
04:00 24 are procompetitive.
04:00 25 Q. At the very top there, it -- there's a

04:00 1 reference to Find a Doctor functionality on
04:01 2 Invisalign.com.
04:01 3 Do you see that?
04:01 4 A. Yes.
04:01 5 Q. Is Invisalign.com a website run by Align
04:01 6 Technology?
04:01 7 A. That's correct.
04:01 8 Q. And Find a Doctor, what does that -- what does
04:01 9 that mean?
04:01 10 A. So they have a website that is basically
04:01 11 providing marketing material for doctors that sell
04:01 12 Invisalign.
04:01 13 Q. So is it your view that the -- a provision
04:01 14 like this, this antidiversion program, do you have an
04:01 15 opinion as an economist about whether it is
04:01 16 procompetitive or anticompetitive?
04:01 17 A. Yeah. This would be procompetitive because
04:01 18 like I said, it's overcoming a potential,
04:01 19 quote/unquote, market failure, that if you let go, if
04:01 20 you let that go unchecked, it would actually make the
04:01 21 market less efficient.
04:01 22 Q. Now, did you look at whether Smilist was
04:01 23 actually blocked from ordering ClearCorrect aligners as
04:01 24 a result of this provision?
04:01 25 A. I did.

04:01 1 Q. And did Dr. Perryman do that analysis?
04:02 2 A. No. He didn't.
04:02 3 Q. Okay. And what did you find?
04:02 4 A. So we were able to get data from Smilist, both
04:02 5 before and after they signed this contract.
04:02 6 MR. TUBACH: Why don't we pull that up
7 now?
8 BY MR. TUBACH:
04:02 9 Q. Sorry to interrupt, Dr. Knittel.
04:02 10 MR. TUBACH: Exactly, 9.15.
11 BY MR. TUBACH:
04:02 12 Q. Please go ahead.
04:02 13 A. Yeah. So this is the number of case counts in
04:02 14 a year that Smilist, this DSO, is selling of
04:02 15 ClearCorrect. And from 2017 to 2021, they didn't have
04:02 16 this contract. And then they signed the contract in
04:02 17 2022.
04:02 18 So what you see from this chart is that the
04:02 19 number of ClearCorrect purchases that Smilist was
04:02 20 engaging, you know, goes up, peaks at 2019, and
04:02 21 actually in 2020 and 2021 falls. Then they sign a
04:02 22 contract, and then they actually start selling more
04:02 23 ClearCorrects after signing this contract.
04:02 24 Q. And what does this graph tell you as an
04:02 25 economist about whether these antidiversion provisions

04:03 1 that we were just discussing are blocking or
04:03 2 foreclosing ClearCorrect for competing for Smilist's
04:03 3 business?
04:03 4 A. Yeah. There -- it's obviously not blocking
04:03 5 ClearCorrect from selling at Smilist. In fact, they
04:03 6 sold more after the contract was written.
04:03 7 Q. What would you expect this graph to look like
04:03 8 if Straumann and ClearCorrect were right that this
04:03 9 actually blocks competition?
04:03 10 A. So if this was really blocking or foreclosing
04:03 11 competition, we would expect the sales to go to zero
04:03 12 after the contract was signed.
04:03 13 Q. Are these antidiversion clauses in the
04:03 14 contracts that have them, in your view as an economist,
04:03 15 are they -- are they exclusive contracts?
04:03 16 A. They're -- well, they're obviously not
04:03 17 exclusive contracts.
04:03 18 Q. Do DSOs ever leave these contracts?
04:03 19 A. They do.
04:03 20 Q. Do you have an example?
04:03 21 A. Yeah. I do. So Aspen Dental, it's a pretty
04:03 22 large DSO. I think it has a thousand offices
04:04 23 underneath or associated with them. They signed a
04:04 24 contract similar to what we just saw. And midway
04:04 25 through that contract, not only did they leave the

04:04 1 contract but they started offering their own clear
04:04 2 aligners.
04:04 3 Q. How -- what do you mean, "their own clear
04:04 4 aligners"?
04:04 5 A. So they were what's called white label clear
04:04 6 aligners. So they didn't get into the manufacturing
04:04 7 business. So they contracted with a wholesale
04:04 8 manufacturer and started offering what are called white
04:04 9 label products. So that's where somebody else is
04:04 10 making it, but you're putting your logo on it.
04:04 11 The next time you go to a grocery store, go
04:04 12 down the chip aisle. And you'll see the grocery store
04:04 13 has their own label. They're not making chips.
04:04 14 They're contracting with a wholesaler that is providing
04:04 15 that white label product.
04:04 16 Q. And just to end on this -- on this sub point
04:04 17 here, these contracts, these are the contracts
04:04 18 Dr. Perryman has offered no damages analysis at all,
04:04 19 correct?
04:04 20 A. That's correct.
04:04 21 Q. Okay.
04:04 22 THE COURT: Counsel, we're going to stop
04:05 23 for the day so we can get to work on the jury charge.
04:05 24 Ladies and gentlemen of the jury, if you
04:05 25 would be back tomorrow by 8:45, we will start tomorrow

04:05 1 morning at 9:00. Please don't discuss the case with
04:05 2 yourselves.
04:05 3 THE BAILIFF: All rise.
04:05 4 (Jury exited the courtroom.)
04:05 5 THE COURT: You may be seated.
04:05 6 An update for you all. I'd forgotten to
04:05 7 let you know that -- it puts a little bit of a -- gives
04:05 8 a little bit of a problem. Tomorrow at 12:45, one of
04:05 9 the jurors has a job interview, and it's going to go
04:06 10 from 12:45 to 1:30.
04:06 11 So unless you want me to tell her that
04:06 12 one side or the other doesn't want her to make that
04:06 13 call...
04:06 14 (Laughter.)
04:06 15 THE COURT: So -- and so I've already
04:06 16 assured her that that's fine, and I've taken care of
04:06 17 it. It just means I won't begin reading the jury
04:06 18 charge until 1:30 tomorrow, if that -- just so you
04:06 19 know.
04:06 20 It's fine with me, absolutely fine with
04:06 21 me. I'll run through the charge. I'll read the
04:06 22 charge, and then you'll do your closing arguments. And
04:06 23 then what I intend to do, though, is give the jury the
04:06 24 option of whether they want to start deliberating or
04:06 25 not. And it's up to them. Given how far away they

04:06 1 live, many of them, my guess is they will want to
04:06 2 start. And tomorrow night I've got nothing else to do,
04:06 3 so I'm happy to stay at least till a reasonable hour.
04:07 4 At some point I think it's unreasonable
04:07 5 to keep them, but I'm happy to do it that way. So
04:07 6 that's -- that's what I'm planning on.
04:07 7 Now, I do think it would be much quicker,
04:07 8 because I only have till about 5:30 and then we have no
04:07 9 time in the morning, to do it informally in my
04:07 10 chambers. That will go faster, if that's okay with you
04:07 11 all.
04:07 12 MR. DURST: Yes. It's okay, Your Honor,
04:07 13 with us.
04:07 14 MR. MUELLER: It is, Your Honor.
04:07 15 THE COURT: Okay. So again, you don't --
04:07 16 I'm going to take my tie off. You don't need a tie.
04:07 17 (Off-the-record discussion.)
04:07 18 THE COURT: Is there anything we need to
04:07 19 take up on the record?
04:07 20 MR. DURST: Just wanted to inform the
04:07 21 Court what we've already informed the defendants, which
04:07 22 is, we are not going to call Dr. Morrison as a witness.
04:07 23 THE COURT: Okay.
04:07 24 MR. DURST: So that will save some of our
04:07 25 precious minutes for another witness.

04:07 1 THE COURT: So will it save us enough
04:07 2 time that I could get started reading in the late
04:08 3 morning?
04:08 4 And here's -- there's -- I don't care. I
04:08 5 mean, you don't need -- you're not committing yourself.
04:08 6 MR. DURST: Possibly so.
04:08 7 THE COURT: If we finish in time, there's
04:08 8 no rule that says I have to read the entire thing at
04:08 9 once.
04:08 10 So, for example, what I may do -- Bob,
04:08 11 let me -- I'll be right back. I'm going to let the
04:08 12 jury know to bring their lunch tomorrow and so that we
13 can --
04:08 14 I'll be right back.
04:08 15 (Pause in proceedings.)
04:08 16 THE COURT: They're all gone. I'll
04:08 17 figure out some way to deal with them and lunch with
04:09 18 them tomorrow to make it as quick as possible.
04:09 19 But I'm happy to start reading the jury
04:09 20 charge when -- but I also have Rule 50 motions after
04:09 21 you all are done. So --
04:09 22 MS. DURIE: Would it be helpful if the
04:09 23 parties agreed to supply lunch for the jurors?
04:09 24 THE COURT: We do that. I sequester them
04:09 25 and it's provided. But thank you.

04:09 1 MR. DURST: We estimate we have an hour
04:09 2 and a half left of direct testimony.
04:09 3 THE COURT: And?
04:09 4 MR. MUELLER: An hour and a half of
04:09 5 cross, Your Honor.
04:09 6 THE COURT: So we'll go all morning, 9:00
04:09 7 to noon. That's fine. I'm -- okay.
04:09 8 So what I'll do then is I will ask the
04:09 9 jury when they line up in the morning whether or not --
04:09 10 I'll let them know we're stopping at noon. So I'll ask
04:09 11 them whether they would prefer to start me reading at
04:09 12 noon and proceed, or whether they'd like to go and get
04:09 13 lunch. And I'll leave -- I'll leave it up to them.
04:09 14 And so we're going to break at 12:40 for
04:10 15 the phone call, and we'll start at 1:30 with everything
04:10 16 else regardless.
04:10 17 And also, if I haven't said this before,
04:10 18 you do not have to exchange demonstratives. However,
04:10 19 if you're unhappy about what the other side says, you
04:10 20 do have to object. If you wait until the jury's in the
04:10 21 deliberation room, which has happened twice, and make
04:10 22 your objections then, it's too late.
04:10 23 So twice. Not once, twice. So give me
04:10 24 just a minute or two.
04:10 25 Yes, sir.

04:10 1 MR. MUELLER: I just have one last
04:10 2 question, Your Honor, on the closings just in terms of
04:10 3 time allocation. If Your Honor wouldn't mind, I
04:10 4 actually can't quite remember from my last trial before
04:10 5 you how much you allow to be reserved for the rebuttal.
04:10 6 THE COURT: So I'm assuming -- a good
04:10 7 question in this case, given the case. I'm assuming
04:10 8 that Mr. Durst thinks his side is opening and closing?
04:11 9 MR. DURST: I do think that, Your Honor.
04:11 10 THE COURT: And I think that's right as
04:11 11 well.
04:11 12 Now, that being said, I don't have any
04:11 13 hard rule on how long the plaintiff has to go in their
04:11 14 opening of the closing. However, five minutes is not
04:11 15 enough. And my attitude is it has to be a robust
04:11 16 opening, and there shouldn't be anything held back for
04:11 17 the final section in terms of, you know -- I mean, and
04:11 18 so -- but, you know, given the quality of the lawyers
04:11 19 that are on this side of the bar, I don't anticipate --
04:11 20 I've never had a problem with that.
04:11 21 So it just has to be a full opening,
04:11 22 whatever amount of time that is.
04:11 23 MR. MUELLER: Understood. Thank you,
04:11 24 Your Honor.
04:11 25 THE COURT: And then also, if it's -- I

04:11 1 don't know if it's a question or not. I am completely
04:11 2 agnostic to how many people speak per side. That's
04:11 3 entirely up to you all.
04:12 4 Now, I had one trial where the lead trial
04:12 5 lawyer couldn't take it, and he made the lawyer he had
04:12 6 given the closing argument sit down, and got up and did
04:12 7 the last ten minutes. And I didn't think that was
04:12 8 entirely okay. But, you know, they lost.
04:12 9 (Laughter.)
04:12 10 THE COURT: Anyway, I will see you in
04:12 11 chambers as soon as y'all can get there.
04:12 12 THE BAILIFF: All rise.
13 (Hearing adjourned.)
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1 UNITED STATES DISTRICT COURT)
2 WESTERN DISTRICT OF TEXAS)
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5 I, Kristie M. Davis, Official Court
6 Reporter for the United States District Court, Western
7 District of Texas, do certify that the foregoing is a
8 correct transcript from the record of proceedings in
9 the above-entitled matter.
10 I certify that the transcript fees and
11 format comply with those prescribed by the Court and
12 Judicial Conference of the United States.
13 Certified to by me this 12th day of July
14 2026.
15
16 /s/ Kristie M. Davis
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