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SUPERIOR COURT OF CALIFORNIA

COUNTY OF ALAMEDA

BEFORE THE HONORABLE WINIFRED Y. SMITH, JUDGE PRESIDING

DEPARTMENT NUMBER 21

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COORDINATION PROCEEDING	)	
SPECIAL TITLE (RULE 3.550)	)	
	)	
ROUNDUP PRODUCTS CASE	)	<b>JCCP No. 4953</b>
	)	
_____	)	
THIS TRANSCRIPT RELATES TO:	)	
	)	
Pilliod, et al.	)	<b>Case No. RG17862702</b>
vs.	)	
Monsanto Company, et al.	)	<b>Pages 4005 - 4216</b>
_____	)	<b>Volume 25</b>

Reporter's Transcript of Proceedings

Tuesday, April 23, 2019

Reported by: Kelly L. Shainline, CSR No. 13476, RPR, CRR  
Lori Stokes, CSR No. 12732, RPR  
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I N D E X

Tuesday, April 23, 2019

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I N D E X

E X H I B I T S

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1 Tuesday, April 23, 2019

8:45 a.m.

2 P R O C E E D I N G S

3 ---oOo---

4 (Proceedings commenced in open court out of  
5 the presence of the jury:)

6 **MR. WISNER:** Your Honor, so I'd like to  
7 address --

8 **MR. BRADY:** Well, let's see where she's at  
9 with this first.

10 Do you want to tell us? You've had some time  
11 to think about this. Where is the Court going? We  
12 don't want to rehash.

13 **THE COURT:** Well, let me know what Mr. Wisner  
14 has to say.

15 **MR. WISNER:** Sure. I actually want to say --

16 **THE COURT:** No, definitely not rehashing, but  
17 I just want to refine the conversation. In view of the  
18 evidence that's come in the last couple of days, the  
19 landscape has changed somewhat and I think that it's  
20 important that we respond to that with respect to,  
21 quote, the number.

22 **MR. WISNER:** Sure. If I can approach, I have  
23 two documents for Your Honor.

24 And, Your Honor, I appreciate this because I  
25 actually wanted to talk about this even regardless of

1 the ruling to make sure our record is clear.

2 So the first one is the bigger document. I  
3 only have one copy of this -- actually I have two  
4 copies.

5 This is the actual Medicare regulations, and I  
6 just want to draw your attention very quickly to page 10  
7 and the "Repayment Required" section. There's a  
8 sentence that says:

9 A primary plan's responsibility for  
10 such payment may be demonstrated by a  
11 judgment, a payment conditioned upon the  
12 recipient's compromise waiver or release  
13 whether or not there's a determination or  
14 admission of liability, a payment for  
15 items or services included in a claim  
16 against the primary plan or the primary  
17 plan's insured or by other means.

18 And the case law is interpreted -- and that's  
19 actually the case I have in front of you. This is one  
20 example. This is a federal case -- I only have one  
21 copy -- 2012. If you turn to the last --

22 **THE COURT:** You gave me two copies.

23 **MR. WISNER:** Oh, that's probably why I don't  
24 have a third.

25 And if you -- this was a personal injury case,



1 Your Honor. And if you turn to page 4, paragraph 3,  
2 numbered paragraph 3 on the left-hand column, halfway  
3 through there, it says:

4 To the extent that there are items or  
5 services incurred by Frank in the future  
6 that would otherwise be covered or  
7 reimbursable by Medicare that are related  
8 to what was claimed and released in this  
9 lawsuit, Medicare shall not be billed for  
10 those items or services until the funds  
11 received by Frank for that purpose through  
12 the settlement are exhausted.

13 And so the way the Medicare system works is,  
14 as a matter of law, there's a judgment that determines  
15 the responsibility for payment. So here there would be  
16 determination that Monsanto is liable for future costs  
17 of Revlimid, then they would not pay it. Okay.

18 **THE COURT:** Oh, because evidence of which the  
19 jury can't hear about, whatever the consequences of the  
20 judgment are; right?

21 **MR. WISNER:** I agree. And this is, I think, a  
22 legal issue is why I'm showing you the regulations and  
23 the law.

24 **THE COURT:** Right.

25 **MR. WISNER:** And the reason why I'm saying

1 that is because assuming Medicare can't pay it, because  
2 that's actually what the law says, the only remaining  
3 issue is that difference about her 2,100 or \$2,200 a  
4 month charity contribution from the drug manufacturer.

5 I have Mrs. Pilliod here. I'd like to have  
6 her take the stand for literally three questions,  
7 402 hearing on this point.

8 **THE COURT:** So assuming that I would agree  
9 that there needs to be some evidence in the record of  
10 what her obligation may or may not be that the \$2,100  
11 number might be the number, then what do you do about  
12 your expert that's talking about \$21,000 a month?  
13 Because we already know at this point from I think two  
14 sources that that's -- well, three sources actually.

15 **MR. BRADY:** It's only 14- to 16,000,  
16 Your Honor, is what Dr. Nabhan said yesterday.

17 **MR. WISNER:** Well, in any event --

18 **THE COURT:** So whatever the number is that's  
19 been speculated now by three different witnesses, the  
20 highest of which is your expert, and your expert has  
21 based his opinion on that \$21,000 number, that's not the  
22 number. I mean, that can't be the number because now  
23 Mrs. Pilliod will be prepared, and I'm going to allow  
24 her to come and answer these questions, and probably  
25 would call her to the witness stand to talk about the

1       \$2,100 number, and then you've got 3,000 that  
2       Dr. Rubenstein mentioned, and then the 12- to 14 --  
3       whatever that number is that was mentioned by  
4       Dr. Nabhan.

5               **MR. WISNER:** So the issue is a couple things.  
6       We have the -- we actually have the Medicare costs right  
7       here. We can have the Court take judicial notice. It's  
8       from the Medicare website.

9               But putting that issue aside for one second,  
10       the number is actually the full price because if she  
11       were to obtain a judgment, Medicare would no longer pay  
12       for it. And she'll testify -- I'll make a proffer  
13       she'll testify that she would lose her charity  
14       contribution from the drug manufacturer because it's  
15       based on income. So she would lose all the things that  
16       she has that are helping her pay for her drug and she  
17       would be left with the full list price.

18               That number on the drugs.com list is actually  
19       what would come out of her pocket because she doesn't  
20       get to pay Medicare prices. She has to pay full price  
21       based on the way the law is written.

22               So as a matter of law, Your Honor, provided we  
23       can establish this one little issue of the charitable  
24       distribution, which I think we can do very easily, as a  
25       matter of law, if she actually is -- if she's successful

1 in this lawsuit, will be required to pay full price  
2 until her judgment is exhausted. That's what the case  
3 law says.

4 And if that's in fact true, which is not even  
5 speculative, that's a matter of law, then Mr. Mills'  
6 estimation of what that full list price was actually is  
7 the proper and is the proper evidence to consider by the  
8 jury.

9 **THE COURT:** Well, my concern is this. First  
10 of all, the jury can't hear any of that in terms of what  
11 the consequences of the judgment are. So if we're  
12 talking about -- first of all, we're in collateral  
13 source land.

14 **MR. WISNER:** Sure.

15 **THE COURT:** We've been there for a while. So  
16 I don't know the extent to which there's some sort of  
17 waiver of reference to collateral sources which probably  
18 would have to be if she's going to get up and testify  
19 about her insurance.

20 **MR. WISNER:** Well, Your Honor, I wanted to do  
21 this outside the presence of the jury because the  
22 question here is a threshold question. Right? What  
23 evidence should the jury hear about her future economic  
24 damages.

25 As a matter of law and the undisputed evidence

1 about her charitable contribution, they can't dispute  
2 that, they won't be able to dispute it. As a matter of  
3 law, the proper consideration is actually the full list  
4 price. Because Medicare is irrelevant here, because we  
5 know based on the law, should she prevail she would have  
6 to pay the full price. And the only remaining thing is  
7 that issue with the charitable thing, and that doesn't  
8 need to go to the jury. All of this -- none of this  
9 needs to be considered by the jury.

10 **THE COURT:** I understand what your argument  
11 is.

12 **MR. WISNER:** Okay.

13 **THE COURT:** All right. Let me hear from  
14 Mr. Ismail.

15 **MR. ISMAIL:** Thank you, Your Honor. A couple  
16 things.

17 First of all, there is no exception in  
18 California for Medicare as a payor. In fact we have  
19 case law applying *Howell* to Medicare circumstances.

20 So there's a case, *Luttrell v. Island Pacific*  
21 *Supermarkets*, 215 Cal. App. 4th 196. This is a 2013  
22 case. And so -- and there's no California law that  
23 suggests *Howell-Corenbaum* would suddenly set aside  
24 because of Medicare as a payor. Indeed that would  
25 suggest anyone that's over age 65 is exempt from the

1 evidentiary requirements set forth in those cases.

2 The issue about whether future medical  
3 expenses are covered by Medicare even in light of a  
4 recovery by Mrs. Pilliod, if the issue of future medical  
5 expenses is not part of the award because they've not  
6 submitted competent testimony or evidence to allow it to  
7 be part of the award, then it is not carved out by  
8 Medicare going forward.

9 So if there's no recovery here for future  
10 medical expenses, she still can recover as an insured  
11 under Medicare.

12 Now, I don't know what other additional  
13 evidence counsel is now saying they're going to  
14 introduce here on the last day of their case in chief  
15 that was not produced in discovery or not introduced  
16 before this jury. But the fundamental premise being  
17 there is not a categorical exception to *Howell* or  
18 *Corenbaum* in California for patients who receive  
19 Medicare. That is not recognized as such in the state  
20 and the speculative "what would happen in the event" is  
21 not something that I believe the Court can take judicial  
22 notice of, make a legal determination of, and as  
23 Your Honor has indicated, is not properly placed before  
24 the jury.

25 There is a way to do this, and it's not

1       been -- it's not been done.

2               **MR. WISNER:** Respectfully, Your Honor, there  
3       is no way to do this in the context of the Medicare  
4       Secondary Payer Act. The law is the law. This is not  
5       new evidence. This is just the regulations that govern  
6       this particular individual's reimbursement in the  
7       future.

8               And it says very clearly if the judgment  
9       relates to the medical issues released in the lawsuit.  
10      This is being adjudicated right now in this lawsuit. If  
11      she obtains a judgment, she's on the hook for the full  
12      price. That's just the law. This isn't a factual  
13      issue. That's just what the law says.

14              The only factual remaining issue under,  
15      whether you call it *Howell* or *Corenbaum*, because they  
16      didn't address this issue in those cases, but to the  
17      extent that we did, we have to look at what she's  
18      reasonably expected to pay in the future, and she's  
19      going to pay full price.

20              The only factual issue remaining is that  
21      charitable contribution, and I think we can proffer her  
22      one minute testimony, clean that up pretty clearly  
23      outside the presence of the jury, and I think the record  
24      is pretty clear at that point that we can in good faith  
25      say, "Ladies and gentlemen, she should prevail, she will

1 have to pay out of pocket for the rest of her life  
2 \$21,000 list price." And that's assuming the price  
3 doesn't go up even though it's gone up tenfold in the  
4 last three or four years. "Assuming it doesn't go up,  
5 she'll have to pay that out of pocket. So you need to  
6 award her a sufficient amount of money to cover those  
7 costs so she can live."

8 I mean, I think that's completely on the -- on  
9 all fours with the law and the facts in this case. I  
10 don't think it has anything to do with *Corenbaum* -- or  
11 *Howell* or *Corenbaum*.

12 **MR. BRADY:** The only evidence of what the  
13 reasonable price or cost will be for this Revlimid  
14 treatment in the future, Your Honor, the only evidence  
15 is the retail price if she will lose her ability to get  
16 either the Medicare to, or the McKesson Patient  
17 Assistance Program, to pay for any of this medication  
18 vis-a-vis a judgment in this case.

19 So that's it. That is the evidence. That is  
20 the best evidence of what is the reasonable cost of  
21 future treatment or future medication. And that's what  
22 both *Howell* and *Corenbaum* are speaking to, the  
23 reasonable cost.

24 It's by definition reasonable because there is  
25 nothing else. There won't be any other payor but



1 Alberta Pilliod in the event that she obtains a judgment  
2 in this case.

3 So it makes it different than *Howell* and  
4 different than *Corenbaum* in that this situation was not  
5 contemplated in this case.

6 And, again, Mr. Wisner has cited the law from  
7 the U.S. Code Annotated, and in addition to that there  
8 are -- we'd be happy to provide it to the Court, the  
9 2011 amendments require the plaintiff to actually set up  
10 a Medicare Set Aside Account.

11 So there would be no way that the defendants  
12 can proffer any evidence in this case to show that  
13 Medicare will pay in the future. And, again, with  
14 Ms. Pilliod speaking to the McKesson Patient Assistance  
15 Program, it's need-based. It's based on income. And if  
16 she receives a judgment here, she will no longer qualify  
17 for that. It evaporates. So she'll be punished for  
18 being successful in this case.

19 **THE COURT:** All right. My concern is that --  
20 and I'm sort of speaking to Mr. Ismail here -- is that  
21 unlike *Corenbaum* and *Howell*, there really isn't a number  
22 anchored to -- I'm not sure what your thoughts are --  
23 but the evidence of her -- the underlying evidence of  
24 her status with Medicare is not something the jury can  
25 consider. It's probably a threshold -- it is a threshold

1 question.

2 So I'm torn because --

3 (Telephone interruption.)

4 **THE COURT:** I'm sort of faced with some  
5 speculation about what her future will be -- what her  
6 future expenses will be sort of not based on any solid  
7 fact. And there's a reason for that because she hasn't  
8 paid for -- because she's gotten assistance.

9 I'm just hesitant to simply allow -- well,  
10 hearing her testimony regarding \$2,100 a month, I think  
11 that -- I will allow her to come up and you can ask her  
12 those questions, but I'm not sure that that actually  
13 resolves the issue.

14 **MR. WISNER:** I mean, the way I think about it,  
15 Your Honor, is what happens if we win? What happens? I  
16 mean, that's the facts; right?

17 If she wins, and let's say she gets a  
18 substantial compensatory award, which I think is a  
19 reasonable expectation should she prevail, then the law  
20 says she loses Medicare and she'll testify that she  
21 loses her assistance. So she has to pay the full price.  
22 I mean, that's just what happens.

23 And there would be no justice if we had an --

24 **THE COURT:** I understand your argument. I do.  
25 I understand your argument. I really do understand it.

1                   And in the context of there is no  
2                   documentation thus far regarding payment of this, which  
3                   would otherwise anchor the future medicals, my dilemma  
4                   at this point is whether or not allowing testimony  
5                   regarding, you know, the drugs.com price as the price is  
6                   the potential future base for future economic -- I mean,  
7                   medical expenses gives me pause. But I'm not sure where  
8                   else to go.

9                   **MR. BRADY:** There's nothing else, Your Honor.

10                  **MR. ISMAIL:** I would say to the extent I  
11                  haven't stated it clearly thus far, Your Honor, I would  
12                  say two things.

13                  One, they're asking you to speculate as to  
14                  what, in the event plaintiffs prevail, that there would  
15                  be an award sufficient that would extinguish her ability  
16                  to qualify for the Patient Assistance Program and  
17                  whatnot. That would be a speculative predicate for this  
18                  Court to guess what the jury might do as the threshold  
19                  issue that they're asking you to submit this to the jury  
20                  on.

21                  And moreover, to the extent -- there's been no  
22                  testimony in this case that the drugs.com price, 21,000  
23                  or whatever is on that sheet, the witness yesterday  
24                  didn't say that, first of all. The witness last week  
25                  didn't say that. And Mrs. Pilliod didn't say that.

1           And if Mr. Mills comes in here this afternoon  
2           and says, "I've run a calculation based on 21,000,"  
3           that's not a number that's in the record, period.

4           **MR. WISNER:** Just to clear up that confusion,  
5           it's 21,000 for a full 30-day supply. He reduces it to  
6           about 15-, 16,000, which is exactly what Dr. Nabhan  
7           testified to yesterday.

8           So the numbers will be consistent when  
9           Mr. Mills testifies that that sheet with -- outside the  
10          context of his opinion is confusing, but it was  
11          referring to a 30-day spot. She only has to do 21 days  
12          on and 7 days off. So it's a quarter less.

13          **MR. BRADY:** Dr. Nabhan gave the adjusted price  
14          based on the number of pills in the dose, Your Honor,  
15          and that was in evidence yesterday.

16          **MR. ISMAIL:** Moreover, to the extent there  
17          isn't an award of future medical expenses, even if  
18          plaintiffs prevail, because they don't have competent  
19          proof -- evidence to submit it to the jury, there's  
20          nothing in the regulation to suggest if she receives an  
21          award for past pain and suffering or past medical  
22          expenses, it extinguishes her going forward.

23          **MR. WISNER:** I wish.

24          **THE COURT:** So the evidence or at least the  
25          citations to the -- I guess the federal statute that

1 talks about Medicare and this case, all that aside, I  
2 mean, we're still at -- kind of at square one where I  
3 was several days ago, which is forget speculating about  
4 whether she wins or she loses. She hasn't thus far had  
5 to pay. And so there is no base number for which has  
6 been billed on which to then argue to the jury that  
7 she's going to have to pay X number of dollars going  
8 forward in the future to actually give them a reasonable  
9 estimate of cost so they can decide if they want to  
10 award or don't want to award or how much they want to  
11 award.

12 And so all of the conversations that we're  
13 having, I think, kind of beg the question in that if we  
14 don't have any documentation, the number that Dr. Nabhan  
15 suggests is purely speculative because I would have to  
16 have taken into consideration what her future status  
17 might be in the event she gets an award.

18 And I'm not sure that's -- I don't believe  
19 that that's proper for me to conclude that legally she  
20 would have -- based on an award by this jury, which we  
21 wouldn't know how much it is, whether it would actually  
22 disqualify her or not for future Medicare and how that  
23 might otherwise play into McKesson's Patient Assistance  
24 Program.

25 For me to make assumptions like that to permit

1 a completely speculative number is giving me a lot of  
2 pause. Although, I just don't know at the end of the  
3 day if, in all fairness to her, Mrs. Pilliod, that if I  
4 don't do something -- if I don't kind of land on a  
5 number or at least allow there to be some evidence of a  
6 number that makes sense other than, I don't know, \$2,100  
7 a month made sense to me just in terms of that may be,  
8 if she doesn't get this assistance, given all the things  
9 we know right now. And that's really pretty much what  
10 you have to assume, that one -- her situation right now  
11 which is if she has to pay in the future, we're basing  
12 it on her situation right now.

13 So the variable really is the charity. The  
14 variable is the charity, which is that may happen, that  
15 may not happen.

16 **MR. WISNER:** Sure.

17 **THE COURT:** But other than that, I don't think  
18 that then speculating about her status with Medicare if  
19 she wins or loses is on solid ground. I really don't.

20 **MR. WISNER:** Well, respectfully, Your Honor,  
21 that's actually not speculation. This is actually just  
22 the law.

23 And the reason why I say this is Mr. Ismail  
24 said, oh, if they don't award future economic damages.  
25 I have negotiated thousands of agreements with Medicare

1 Part C, thousands.

2 **THE COURT:** I'm sure.

3 **MR. WISNER:** And never once have they ever  
4 agreed to that idea that we just settle past and not  
5 future so you don't get to take any. Not true. They  
6 take their piece and they take their future piece as  
7 well. That always happens. This is not speculation at  
8 all.

9 The only thing that we're speculating about is  
10 if we win. But we don't even get to this question of  
11 future economic damages until they establish liability.  
12 That's how the verdict form works.

13 They go, yes, you're liable. Okay. Now that  
14 you're liable, let's figure out damages. And once the  
15 liability is determined, as a matter of law, they have  
16 to pay. Medicare will not pay it. And she will be left  
17 with the bill. That's not speculative. That's just how  
18 the law works. And I --

19 **THE COURT:** No, but they would have to award  
20 enough money to change her status. What if they say  
21 liable and you --

22 **MR. WISNER:** No. That's my point. It's  
23 demonstrated responsibility. It's not about money.  
24 Once liability is established, as a judgment is entered,  
25 it could be 1 dollar, she no longer -- they will no

1 longer pay the bill. That's how Medicare works.  
2 Because the expectation is that her future damages, her  
3 future medical expenses are now the product of Monsanto  
4 has to pay it. And the judgment -- it will be taken  
5 against the judgment.

6 So her future economic damages are exactly  
7 what the amount that the list price is. That's just a  
8 matter of law. It doesn't say anything about her status  
9 financially. The financial status issue relates to the  
10 charitable contribution which is a very different issue  
11 than Medicare. Medicare is just demonstrated  
12 responsibility. That's the law.

13 And I mean, for what it's worth, Your Honor, I  
14 litigate this actually quite a bit. I represent  
15 Medicare Advantage organizations who litigate this very  
16 statute. I've actually created a lot of law in this  
17 area.

18 It's automatic. There is no wiggle room. And  
19 so that's why I'm saying it's not speculative about her  
20 status of Medicare. She will lose her benefits for this  
21 specific expense.

22 Other expenses she has related to Medicare, so  
23 diabetes treatment or something else, Medicare will  
24 cover that because it hasn't been demonstrated that  
25 Monsanto is responsible for that. But they will have



1 demonstrated responsibility specifically for her future  
2 cancer treatment drugs, and that's why it's a problem.

3 So the only remaining issue is the charitable  
4 contribution which is, I believe, an uncontested fact  
5 that it's income-based and should she receive a  
6 substantial judgment, she'll lose that.

7 Now, if we want to present that evidence to  
8 the jury, we're happy to do that. And they want to  
9 argue, ladies and gentlemen, don't give her enough of a  
10 judgment so that she can keep her financial assistance,  
11 they can argue that. But that's the only thing that  
12 would possibly be left to a factual issue. The Medicare  
13 law is clear as day.

14 **MR. BRADY:** This is why *Howell* and *Corenbaum*  
15 don't directly apply and why this is unfortunately --

16 **THE COURT:** So let me ask Mr. Wisner.

17 **MR. WISNER:** Yes, Your Honor.

18 **THE COURT:** Your argument is that if Monsanto  
19 is found liable, notwithstanding the amount of money, if  
20 it's a dollar or a million dollars or whatever, that  
21 immediately, according to the federal government, she  
22 will receive no more Medicare because, in their mind,  
23 Monsanto is, going forward, responsible notwithstanding  
24 how much the amount of the award by the jury?

25 **MR. WISNER:** That's correct. For, not all

1 Medicare, other aspects of her health care treatment  
2 would be covered because Monsanto hadn't been  
3 demonstrated to be responsible for that. They're not  
4 responsible for her diabetes.

5 **THE COURT:** What if they don't hold Monsanto  
6 liable for her future medical?

7 **MR. WISNER:** Then there's no demonstrated  
8 responsi -- well, they don't hold her liable for future  
9 economic damages?

10 **THE COURT:** Yeah, what if it's zero? What if  
11 they put a zero? What if it's, you know: Past yes,  
12 future no. For whatever reason.

13 **MR. WISNER:** Sure. Then Medicare will start  
14 taking money out of whatever is in the judgment.

15 So her past expenses, which are stipulated to,  
16 right? They'd start taking there. They'd start taking  
17 from her past medical expenses, which is unfair but a  
18 fact of law. That's how it works. Any compensatory  
19 award, they start taking it from there. Which is  
20 exactly why we think that they should be required to pay  
21 for her future cost of drugs at the list price because  
22 that is the most reasonable probable outcome should she  
23 prevail.

24 **MR. ISMAIL:** So based on that explanation,  
25 Your Honor, if Medicare is taking from the judgment, if

1 Mr. Wisner says regardless of how the jury decides  
2 liability, if they decide liability in the affirmative,  
3 regardless of whether they award a penny for future  
4 medicals or not, which I don't believe is a fair  
5 characterization, but the point of the matter is it is  
6 then capped by the amount of the award.

7 So if they start taking from the award and  
8 it's dissipated for whatever reason, then Mrs. Pilliod  
9 would then be able to get coverage through Medicare  
10 again after that cap has been extinguished.

11 So there is -- the scenario in which she is on  
12 the hook above and beyond that which the jury awards by  
13 his own argument doesn't come to fruition. So if  
14 Medicare takes their piece as described, they're  
15 contained within the whole of the judgment, and then  
16 there's not a scenario in which she is both without  
17 judgment and without Medicare.

18 **MR. WISNER:** But then we have exactly a legal  
19 problem, right? Because they've been held responsible.  
20 They've been held liable. And instead of paying for  
21 that actual, she has to pay her money --

22 **THE COURT:** It's fundamentally unfair in terms  
23 of that outcome.

24 All right. So I'll tell you. It's 10 after  
25 9:00 and the jurors are probably here by now.

1                   Why don't you call Mrs. Pilliod and ask her  
2 the several questions you want to ask her. So you can  
3 do that now.

4                   And then I'm going to land on a final  
5 decision.

6                   **MR. WISNER:** Okay.

7                   **MR. MILLER:** Your Honor, unrelated, before the  
8 jurors come in, I want the Court and defense counsel to  
9 know what we know, Mrs. Pilliod did have that MRI Friday  
10 that we talked about, and it was negative. So I was  
11 going to ask Dr. Nabhan about it, just so we disclose  
12 it. I don't know what the Court wants to do about that.

13                   We're all very happy for her, and I didn't  
14 want to hide anything from the jury, is what my  
15 intention was. If I know it, I wanted to share it.

16                   **THE COURT:** I guess on redirect when you turn  
17 the witness over, did you want to ask questions this  
18 morning before Mr. Ismail? Did you talk it over with  
19 counsel?

20                   **MR. MILLER:** I just wanted to ask him about --

21                   **THE COURT:** Chat with Mr. Ismail first before  
22 you ask me.

23                   **MR. MILLER:** Let's get this done first.

24                   **THE COURT:** So, Mrs. Pilliod. You remain  
25 under oath. We don't have to reswear.

1 Mr. Wisner, you can go ahead and ask  
2 questions.

3 402 HEARING

4 ALBERTA PILLIOD,

5 called as a witness for the plaintiffs, having been  
6 previously duly sworn, testified further as follows for  
7 402 examination:

8 **MR. WISNER:** Thank you, Your Honor.

9 DIRECT EXAMINATION

10 **BY MR. WISNER:**

11 **Q.** Mrs. Pilliod, a couple of questions.

12 What is your understanding of how much  
13 assistance you are receiving from McKesson when you pay  
14 for your current cancer drug?

15 **A.** I'm getting 2,100 a month.

16 **Q.** And how do you know that?

17 **A.** When I talked to them in January, I didn't get  
18 my prescription on the usual date, or I wasn't going to  
19 get it on the usual date, and they said it was because I  
20 had to reapply every year and show what our income was.

21 So I sent them a letter of my husband's Social  
22 Security award and my State Teacher Retirement pay for  
23 the year. And then they've sent it to committee. And  
24 they said that it would be looked at by the committee  
25 whether I would receive their award.

1                   And I said, well, I'm not going to have it in  
2 time then.

3                   And they said, well, no, if you pay the \$2,100  
4 for this month, then we'll send it to you right away.  
5 And I said I couldn't do that. So we waited until I got  
6 the committee to agree with, you know, paying for it  
7 instead of me paying for it, that McKesson would.

8                   **Q.** And every year are you obligated to apply for  
9 this thing from McKesson?

10                  **A.** Yes.

11                  **Q.** And every year are you waiting to see what  
12 they do on your application?

13                  **A.** Yes.

14                  **Q.** And every year do you have to submit your  
15 income, current income, to qualify for that?

16                  **A.** Yes.

17                  **Q.** What is your understanding of what you would  
18 have to pay if you were awarded a substantial judgment  
19 in this case?

20                  **A.** A lot of money.

21                  **Q.** Okay.

22                  **MR. WISNER:** Thank you, Your Honor. I think  
23 that's sufficient, unless Your Honor has questions you'd  
24 like to ask the witness.

25                  **THE COURT:** No, I don't.

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Mr. Ismail.

**MR. ISMAIL:** Yes, Your Honor.

**CROSS-EXAMINATION**

**BY MR. ISMAIL:**

**Q.** Good morning.

**A.** Good morning.

**Q.** With respect to your current insurance status, you are Medicare eligible; is that correct?

**A.** Correct.

**Q.** And you have been covered by Medicare for various of your medical expenses?

**A.** Yes.

**Q.** Do you know how much Medicare pays on your behalf for the Revlimid treatment?

**A.** No, I don't.

**Q.** Do you have any documentation that shows the recovery by McKesson, for example, from Medicare to offset?

**A.** No, Medicare doesn't send anything on the prescription drugs.

**Q.** Do you -- I saw in your medical records that you had some reference to insurance through AARP as well?

**A.** Yes.

**Q.** And that's insurance that you have used over

1 the years, AARP?

2 A. Correct, since I was 65.

3 Q. And so do you still have that insurance?

4 A. Yes.

5 Q. So you have a private insurer?

6 A. It's a supplement to Medicare.

7 Q. And as a former State employee, are you  
8 eligible for state insurance programs through your --  
9 through the teachers -- teachers union and that  
10 relationship?

11 A. I'm not sure what you mean by that.

12 Q. Sure. So we know you have Medicare. We know  
13 you have private insurance through AARP. My question  
14 is: Do you know whether you are eligible for  
15 non-Medicare public insurance, for example, through the  
16 State Teachers Retirement fund, the State teachers  
17 insurance fund for former state employees?

18 A. The way I understand it is that teachers did  
19 not qualify the same way that everybody else did since  
20 Ronald Reagan. And so we weren't eligible for Social  
21 Security. I was eligible through my District for  
22 supplemental insurance, but it was more expensive and it  
23 didn't cover as much as the AARP United Health did, and  
24 I still had to pay for it. So it was a better deal for  
25 me to get the United Health than it was whatever the



1 District offered.

2 Q. Thank you. And United Health, just so the  
3 record is clear, that is the organization that does the  
4 AARP insurance?

5 A. Correct.

6 Q. So they're one in the same?

7 A. The supplemental insurance.

8 Q. Thank you. I appreciate for your time.

9 MR. WISNER: Follow up on that, Your Honor.

10 **REDIRECT EXAMINATION**

11 **BY MR. WISNER:**

12 Q. Regarding the AARP or the District insurance,  
13 is it your understanding those are supplemental to  
14 Medicare?

15 A. Right.

16 Q. So if Medicare was unavailable to you for your  
17 cancer drug, those insurance companies would be  
18 unavailable to you as well?

19 A. I would assume so, yeah.

20 Q. And is it your understanding that if you were  
21 to receive a substantial judgment in this case, that you  
22 would be required to pay full price?

23 A. Yes.

24 MR. WISNER: Thank you.

25 THE COURT: Any other questions?

1                   **MR. ISMAIL:** No, Your Honor.

2                   **THE COURT:** All right. Thank you,  
3 Mrs. Pilliod. You may be excused.

4                   Onesha, are all the jurors here?

5                   **COURT ATTENDANT:** They are all here.

6                   Would you like me to bring them out,  
7 Your Honor?

8                   **THE COURT:** No, not yet.

9                   (Pause in the proceedings.)

10                  **MR. WISNER:** We don't have to do this right  
11 now, Your Honor, but at the next break before the jury  
12 comes in, I would like to admit a bunch of documents  
13 into evidence before we rest.

14                  **THE COURT:** Okay. So you've got your cross  
15 this morning?

16                  **MR. ISMAIL:** Yes, ma'am.

17                  **THE COURT:** Okay. Let's get started with that  
18 and talk more at the break about that just because I  
19 don't want to delay the jurors anymore.

20                  **MR. ISMAIL:** Can we have two minutes,  
21 Your Honor.

22                  **THE COURT:** Sure.

23                  (Recess taken at 9:20 a.m.)

24                  (Proceedings resumed in open court in the  
25 presence of the jury at 9:43 a.m.)

1                   **THE COURT:** Good morning, ladies and  
2 gentlemen.

3                   **ALL:** Good morning, Your Honor.

4                   **THE COURT:** We're going to proceed this  
5 morning with the cross-examination.

6                   **MR. MILLER:** Yes, Your Honor. By agreement, I  
7 was going to ask one last question.

8                   **THE COURT:** By agreement, go ahead.

9                                   **CHADI NABHAN,**  
10 called as a witness for the Plaintiffs, having been  
11 previously duly sworn, testified further as follows:

12                                   **DIRECT EXAMINATION (resumed)**

13 **BY MR. MILLER:**

14                   **Q.** Good morning, Dr. Nabhan.

15                   **A.** Good morning.

16                   **Q.** How are you?

17                   **A.** I'm okay. Just a little bit of a back spasm,  
18 but I'm good.

19                   **Q.** All right. I just wanted to ask have you been  
20 advised that in fact Alberta Pilliod's MRI from Friday  
21 was negative?

22                   **A.** Yes, I was told that.

23                   **Q.** And that's good news?

24                   **A.** Yes, of course. Anytime we can't find cancer  
25 is very good news for the patient.

1           **Q.** Will everything we've talked about with  
2 prognosis and repeat checkups still remain the same?

3           **A.** Yes, you continue to follow up for her,  
4 depending on the physician, sometimes every three  
5 months. Probably at this stage they are likely to ask  
6 for an MRI in six months. I don't know actually when  
7 the next MRI, but that's usually the standard, three to  
8 six months from now repeat MRI.

9           **Q.** And continue with the Revlimid?

10          **A.** Yes, she should continue on the Revlimid.

11          **MR. MILLER:** Thank you.

12                   Your witness, counsel.

13          **MR. ISMAIL:** Thank you.

14          **THE COURT:** You may proceed.

15          **MR. ISMAIL:** Thank you, Your Honor.

16                                   **CROSS-EXAMINATION**

17          **BY MR. ISMAIL:**

18           **Q.** Good morning, Dr. Nabhan.

19           **A.** Good morning.

20           **Q.** So, sir, I'd like to begin this morning sort  
21 of where you began with Mr. Miller yesterday, sort of  
22 talking about how you were first contacted to serve as a  
23 witness on plaintiffs' behalf. Okay?

24           **A.** Sure.

25           **Q.** So as I understand it, what you told us

1 yesterday was in around April of 2016 you were contacted  
2 by an associate of Mr. Miller to serve as a retained  
3 witness on behalf of the plaintiffs; is that correct?

4 A. In the spring of 2016, yeah, to -- they asked  
5 me questions about Roundup and pesticide, as we talked  
6 about.

7 Q. And so at the time that you were first  
8 contacted by plaintiffs' counsel in the spring of 2016,  
9 you had not formed an opinion yet on whether glyphosate  
10 products caused non-Hodgkin's lymphoma; true?

11 A. That's correct. I knew about pesticides and  
12 non-Hodgkin's lymphoma, but I needed to look more into  
13 Roundup and non-Hodgkin's lymphoma.

14 Q. That's exactly where I was going to go,  
15 Doctor, because you talked a lot yesterday about how  
16 there's a general sense amongst oncologists that certain  
17 pesticide --

18 **THE COURT:** Does somebody have a phone on or  
19 is it chirping? Can you please turn it off? Thank you.

20 Go ahead.

21 **BY MR. ISMAIL:**

22 Q. I'll restart, Doctor.

23 A. No problem.

24 Q. You told us yesterday that there was --  
25 there's a sense amongst oncologists that certain

1 pesticides may be associated with certain cancers. Do  
2 you remember that sort of discussion you had with  
3 Mr. Miller yesterday?

4 A. I think lymphoma specialists, the people who  
5 really do lymphoma mainly.

6 Q. And so you're generally aware that there are  
7 hundreds of different kinds of pesticides; correct?

8 A. Yes, I am.

9 Q. Is it fair to say that at the time you were  
10 contacted by Mr. Miller's firm, you had not yet formed  
11 an opinion or did not know which pesticides were or were  
12 not associated with non-Hodgkin's lymphoma; true?

13 A. As I said, general category pesticides  
14 associated with non-Hodgkin's lymphoma, it was  
15 well-known to me as a lymphoma specialist. What I  
16 wasn't sure about is whether Roundup is associated with  
17 NHL.

18 Q. Right. And my question actually was a little  
19 broader than that. Amongst the hundreds of different  
20 pesticides, you had not formed an opinion as to which,  
21 if any, of the various pesticides were associated with  
22 NHL; true?

23 A. That's fair.

24 Q. And Roundup, as you just indicated, you had  
25 not formed an opinion as of the spring of 2016 whether

1 Roundup in particular was associated with NHL?

2 A. I had not researched the data.

3 Q. So you went over with Mr. Miller yesterday  
4 publications in the peer-reviewed literature from 1999,  
5 2002, 2003, I believe. Do you recall having discussions  
6 about certain publications in those time frames?

7 A. Yes, we reviewed most of those, yes.

8 Q. And so during that period of time that those  
9 articles were published, you were still clinically  
10 treating patients; correct?

11 A. That's correct.

12 Q. And those publications that you went over with  
13 Mr. Miller did not hit your radar, so to speak, as a  
14 clinician, speaking about glyphosate in particular;  
15 correct?

16 A. I'll say it again. I was not aware of the  
17 data on Roundup and glyphosate until I researched it in  
18 the spring of 2016.

19 Q. So the answer is "yes" to my question?

20 A. Yes.

21 Q. Those particular papers you had not focused on  
22 as a clinician prior to the time you were contacted by  
23 plaintiffs' counsel; correct?

24 A. Yes. I had not reviewed the epidemiology on  
25 Roundup or glyphosate.

1           **Q.**    And you -- I think you were shown briefly  
2 yesterday or mentioned in your testimony a monograph  
3 prepared by IARC in March of 2015. Do you recall doing  
4 that?

5           **A.**    I recall that, yes.

6           **Q.**    Prior to the time that Mr. Miller's firm  
7 contacted you, you had not reviewed the IARC monograph;  
8 correct?

9           **A.**    That's correct. I had not reviewed before.

10          **Q.**    And nor had you reviewed the summary of the  
11 IARC findings published in the Lancet before you were  
12 contacted by Mr. Miller; correct?

13          **A.**    I had not reviewed them comprehensively, no.

14          **Q.**    And again, 2015, that was still in the time  
15 frame in which you were treating patients clinically;  
16 correct?

17          **A.**    That's correct.

18          **Q.**    So it's fair to say that the IARC monograph  
19 had no particular clinical relevance to you when you  
20 were treating patients; true?

21          **A.**    I did not apply that. I wasn't -- I didn't  
22 review it before, that's correct.

23          **Q.**    So you indicated -- so I think you told us, I  
24 don't remember the exact date you came out of fellowship  
25 from -- was it 1999?



1           **A.**    When I finished fellowship?

2           **Q.**    Yes.

3           **A.**    2002. '99 to 2002 was my fellowship.

4           **Q.**    So post fellowship, you had about 14 years in  
5 which you were a practicing oncologist seeing patients;  
6 correct?

7           **A.**    That's correct.

8           **Q.**    And you told us that you had a general sense  
9 about pesticides as sort of a nonspecific class of  
10 products in mind as a -- potentially being associated  
11 with NHL; correct?

12          **A.**    As a category, I was trained as such, yes.

13          **Q.**    When you were treating patients, however, you  
14 never actually diagnosed a particular case of  
15 non-Hodgkin's lymphoma as being induced by Roundup;  
16 true?

17          **A.**    That is true because again -- that's the same  
18 question you asked. Okay, yes.

19          **Q.**    I was asking specifically in your clinical  
20 practice. So the answer to my question is "yes"?

21          **A.**    Yes.

22          **Q.**    You never -- you never told a patient: Your  
23 NHL was caused by Roundup; true?

24          **A.**    That is true.

25          **Q.**    Now, you told us that oncologists do try to

1 find out the cause of a patient's NHL; correct?

2 A. To the extent possible, they all do and they  
3 should try.

4 Q. And you did so as a practicing physician  
5 between 2002 post fellowship to 2016; correct?

6 A. Yes, using the information I knew at the time.

7 Q. And you, during that entire time, never wrote  
8 in a medical record that you believed the patient's NHL  
9 was caused by glyphosate products; correct?

10 A. That's correct.

11 Q. And I believe you just told us you never told  
12 a patient as such; correct?

13 A. That's correct.

14 Q. And you never told one of your fellow  
15 oncologists that you believe glyphosate products cause  
16 NHL; correct?

17 A. At the time I was practicing. Some of that  
18 has changed since then.

19 Q. And you talked about the time, I think  
20 Mr. Miller asked you when you were seeing patients,  
21 whether you had the opportunity to round in the  
22 hospital; do you remember that question was asked of  
23 you?

24 A. I do remember that question.

25 Q. And that was -- that's an opportunity for you

1 to engage residents or fellows who are learning in that  
2 area of specialty; correct?

3 A. Of course.

4 Q. And it's still the case that during your time  
5 in -- as a practicing oncologist, you never told a  
6 resident or fellow that Roundup or glyphosate products  
7 cause NHL; true?

8 A. I wasn't aware of it. So it's true. I can't  
9 tell them about something I was not aware of.

10 Q. And then going forward, you -- after  
11 Mr. Miller's firm contacted you in the spring of 2016,  
12 you told us that you then began to do some review of the  
13 literature on Roundup specifically; correct?

14 A. At my first contact, I said I need to take  
15 time to review the literature.

16 Q. And so you spent, I think you told us, about  
17 three months before you called them back and said that  
18 you had arrived at your opinions.

19 A. That is correct.

20 Q. Portions of which you shared yesterday.

21 A. Yes.

22 Q. Now, do you acknowledge, sir, that there is  
23 disagreement in the medical and scientific community  
24 with respect to your opinion that glyphosate products  
25 increase the risk of NHL?

1           **A.**    I think clearly that, part of the reason why  
2 we're here, there are some scientists that may disagree  
3 with me and I may disagree with them.  I agree with  
4 that.

5           **Q.**    All right.  Well, let's look at a few then.

6           **MR. ISMAIL:**  May I approach, Your Honor?

7           **THE COURT:**  Yes.

8           **BY MR. ISMAIL:**

9           **Q.**    So, Dr. Nabhan, you were asked yesterday by  
10 Mr. Miller about the Environmental Protection Agency.  
11 Do you recall that?

12          **A.**    I do.

13          **Q.**    And he showed you a document from the EPA and  
14 directed your attention to one paragraph of that  
15 document.

16          **A.**    It's an over 200-page document.  He directed  
17 my attention to that paragraph, yes.

18          **Q.**    And what you told the jury yesterday is the  
19 following, quote:

20                        "As I said earlier, the EPA's  
21 position has been:  We can't tell if it  
22 does, we can't tell if it doesn't.  They  
23 stayed in the middle.

24                        "They didn't offer any opinion that  
25 was helpful.  They said they didn't know

1                   if it does or doesn't. That's been their  
2                   position for the past several years."

3                   Do you recall saying that?

4                   **A.** My interpretation of the report is that they  
5                   were not conclusive. That's how I interpreted the  
6                   report.

7                   **Q.** So you recall saying that yesterday; correct?

8                   **A.** Yes, I do.

9                   **Q.** And so when we're -- in that last answer you  
10                  gave, the "they," you were speaking about the  
11                  Environmental Protection Agency scientists; correct?

12                  **A.** I was speaking about my interpretation of  
13                  their report.

14                  **Q.** And you're saying whether it does or doesn't,  
15                  you were speaking to the question of whether glyphosate  
16                  increases the risk of NHL; correct?

17                  **A.** Again, it's my interpretation of their  
18                  statement.

19                  **Q.** So let's take a look at what their statements  
20                  actually have been. Okay?

21                  **A.** Sure.

22                  **Q.** If you would turn to page -- I'm sorry --  
23                  Exhibit 4941.

24                  **A.** Okay.

25                  **Q.** And just to orient everyone, this is the

1 document that you discussed with the jury yesterday and  
2 you giving your interpretation of what the EPA  
3 scientists concluded about glyphosate; correct?

4 A. Yes.

5 Q. And just by way of a little bit of background,  
6 I know you're not an expert on EPA review and whatnot,  
7 but you understand that the EPA employs scientists in a  
8 variety of specialties?

9 A. Yeah, I do understand that.

10 Q. And you understand the EPA has expert  
11 toxicologists that review the issues at hand; correct?

12 A. Yes. It's not like they haven't been wrong  
13 before.

14 Q. And you acknowledge that you are not a  
15 toxicologist; correct?

16 A. I'm not a toxicologist.

17 Q. The EPA employs epidemiologists to review the  
18 data relevant to the questions they're trying to decide;  
19 correct?

20 A. Sure.

21 Q. You're not an epidemiologist; correct?

22 A. I'm not an epidemiologist.

23 Q. In addition to those specialties, the EPA  
24 employs scientists who are experts in genotoxicity,  
25 animal cancer studies, and a variety of disciplines of

1 which you are not an expert; correct?

2 A. Correct.

3 Q. Now if you turn to page 133.

4 A. Okay.

5 Q. Directing your attention to the bottom  
6 paragraph here.

7 A. Sure.

8 Q. It begins "At this time."

9 A. I'm sorry, it doesn't look in my --

10 Q. Depending on what page number you're looking  
11 at. If you're looking at the middle page number, it's  
12 133, if you're looking at the right page number, it's  
13 134.

14 A. Okay. I can see it now.

15 Q. So with respect to the statements in December  
16 of 2017 from the EPA scientist first sentence says:

17 "At this time, a conclusion regarding  
18 the association between glyphosate  
19 exposure and risk of NHL cannot be  
20 supported based on the available data due  
21 to conflicting results."

22 Did I read that correctly?

23 A. You did read it correctly, yes.

24 Q. Is that information you were aware of  
25 yesterday when you gave your testimony to the jury that

1 the EPA has not taken a position on glyphosate?

2 A. Yes, I was aware of this information.

3 Q. Then they go on to say:

4 "Chance and/or bias cannot be  
5 excluded as an explanation for observed  
6 associations."

7 Did I read that correctly?

8 A. Yes.

9 Q. They go on to say:

10 "The magnitude of adjusted risk  
11 estimates for ever/never use were  
12 relatively small ranging from 1.0 (no  
13 association)" --

14 Just to orient folks there, that's  
15 epidemiology looking at formulated glyphosate products  
16 like Roundup and whether using those products increased  
17 your risk of NHL; correct?

18 A. Correct.

19 Q. And what they report, the EPA scientists in  
20 review of their -- of that data, some of them range from  
21 1.0 meaning no association; is that what they write  
22 here?

23 A. Yes.

24 Q. And you're aware of epidemiology studies that  
25 show no association between products like Roundup and



1 NHL; true?

2 A. Yes, there are some studies that say that.

3 Q. And then they say the range goes from 1 to  
4 1.85 in adjusted analyses. And you and I will talk in a  
5 little bit about adjustments that are necessary to  
6 properly interpret the data. But you know what that  
7 refers to, adjusted analyses?

8 A. Sure.

9 Q. And then:

10 -- "with the widest confidence  
11 intervals observed for the highest effect  
12 estimates indicating less reliability in  
13 these estimates."

14 Did I read that correctly?

15 A. Yes.

16 Q. And what that's referring to is for some of  
17 the data that have higher relative risks, there are wide  
18 confidence intervals associated with those numbers;  
19 right?

20 A. Yes.

21 Q. And in most of those circumstances the  
22 confidence intervals cross 1; correct?

23 A. That's correct.

24 Q. And so I think the jury has heard this, that  
25 that means the results are not statistically

1 significant; correct?

2 A. Which I think you've heard me say yesterday  
3 that sometimes this does not mean no clinical  
4 significance, yes.

5 Q. So we've heard your views on statistical  
6 significance, but what I said is true.

7 A. What you said is true.

8 Q. And what the scientists at the EPA are saying  
9 here is when you have these wide confidence intervals,  
10 that's a sign to researchers that there's some lack of  
11 reliability or precision in the estimates being  
12 measured; true?

13 A. Or could be a sample size.

14 Q. Could be a sample size.

15 A. Right.

16 Q. So that the smaller the study, the less  
17 reliable the point estimate?

18 A. The smaller the study, the wider could be the  
19 confidence interval.

20 Q. Which as described here in this document has  
21 implications for the reliability of the data. Would you  
22 agree with that, sir?

23 A. I don't agree with the statement of  
24 reliability of the data. I would agree that the -- when  
25 it's smaller sample size, the confidence interval is

1 wide, but I think the reliability of the data, that's in  
2 the eyes of the beholder, we may disagree on that.

3 Q. Fair enough.

4 Turn to the next page if you would, please,  
5 sir.

6 A. Which number?

7 Q. It's the very next page 1 --

8 A. 34.

9 Q. 34.

10 A. Sure.

11 Q. So here is where the EPA scientists describe  
12 the review of the rodent studies.

13 Do you see where I am?

14 A. Yes, I do.

15 Q. So you told us yesterday, I think in response  
16 to Mr. Miller's question, you made some reference to the  
17 pillars of science. Do you recall that?

18 A. I do recall that.

19 Q. And in fairness, I think when you and I had an  
20 opportunity to talk yesterday, you said you weren't an  
21 expert in these types of studies; correct, animal  
22 studies?

23 A. That's correct.

24 Q. And what you did here was you briefly looked  
25 at the data to see what kind of data was out there, what

1 kind of studies were done.

2 A. Yes. It's been a while since I've seen the  
3 actual studies. I reviewed a little bit of them when  
4 the Zhang meta-analysis came out, there was a table on  
5 the animal study. But it's been a while.

6 Q. Sure. But certainly you did not review the  
7 animal cancer studies with the same rigor and expertise  
8 as did the EPA scientists; true?

9 A. I can't really speak of the rigor that they  
10 do. I can only say that I did not review them  
11 rigorously, but I think I can't comment on how rigorous  
12 their review.

13 Q. Fair enough, sir.

14 So they reviewed 14 animal carcinogenicity  
15 studies with glyphosate, glyphosate acid, or glyphosate  
16 salts in this 2017 review; correct?

17 A. Yes.

18 Q. And what they determined was that none of the  
19 tumors evaluated were considered to be treatment-related  
20 based on weight of evidence evaluations.

21 Did I read that correctly?

22 A. That was their determination.

23 Q. Were you aware of this conclusion by the EPA  
24 scientists when you told the jury yesterday that the EPA  
25 had not taken a view on the carcinogenicity of

1 glyphosate?

2 A. In animals?

3 Q. My question, sir, is when you testified  
4 yesterday that the EPA scientists haven't formed a view  
5 about glyphosate, were you aware of this conclusion in  
6 the document? Yes or no?

7 A. You're asking about the conclusion for animal  
8 studies?

9 Q. Correct. That the animal studies show -- were  
10 determined to be not treatment-related.

11 A. I do recall reading it. It's been a while,  
12 yes.

13 Q. Thank you.

14 So further in that same page there was --  
15 there's a discussion of genotoxicity studies. So the  
16 paragraph directly below. Do you see where I am?

17 A. I do.

18 Q. And what the EPA scientists evaluated here  
19 were over 80 genotoxicity studies with the active  
20 ingredient glyphosate were analyzed for the current  
21 evaluation.

22 Do you see where I am?

23 A. I do.

24 Q. You didn't review 80 genotoxicity studies in  
25 your work in this case; correct?

1           **A.**    I did a while back when I first looked at  
2 them, but that's been a while.

3           **Q.**    Sure.

4                    And genotoxicity again was one of the subjects  
5 that you said you were not an expert in when you and I  
6 spoke yesterday morning; correct?

7           **A.**    Yes, but you just asked me if I reviewed them.  
8 I said I did but awhile back.

9           **Q.**    Thank you, sir.

10                   And so the EPA scientists, when they're  
11 commenting about these 80 studies that they reviewed,  
12 was the overall weight of evidence indicates that  
13 there's no convincing evidence that glyphosate is  
14 genotoxic in vivo via the oral route.

15                   Did I read that correctly?

16           **A.**    You did read that correctly.

17           **Q.**    And when you testified yesterday that the EPA  
18 scientists had not taken a view or position on  
19 glyphosate, were you aware of their statement that the  
20 genotoxicity studies show no convincing evidence that  
21 glyphosate is genotoxic?

22           **A.**    I don't recall word by word, but I was aware  
23 they looked at genotoxicity, yes.

24           **Q.**    And their conclusion; correct?

25           **A.**    Yes.

1           **Q.**   And indeed if you go to the next page in the  
2 carryover paragraph, the EPA scientists, at the end of  
3 this discussion, say the genotoxicity studies  
4 demonstrate that glyphosate is not directly mutagenic or  
5 genotoxic in vivo.

6                   Is that the conclusion of the EPA scientists  
7 in this document?

8           **A.**   That's their conclusion.

9           **Q.**   So you're aware that they've articulated --  
10 "they" being the EPA scientists -- an overall conclusion  
11 in this document; correct?

12          **A.**   Yes.

13          **Q.**   Turn to page 143.

14                   Are you there, sir?

15          **A.**   Yes.

16          **Q.**   I'm just orienting you to the section. The  
17 discussion carries over onto the next page. So this is  
18 the section on the conclusions in this document;  
19 correct?

20          **A.**   That's correct.

21          **Q.**   And if you turn the page, let's see what the  
22 EPA actually says.

23                   So at the top, describing the extensiveness of  
24 the review:

25                                "An extensive database exists for

1           evaluating the carcinogenic potential of  
2           glyphosate, including 63 epidemiological  
3           studies, 14 animal cancer" -- sorry --  
4           "carcinogenicity studies and nearly  
5           90 genotoxicity studies for the active  
6           ingredient glyphosate."

7           Did I read that correctly?

8           **A.** You read it correctly.

9           **Q.** And they go on to say:

10                         "The available data at this time do  
11                         not support a carcinogenic process for  
12                         glyphosate."

13           Correct?

14           **A.** That's what they say, yes.

15           **Q.** Were you aware of this information when you  
16           told the jury yesterday that the EPA had not taken a  
17           position on glyphosate?

18           **A.** Yes, because if you read the entire report,  
19           there's a lot of go back and forth, back and forth as  
20           they were analyzing the data.

21           **Q.** Well, let's see how they actually classified  
22           glyphosate right below that in this document.

23                         So do you understand that the EPA has  
24           available to it various classifications it can give an  
25           agent as to its carcinogenicity potential?



1           **A.**    Yes, I'm aware of that.

2           **Q.**    And do you know what the EPA has concluded  
3 about glyphosate in this document?

4           **A.**    I think they're saying it's not likely to be  
5 carcinogenic in humans.

6           **Q.**    So, first of all, they have available to them  
7 the descriptor "carcinogenic to humans" and they say the  
8 weight of the evidence do not clearly support that  
9 description; correct?

10          **A.**    That's what they say, yes.

11          **Q.**    And then they say what the strongest support  
12 is for in this document; right?

13          **A.**    That's what they say, yes.

14          **Q.**    And tell the jury what the EPA concluded the  
15 strongest support was for with respect to whether  
16 glyphosate poses a cancer risk to humans.

17          **A.**    The statement in this page, it says the  
18 strongest support is for not likely to be carcinogenic  
19 to humans.

20          **Q.**    And similarly, sir, when you told the jury  
21 under oath yesterday that your interpretation is that  
22 the EPA scientists did not take a view about glyphosate,  
23 were you aware of their classification of that product  
24 in this document?

25          **A.**    Yes, I believe I was. Just to me that's still

1 my interpretation of this, based on all of the 200 pages  
2 that they went back and forth, is not necessarily as  
3 conclusive as you are stating.

4 Q. As they stated in this -- on this paragraph  
5 where they give their final conclusion; true?

6 A. But I said that was my personal interpretation  
7 of the science that they looked at and their statement.

8 Q. So you're aware, sir, that there are other  
9 scientific organizations that have examined this precise  
10 question; correct?

11 A. I'm aware of that, yes.

12 Q. And one such organization is called EFSA;  
13 correct?

14 A. Correct.

15 Q. And if you turn to Exhibit 4727 in your  
16 binder.

17 Before I go through the specifics of this  
18 document, Doctor, do you acknowledge that other  
19 scientific organizations around the world have examined  
20 the question of whether products like Roundup increase  
21 the risk of NHL in humans?

22 A. Many of them have. They actually looked more  
23 at food contamination and whether it increases  
24 carcinogenicity in food.

25 Q. And so the answer to my question is "yes"?

1           A.    Yes, but it's important to clarify.

2           Q.    Other organizations have examined this  
3 question about whether glyphosate increases the cancer  
4 risk in humans; true?

5           A.    I understand but --

6           Q.    Is the answer "yes"?

7           A.    EFSA says it's European Food Safety Authority;  
8 right?

9           Q.    You understand --

10          A.    That's what EFSA --

11                               (Simultaneous colloquy.)

12       **BY MR. ISMAIL:**

13          Q.    -- understand the conclusion on pesticide peer  
14 review?

15          A.    I understand that.

16          Q.    And you're not an expert in European  
17 regulatory system for the approval and registration of  
18 pesticide products; correct?

19          A.    I think neither of us is.

20          Q.    So the answer is "yes"?

21          A.    Correct.

22          Q.    Thank you, sir.

23                       So if you go to the document -- on the first  
24 page.

25                       Have you reviewed this document, Doctor?

1           **A.**    It's been a long time.  I haven't -- I have,  
2           but probably over two years ago.

3           **Q.**    So the -- do you understand that EFSA, similar  
4           to EPA, which we just talked about, employs scientists  
5           in a variety of disciplines and specialties to undertake  
6           a review of the scientific issue that they're  
7           evaluating?

8           **A.**    I really can't comment on their process.  
9           Again, I've reviewed the document, but it's hard for me  
10          to say the process, who they employ and so forth.  But I  
11          have no reason to doubt what you're saying.

12          **Q.**    Okay.  So do you know, by whatever process  
13          EFSA employed, what they concluded with respect to  
14          glyphosate after doing the scientific review articulated  
15          here?

16          **A.**    I believe they concluded that glyphosate is  
17          not carcinogenic when it's contaminated in food.  That's  
18          what I recall.

19          **Q.**    You think that's what this document concludes?

20          **A.**    It's been more than two years.  We can go  
21          through it together.

22          **Q.**    So in terms of the -- what's actually  
23          articulated here and what I've highlighted on the  
24          screen, EFSA concluded that glyphosate is unlikely to  
25          pose what, sir?

1           **A.**    You're asking me to read it?

2           **Q.**    Yep.

3           **A.**    "EFSA concluded that glyphosate is unlikely to  
4 pose a carcinogenic hazard to humans and the evidence  
5 does not support classification with regard to its  
6 carcinogenic potential according to regulation."

7           **Q.**    If you turn, sir, to page 11 of this --

8           **MR. MILLER:** Your Honor, we need a sidebar.

9           **THE COURT:** Okay.

10          **THE WITNESS:** I need the white noise now.

11                   (Sidebar held but not reported.)

12          **THE COURT:** So before we resume, we're going  
13 to need to take a couple minutes' break. So we're going  
14 to take a quick 10-minute break right now. Thank you.

15          **THE WITNESS:** Thank you, Your Honor.

16                   (Witness and jury excused for recess.)

17          **THE COURT:** So we'll need to step in chambers  
18 one quick second.

19                   (Sidebar held in chambers but not reported.)

20                   (Recess taken at 10:15 a.m.)

21                   (Proceedings resumed in open court in the  
22 presence of the jury at 10:23 a.m.)

23          **THE COURT:** Mr. Ismail, you may resume.

24          **MR. ISMAIL:** Thank you, Your Honor.

25          **Q.**    Doctor, do you still have in front of you the

1 European scientific review that we were looking at  
2 before the break?

3 A. I do.

4 Q. Okay. If you turned to page 11 already, I'm  
5 going to direct your attention to the paragraph that  
6 begins "From the wealth of epidemiological studies"; do  
7 you see where I am?

8 A. I do.

9 Q. And you understand in this review the  
10 scientists here at EFSA were looking at some of the same  
11 epidemiological studies that you discussed with the jury  
12 yesterday?

13 A. I believe they were.

14 Q. And do these scientists say:

15 "From the wealth of epidemiological  
16 studies, the majority of experts concluded  
17 that there is very limited evidence for an  
18 association between glyphosate-based  
19 formulations and non-Hodgkin lymphoma,..."  
20 Did I read that correctly?

21 A. You did.

22 Q. (Reading from document:)

23 -- "overall inconclusive for a causal  
24 or clear associative relationship between  
25 glyphosate and cancer in human studies."

1                   Is that how that sentence continues?

2           **A.**    Correct.

3           **Q.**    And then they describe a minority-held view  
4 that was expressed that the studies were either  
5 inadequate or limited evidence of association.

6                   Did I read that correctly?

7           **A.**    You did.

8           **Q.**    This scientific conclusion is contrary to the  
9 opinions you articulated to the jury yesterday; true?

10          **A.**    Correct.

11          **Q.**    Now, if you turn to page -- I'm sorry, back  
12 one page. And that's where I want to direct your  
13 attention to first. In the very large paragraph towards  
14 the bottom.

15                   And you understand with respect to again the  
16 metaphor of the pillars of scientific evidence --

17                   Well, you look confused.

18          **A.**    I just want to see which page. I'm sorry.

19          **Q.**    Yes. So it's on page 10 of the document, and  
20 it's that very large paragraph at the bottom.

21                   And I pulled out the middle part of that  
22 paragraph so we can all see it better.

23                   Are you with me?

24          **A.**    Yes.

25          **Q.**    What I was asking, sir, is that with respect

1 to the three types of evidence, scientific evidence that  
2 Mr. Miller referenced yesterday in his questions, you  
3 understand the scientists at this European organization  
4 looked at that same three lines of scientific evidence;  
5 correct?

6 A. They did.

7 Q. And with respect to what they concluded was  
8 that glyphosate did not present genotoxic potential and  
9 no evidence of carcinogenicity was observed in rats or  
10 mice.

11 Did I read that correctly?

12 A. They did conclude the wrong conclusion, but  
13 they did.

14 Q. And that is your opinion as someone who's  
15 neither an expert in genotoxicity or animal cancer  
16 studies; correct?

17 A. Well, I'm sorry, I don't understand your  
18 question.

19 Q. Sure.

20 A. I said I disagree with the opinion.

21 Q. Right. You said they were wrong. And my  
22 question was: Did you -- hold on. Let me withdraw that  
23 and I'll restart.

24 A. Sure.

25 Q. So you told the jury that this group of



1 scientists in Europe were wrong about this conclusion  
2 regarding genotoxicity and whether there was evidence of  
3 carcinogenicity in animal studies; correct? That's what  
4 you just said a moment ago.

5 A. It is my opinion they were wrong.

6 Q. Right. And so my follow-up question to you is  
7 you are neither an expert in genotoxicity nor animal  
8 cancer studies; true?

9 A. I don't need to be an expert to know if they  
10 were wrong.

11 Q. The answer to my question is "yes"?

12 A. I'm not an expert. I've said that five times.

13 Q. Thank you.

14 Now if you turn to Exhibit 4722.

15 A. 4722.

16 Q. And you under --

17 A. Yep.

18 Q. Very good.

19 You have heard of a scientific body in Europe  
20 called ECHA?

21 A. I have heard of them, yes.

22 Q. The European Chemicals Agency?

23 A. Right.

24 Q. And you know that after the IARC meeting in  
25 2015, ECHA, along with the last two groups of scientists

1 that we just went over, reexamined the question of  
2 whether glyphosate products are associated with  
3 non-Hodgkin's lymphoma?

4 A. Looks like it, yes.

5 Q. Have you reviewed this document, sir?

6 A. The ECHA, I believe I have. But, again, if I  
7 did, a long time ago, maybe about a couple of years ago.  
8 It's been a while for this one.

9 Q. So this document is actually dated 2000 and --

10 A. '16.

11 Q. Thank you. And so actually it's --

12 A. It says the proposal was submitted by Germany  
13 and received by RAC on March 17, '016, or something.

14 Q. So if you turn back to the third page of the  
15 exhibit, you'll see that the preparation of these  
16 comments and the submission of this document by ECHA was  
17 actually in 2017.

18 A. Sure.

19 Q. Okay. So this document came out after you  
20 already formed your opinion; right?

21 A. Yes, of course.

22 Q. So let's turn now to what this group of  
23 scientists say. And I assume consistent with the last  
24 review that we just went over, you're not familiar with  
25 the processes or the expertise or the procedures that

1 this group of scientists employ to arrive at their  
2 conclusions?

3 A. And I said none of us is.

4 Q. Is the answer "yes"?

5 A. Yes.

6 Q. And so when we look here on page 31 -- are you  
7 there?

8 A. 31. Yes, I'm here.

9 Q. And so we have "Conclusions of the DS." Do  
10 you know what that is?

11 A. No. What is the DS?

12 Q. Dossier submitter.

13 A. Say it again.

14 Q. The reference to the dossier, do you know what  
15 that referenced to?

16 A. I didn't know what the DS symbol is for. So  
17 this is dossier submitter?

18 Q. So going forward in this document, the  
19 conclusion that's adopted by ECHA, that "based on the  
20 epidemiological data as well as on data from long-term  
21 studies in rats and mice, taking a weight of evidence  
22 approach, no hazard classification for carcinogenicity  
23 is warranted for glyphosate according to the CLP  
24 criteria."

25 Did I read that correctly?

1           **A.**    You did.

2           **Q.**    And again --

3           **A.**    What does CLP stand for, if I may ask?

4           **Q.**    Did I read that correctly, sir?

5           **A.**    Yes.  I'm asking what does "CLP" stand for?

6           **Q.**    I'm not really in a position, sir, where I'm  
7 supposed to be answering your questions.

8           **A.**    I apologize.  I was trying to clarify what  
9 "CLP" means.

10          **Q.**    So in the -- I'm not allowed to testify,  
11 Doctor.

12                    So moving forward in terms of the conclusions  
13 here.  So in the very sentence that we've looked at,  
14 they're talking about epidemiological data and also the  
15 animal cancer data; correct?

16          **A.**    Where do you see that?

17          **Q.**    In the section that's highlighted on the  
18 screen.

19          **A.**    Yes.

20          **Q.**    And they arrive at a conclusion that no hazard  
21 classification for carcinogenicity is warranted for  
22 glyphosate; correct?

23          **A.**    That's the conclusion they arrived at.

24          **Q.**    And I assume you're going to tell us that it  
25 is your opinion that they got it wrong; right?

1           **A.**    I said I disagree, I disagree with the  
2           opinion. Reasonable people can disagree.

3           **Q.**    And this is an issue upon reasonable people  
4           can disagree?

5           **A.**    I think me and you disagree right now. So,  
6           yes, we can disagree.

7           **Q.**    Great.

8                        So the issue of whether products like Roundup  
9           increase the risk of non-Hodgkin's lymphoma is a  
10          question of scientific discussion and debate; correct?

11                       **MR. MILLER:** Your Honor, I object. This  
12          document has nothing to do with Roundup, and he's  
13          misleading.

14                       **MR. ISMAIL:** Your Honor, may I --

15                       **THE COURT:** Okay. So --

16                       **MR. MILLER:** It's a glyphosate document, it's  
17          not a Roundup document so I object.

18                       **THE COURT:** Overruled. You can continue to  
19          ask questions.

20                       **BY MR. ISMAIL:**

21                       **Q.**    Sure. And just to address Mr. Miller's  
22          concern, you would certainly agree, Doctor, that when  
23          we're talking about epidemiological data, those are  
24          studies involving humans exposed to the actual  
25          formulated product like Roundup; correct?

1           **A.** I believe when we look at the epidemiologic  
2 studies, yes.

3           **Q.** Very good.

4                   And so what you were telling us a moment ago  
5 is the question about whether products like Roundup  
6 increase the risk of non-Hodgkin's lymphoma is one of  
7 those scientific questions for which reasonable people  
8 can disagree. That's what you just said; correct?

9           **A.** To a limit, until eventually all people could  
10 agree.

11          **Q.** One way or another?

12          **A.** Thirty years ago, people thought smoking was  
13 good.

14          **Q.** Doctor --

15          **A.** Well, just --

16          **Q.** Do you remember my question?

17          **A.** I remember your question.

18          **Q.** All right. So in terms of this particular --  
19 if you actually go, Doctor, to Exhibit 5129.

20          **A.** Sure.

21                   Okay.

22          **Q.** Are you there?

23          **A.** Uh-huh.

24          **Q.** This is a reevaluation decision on glyphosate  
25 that was put together by the scientists at Health

1 Canada.

2 A. Yes.

3 Q. Have you read this document before, sir?

4 A. This one I don't -- my memory escapes me if I  
5 read this one exactly. I don't remember.

6 If I put it on my reliance list, then I have.  
7 But it's been a while again. A lot of these are a  
8 while.

9 Q. So turn to page -- page 1 under the Executive  
10 Summary.

11 A. Page -- one second. Yes.

12 Q. Are you there?

13 A. Yes.

14 Q. And did the scientists at Health Canada give  
15 an overall finding from their reexamination?

16 A. They did.

17 Q. And did these scientists conclude that  
18 glyphosate is not genotoxic and is unlikely to pose a  
19 human cancer risk?

20 A. That's what they concluded.

21 Q. And that's something that you disagree with;  
22 right?

23 A. Certainly.

24 Q. Turn to page 9 of this document.

25 A. Sure.

1           **Q.** Just to orient you to this document, sir, at  
2 the very top they're making reference to the IARC  
3 decision in March 2015 that you talked about yesterday;  
4 right?

5           **A.** Sure.

6           **Q.** And then at Health Canada, they go on to  
7 describe what some of the other scientific reviews have  
8 done with respect to products like Roundup; correct?

9           **A.** Sure.

10          **Q.** And as we go forward, if you look at the very  
11 bottom, does it say:

12                         "Currently no pesticide regulatory  
13 authority, including Health Canada,  
14 considers glyphosate to be a carcinogenic  
15 risk of concern to humans."

16                         Did I read that correctly?

17          **A.** You did.

18          **Q.** And as far as you know, that's a true and  
19 accurate statement; correct?

20          **A.** Can you rephrase the question, please,  
21 counsel?

22          **Q.** The statement that is articulated here by  
23 Health Canada that no pesticide regulatory authority  
24 that has done a scientific review of the issue considers  
25 glyphosate to be a cancer risk to humans?



1           **A.**    Yes, I assumed you asked me if I agree with  
2           that, which I don't.  But their statement is correct.

3           **Q.**    And their statement as describing the other  
4           scientific reviews that have taken place since IARC,  
5           that's, as far as you know, a correct statement; true?

6           **A.**    According to them, based on their statement,  
7           yes.

8                   **MR. ISMAIL:**  Your Honor, I've not previously  
9           published page 23 from this document.

10                   I'm going to ask for permission to do so.

11                   **MR. WISNER:**  What numbering?

12                   **MR. ISMAIL:**  Page 23, middle page number  
13           is 30.  It's under the section called "Conclusion."

14                   **THE COURT:**  Bates number?  I'm sorry, did you  
15           say Bates number 23 or page number?

16                   **MR. ISMAIL:**  Page 23, Bates 30.

17                   **MR. MILLER:**  No objection, Your Honor.

18                   **THE COURT:**  Go ahead.

19                                   (Exhibit published.)

20           **BY MR. ISMAIL:**

21                   **Q.**    I don't know if you were following along with  
22           that, Doctor, but we were turning to page 23 of the  
23           document in the section entitled "Conclusions."

24                   **A.**    Which exhibit?  I'm sorry.

25                   **Q.**    The one that we're still in, sir.

1           **A.**    5129?

2           **Q.**    Yes.

3           **A.**    I'm on page 23.

4           **Q.**    Okay.  You see the section entitled  
5 "Conclusions"?

6           **A.**    Yes, I do.

7           **Q.**    And here they're talking about the animal  
8 studies; correct?

9           **A.**    I'll have to read it.

10                    Yes, they are starting to talk about the  
11 animal studies, correct.

12           **Q.**    Okay.  So a clear dose response was not  
13 observed for any of the tumors; is that the first thing  
14 they say?

15           **A.**    Yes.

16           **Q.**    The statistically significant findings via  
17 pairwise comparisons were weighed against the lack of  
18 dose-response relationships.  Do you see that?

19           **A.**    Yes.

20           **Q.**    And that is the conclusion of the scientists  
21 at Health Canada with respect to the rodent studies that  
22 have been conducted on glyphosate; correct?

23           **A.**    Appears like it, yes.

24           **Q.**    And then they say here at the bottom:

25                    Slightly increased tumour incidences

1 at dose levels at or above the limit dose  
2 of testing (1,000 milligrams per kilogram  
3 per day), were not considered relevant for  
4 human health risk assessment.

5 Did I read that correctly?

6 **A.** You did.

7 **Q.** And what they're talking about here is that  
8 the rodent studies are conducted -- I'll withdraw that.

9 Let me ask a foundation question first.

10 Do you understand in the rodent studies that  
11 the animals are dosed at extremely high doses?

12 **A.** Yes, by design, that's how you have to do  
13 animal studies.

14 **Q.** And the animals are actually fed the  
15 glyphosate daily at dose levels that can exceed even a  
16 thousand milligrams per kilogram per day; correct?

17 **A.** That's correct.

18 **Q.** And you understand that's several thousand  
19 times more than what a human would be exposed to  
20 spraying formulated Roundup residentially?

21 **A.** Yeah, it's different dosing.

22 **Q.** And so what they're saying here is that the  
23 findings from the rodent studies, when you're talking  
24 about human health risk, you have to consider this  
25 enormous magnitude of dosing differential between what

1 the rodents get and what humans might be exposed to;  
2 correct?

3 A. That's what they're saying. I'm not entirely  
4 clear how they make that bridge, though.

5 Q. Sure. So in terms of folks who are actually  
6 an expert in these sorts of things, their conclusion was  
7 with respect to any slightly increased tumor incidences  
8 in the rodent studies, at least this group of scientists  
9 considered they were not relevant when you're  
10 considering human health risk assessment, true?

11 A. Yeah, this group of scientists, that's what  
12 they said.

13 Q. Now, if we -- and this group of scientists'  
14 conclusion is contrary to the opinions you offered to  
15 the jury yesterday; true?

16 A. That's correct.

17 MR. ISMAIL: Your Honor, Exhibit 5131 has not  
18 been previously been published. It was part of the  
19 submission that you reviewed last night.

20 MR. MILLER: Object, Your Honor. It's a  
21 website.

22 THE COURT: I actually don't recall seeing  
23 this particular document.

24 MR. ISMAIL: Would you like us to approach?

25 THE COURT: I would.

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(Sidebar held but not reported.)

**THE COURT:** You can proceed.

**MR. ISMAIL:** Thank you, Your Honor.

**Q.** Doctor, the next exhibit I'd like to take a look at is Exhibit 6481.

**MR. ISMAIL:** Published by agreement, Your Honor.

**THE COURT:** That's fine.

(Exhibit published.)

**BY MR. ISMAIL:**

**Q.** In your review, Doctor, and investigation that you've done on behalf of Mr. Miller in this case, did you review and consider the findings and conclusions of the New Zealand Environmental Protection Agency?

**A.** I'm aware of it. I don't recall reading every single part of it.

**Q.** Okay. If you turn to page 16.

**A.** Sure.

**Q.** You see that the New Zealand Environmental Protection Agency gives its conclusions after IARC on the question of whether glyphosate is genotoxic?

**A.** I do see that, yes.

**Q.** And what, sir, is the conclusion as you understand it as written?

**A.** From the New Zealand authority?

1 Q. Yep.

2 A. So the New Zealand authority says the overall  
3 conclusion is that based on a weight of evidence  
4 approach, taking into account the quality and  
5 reliability of the available data, glyphosate is  
6 unlikely to be genotoxic or carcinogenic to humans.

7 Q. That's a conclusion that is contrary to the  
8 opinions you offered to the jury in this case; correct?

9 A. Certainly.

10 Q. The next document, sir, is -- sorry -- 4136.

11 A. Yes.

12 Q. You understand that the scientists at the  
13 Australian Pesticide Veterinary Medicines Authority also  
14 did a review of the issues we've been talking about in  
15 this trial after IARC?

16 A. I believe they have. I don't recall reading  
17 it, but I know they did.

18 Q. And if you actually look, sir, on page --  
19 well, if you look at the page -- the Bates numbering,  
20 it's page 11.

21 A. Sure.

22 Q. Are you aware of -- you said you were aware of  
23 what the Australian scientists concluded of whatever  
24 source.

25 Do you recall what it is that this group of

1 scientists concluded on the issues we've been talking  
2 about in this trial?

3 A. They concluded that the glyphosate is not  
4 carcinogenic to humans.

5 Q. And that is an issue that's -- that's a  
6 conclusion from this group of scientists that's contrary  
7 to what you testified to the jury yesterday; correct?

8 A. A hundred percent.

9 Q. Now, if you go forward in the same document,  
10 sir, to page 32.

11 A. Bates number 32?

12 Q. Bates number 32.

13 A. Okay.

14 MR. ISMAIL: And this is a page not previously  
15 published. With permission, I will direct the witness's  
16 attention to the bottom section.

17 THE WITNESS: Under "Oxidative Stress" -- I'm  
18 sorry.

19 MR. ISMAIL: Yeah. I'm asking permission from  
20 counsel. Do you see where I am?

21 MR. MILLER: No objection, Your Honor.

22 (Exhibit published.)

23 BY MR. ISMAIL:

24 Q. Okay. Doctor, are you at page 32?

25 A. Bates 32. I just want to make sure; right?

1 Page 30 but Bates 32?

2 Q. Right. And there's a section down here on  
3 "Oxidative Stress."

4 A. I see that, yes.

5 Q. And that's one of the mechanisms you briefly  
6 mentioned yesterday in your conversation with  
7 Mr. Miller.

8 A. Yes. I don't think we know all mechanisms, by  
9 the way. Sometimes we just don't know how certain  
10 compounds cause cancer. This is one of the plausible  
11 mechanisms. But I did mention that, yes.

12 Q. So first, just above that section, Oxidative  
13 Stress, the conclusion based on the weight of the  
14 evidence indicates that glyphosate is not genotoxic in  
15 mammals at concentrations relevant to human exposures.

16 Do you see that?

17 A. Yes, I see that, yeah.

18 Q. And that's getting back to this question that  
19 we've looked at in the context of the Health Canada  
20 review which is that it's you have to consider the  
21 dosing when talking about human health risk. Same  
22 concept; right?

23 A. Sure.

24 Q. And then if you go forward to page 38.

25 **MR. ISMAIL:** And, Mr. Miller, this would be



1 not previously published. And it would be the bottom  
2 paragraph.

3 **THE WITNESS:** I'm sorry. Bates 38 or page?  
4 It's not the same.

5 **BY MR. ISMAIL:**

6 **Q.** Yes. Bates 38.

7 **A.** Sure.

8 **MR. MILLER:** No objection, Your Honor.

9 **THE COURT:** Granted.

10 (Exhibit published.)

11 **BY MR. ISMAIL:**

12 **Q.** So do you see that on the screen, Doctor?

13 **A.** Yes, I see it.

14 **Q.** And this is looking at the animal cancer  
15 studies again; correct?

16 **A.** I have to read the whole paragraph. I don't  
17 know, it says the assessment of outcomes. It talks  
18 about humans. I don't see animals.

19 **Q.** Well, if you --

20 **A.** Where is the animal?

21 **Q.** So the section that we were just looking at.

22 **A.** Right.

23 **Q.** Weight of the evidence in experimental  
24 animals.

25 **A.** Yeah, okay. Yes.

1           **Q.** And then it talks about that glyphosate does  
2 not pose carcinogenic risk at realistic exposure levels;  
3 correct?

4           **A.** Correct.

5           **Q.** And, again, that's looking to this question of  
6 it's one thing to test mice at exposure levels that are  
7 tens of thousands times higher than humans, but when  
8 you're doing a risk assessment, you have to consider  
9 human relevant exposures; correct?

10          **A.** Right. And you get that from the  
11 epidemiologic studies.

12          **Q.** So going forward, Doctor, are you familiar  
13 with an organization known as the National Toxicology  
14 Program?

15          **A.** I'm familiar with them vaguely.

16          **Q.** Okay.

17          **A.** I think they're part of the EPA, I believe.

18          **Q.** That's your main understanding of the NTP?

19          **A.** I'm not part of the NTP. So you can orient me  
20 to it.

21          **Q.** Sure. So the National Toxicology Program is  
22 part of the National Institutes of Health. Does that  
23 ring any bells?

24          **A.** Sure.

25          **Q.** And you know that the scientists at NTP, they

1 do original scientific research in the toxicology  
2 profile of certain chemicals?

3 A. Sure.

4 Q. As well as doing reviews conducted by other  
5 scientists.

6 A. Sure.

7 Q. Have you, as part of your work in this case,  
8 looked to see what the scientists at the NTP have done  
9 and concluded about glyphosate with respect to the  
10 mechanisms you talked with the jury about yesterday?

11 A. I don't recall exactly that document, that  
12 particular document. I'm sure I've looked at it. I  
13 just don't recall exactly what it is.

14 Q. Well, if it's not on your materials review  
15 list, are you still sure you've looked at it?

16 A. I'm just saying that I'm aware of what the  
17 outcome or the output of it, and if it's on my material  
18 list, then I must have looked at it.

19 Q. It isn't. So that's what I'm asking you.

20 A. Then I didn't look at it.

21 Q. Okay. So with respect to your -- what you're  
22 aware of, do you understand that the scientists at the  
23 NTP did their own research and studies as to whether or  
24 not glyphosate is genotoxic?

25 A. I believe they have.

1           **Q.**    And do you know that their conclusion based on  
2 their own review and studies is that glyphosate is not  
3 genotoxic?

4           **A.**    If that's what they said, then that's what  
5 they said. I obviously haven't read that document.

6           **Q.**    And with respect to the second mechanism that  
7 you describe, oxidative stress -- that was the other  
8 mechanism you described?

9           **A.**    Yes, and I just said just a minute ago that  
10 there are many times you have carcinogenic and hazardous  
11 materials that you actually don't know the mechanism of  
12 action. But one of them is oxidative stress, that's  
13 correct.

14          **Q.**    Right. That's one of the theories you  
15 discussed yesterday; correct?

16          **A.**    It's a plausible theory.

17          **Q.**    Are you aware that the scientists at the  
18 National Toxicology Program have analyzed whether  
19 formulated glyphosate increases oxidative stress in  
20 human cells?

21          **A.**    If they said they did, then they did. I just  
22 don't know what the process that they usually applied to  
23 review this evidence.

24          **Q.**    Do you know that -- when you did your review  
25 and investigation in this case, do you know that the

1 scientists at NTP concluded that glyphosate and  
2 glyphosate formulations do not increase oxidative  
3 stress?

4 A. I don't recall reviewing that document, but I  
5 obviously disagree with that.

6 Q. You disagree with that without reviewing it?

7 A. I disagree with the conclusion because I've  
8 reviewed other material.

9 Q. So going forward, Doctor, have you heard of  
10 something called the Report on Carcinogens?

11 A. Written by who?

12 Q. Submitted by the U.S. Department of Health and  
13 Human Services to Congress, and it constitutes the  
14 official list of potential or known carcinogens.

15 A. I know of the process. I have not read that.

16 Q. Do you know there's been evidence submitted in  
17 this case that at no time has the Report on Carcinogens  
18 ever listed glyphosate as a potential or known  
19 carcinogen? Are you aware of that?

20 A. I'm not aware of that. I would question the  
21 process.

22 Q. So with respect to how you arrived at your  
23 opinions in this case, that is not something you  
24 considered; correct?

25 A. I did not consider the Report on Carcinogens,

1 no.

2 Q. So with respect to -- with respect to the  
3 various organizations we just looked at, sir, to sum  
4 up --

5 MR. MILLER: Your Honor, we need to approach.

6 (Sidebar held but not reported.)

7 THE COURT: You may proceed.

8 MR. ISMAIL: Thank you, Your Honor.

9 Q. Dr. Nabhan, just to sum up our conversations  
10 so far this morning, we've talked about how you first  
11 came to this issue in 2016 sort of as a blank slate, as  
12 it were, about Roundup; correct?

13 A. Correct.

14 Q. And you told the jury yesterday that you  
15 reviewed and took some significance from the findings of  
16 IARC; correct?

17 A. Amongst other things.

18 Q. Amongst other things. And you and I just  
19 walked through one, two, three, four, five scientific  
20 reviews done by various countries, regulators, looking  
21 at the same set of evidence, coming to contrary opinions  
22 and conclusions that you testified with the jury;  
23 correct?

24 A. Correct.

25 Q. All of which occurred after the IARC review;

1 correct?

2 **A.** Correct.

3 **Q.** And as part of your investigation, just so the  
4 record is clear, Doctor, did you consider the tests and  
5 results done by the scientists at the National  
6 Toxicology Program?

7 **A.** I don't believe I looked at that  
8 comprehensively.

9 **Q.** And as part of your review and investigation  
10 in this case, did you consider whether or not glyphosate  
11 is listed on the Report on Carcinogens submitted to and  
12 maintained by the U.S. Congress?

13 **A.** I did not look at the Report on Carcinogens.

14 **MR. ISMAIL:** So, Your Honor, did you want to  
15 have another morning break or should we just proceed?

16 **THE COURT:** Why don't we proceed for  
17 another -- I think we're going to have lunch a little  
18 later. So you can go on.

19 **MR. ISMAIL:** Very good, Your Honor.

20 **Q.** Dr. Nabhan, we got some testimony yesterday  
21 from you about your compensation as a witness in this  
22 case on behalf of Mr. Miller; correct?

23 **A.** Correct.

24 **Q.** You told us yesterday that your hourly rate is  
25 \$550 an hour; correct?

1           **A.**    True.

2           **Q.**    As of the time of your deposition in January  
3           in Mr. Pilliod's and Mrs. Pilliod's case, you estimated  
4           that you had spent about 120 hours thus far on their  
5           case.

6           **A.**    For both of them, I think something like that  
7           possibly.

8           **Q.**    So just quickly doing the math, that's about  
9           \$65,000 as of January; correct?

10          **A.**    Yes, I think that's about right.

11          **Q.**    And then obviously you've done some more work  
12          on Mr. Pilliod and Mrs. Pilliod's case since January?

13          **A.**    I do take this work seriously, yes.

14          **Q.**    And you, for example, gave further testimony  
15          in this, the Pilliods' case, in March; correct?

16          **A.**    It was a *Sargon* hearing, yes.

17          **Q.**    And you obviously prepared for that and  
18          prepared for your testimony here today; correct?

19          **A.**    Of course I did.

20          **Q.**    So with respect to your best estimate as you  
21          sit here right now with respect to the amount you have  
22          invoiced or will invoice for the Pilliods' case in  
23          particular, what is your best estimate, sir?

24          **A.**    I don't know. I haven't really invoiced  
25          anything in the past three months. After I'm done with



1 this trial, I will do that. I don't have a good  
2 estimate.

3 Q. So we know it's 65,000 in January, and you  
4 just can't give us any estimate as to how much above  
5 65,000 it is?

6 A. I can't tell you right now, no.

7 Q. I saw in -- either in your report or in your  
8 deposition that you have a special rate for -- an  
9 all-day rate for trials. Do you recall that?

10 A. Yes.

11 Q. Is that \$5,000 per day?

12 A. Right. It usually takes more than 10 to  
13 12 hours. So I just set that, yeah.

14 Q. You made \$5,000 yesterday; correct?

15 A. I didn't make anything. I haven't billed for  
16 anything.

17 Q. You will invoice for \$5,000 for yesterday;  
18 correct?

19 A. I'm not going to invoice for two separate  
20 trial days. That's not my plan.

21 Q. So \$5,000; correct?

22 A. Yes, that's my plan. Unless you think I  
23 should.

24 Q. You know, that's between you and Mr. Miller.

25 A. I don't know, I should take notes from

1 lawyers.

2 Q. You can talk about it with Mr. Miller and you  
3 can work out whatever you want with him.

4 A. Sure.

5 Q. So with respect to the question of the  
6 epidemiology, you made some reference to that while you  
7 and I were talking this morning; correct?

8 A. Yes.

9 Q. And I think you've already agreed with me  
10 about that the smaller the study, the greater the  
11 potential and you get either false negatives or false  
12 positives; correct?

13 A. You have to interpret with caution. You don't  
14 dismiss it, but you have to be careful in how you  
15 interpret the results.

16 Q. Very good. And one of the things that you  
17 have to do when you are doing epidemiology in this  
18 particular area is the question of adjusting; correct?

19 A. Correct.

20 Q. And the jury has heard about this from other  
21 witnesses, but just to make sure you are in line with  
22 what the other witnesses have testified to, you agree  
23 that when you are doing epidemiology on glyphosate and  
24 non-Hodgkin's lymphoma, it is important to adjust for  
25 other pesticide exposure; correct?

1           **A.** I think when you're able to make that  
2 adjustments, when you're capable to do it, when the  
3 sample size of the trial allows you to do that, you  
4 absolutely should. Sometimes you can and sometimes you  
5 can't.

6           **Q.** And so where researchers report adjusted data  
7 and unadjusted data, you would agree that the adjusted  
8 data is where you should focus your interpretation;  
9 correct?

10          **A.** I'm not sure I agree with that 100 percent.  
11 You should focus on the adjusted data, but you have to  
12 know what they adjusted for; right?

13          **Q.** Sure.

14          **A.** You have to adjust for the variables that have  
15 actually influence or effect on the outcome you're  
16 looking at. So partly your statement is correct.

17          **Q.** So when -- so just so we're clear. When  
18 researchers are reporting what they believed should be  
19 adjustments for other pesticide exposure, you would  
20 certainly want to focus on that; correct?

21          **A.** As long as the adjustment, as I said, looking  
22 at variables that influence the outcome. So if they  
23 adjust for pesticides that we know they cause  
24 non-Hodgkin's lymphoma, then that's fine.

25          **Q.** So on the question of the epidemiology, you're

1       aware that in certain instances researchers will look at  
2       the overall rate of non-Hodgkin's lymphoma; correct?

3             **A.**    Sure.

4             **Q.**    And sometimes they look at the particular  
5       subtypes at issue; correct?

6             **A.**    If the numbers allow it.  It's about numbers,  
7       right?

8             **Q.**    And you previously in your deposition  
9       expressed some concern about looking at subtype data  
10      because the definitions of the subtypes have changed  
11      over time, there may be a lack of consistency with how  
12      the subtypes are diagnosed.  Do you recall testifying to  
13      that effect?

14            **A.**    I do.  I mean, the classification has changed  
15      over the years.  So if you look at subtypes 20 years ago  
16      may be different than you look at those subtypes today.

17                    And also the numbers.  I think it's important  
18      to understand that the numbers may allow you sometimes  
19      to do that, sometimes may not allow you to do that.

20            **Q.**    And so generally you have preferred to look at  
21      the overall rate; correct?

22            **A.**    I look at everything, not just the overall  
23      rate.  But just keep in mind that sometimes you may not  
24      be able to look at all of the subtypes because the  
25      numbers don't help you because they're small.

1 Q. And even when the numbers are large, you still  
2 have to interpret those data with caution because of the  
3 change in definition of those subtypes over time?

4 A. You always have to do that.

5 Q. Now, you showed data from five studies  
6 yesterday.

7 A. Correct.

8 MR. ISMAIL: Mr. Miller?

9 MR. MILLER: Yes, sir. No objection.

10 (Exhibit published.)

11 BY MR. ISMAIL:

12 Q. And the good news is, Doctor, the jury has  
13 seen these papers several times and probably could do  
14 this cross-examination at this point.

15 I'm going to summarize it here so we don't  
16 have to go through each of the papers one by one. Okay?

17 A. Sure.

18 Q. The jury has seen these results throughout the  
19 course of the trial.

20 So these are the five studies that you showed  
21 data from yesterday; is that right?

22 A. That's correct.

23 Q. Now, the middle column here, we talk about  
24 whether the data you showed to the jury was adjusted for  
25 other pesticide use. Okay? So you can confirm, for

1 example, in the Hardell study the data you showed the  
2 jury yesterday was unadjusted.

3 A. That's correct.

4 Q. And the data you showed the jury from McDuffie  
5 was unadjusted for other pesticide use; correct?

6 A. May I explain about this, please? The  
7 McDuffie. That's correct, but I need just to explain  
8 something about the McDuffie paper, if I may.

9 Q. Mr. Miller has an opportunity to ask you  
10 questions, Doctor, so --

11 A. Because there was a dose-response with this so  
12 it overcomes the confounding factors.

13 Q. So the dose-response data was not unadjusted  
14 for pesticide; true?

15 A. Correct. But when you have a dose-response,  
16 even if you have confounders, they don't play a role.  
17 That's what I'm trying to explain.

18 Q. That's your view. Right, Doctor?

19 Okay, so then the Hardell 2002 paper was --  
20 the data you showed was not adjusted; correct?

21 A. Correct.

22 Q. And then the De Roos data you showed was  
23 adjusted.

24 A. That's correct.

25 Q. And then Eriksson you showed the unadjusted

1 data; true?

2 A. That's another dose-response was not adjusted,  
3 but because of the dose-response it overcomes the  
4 confounders.

5 Q. And that's your explanation for why you showed  
6 unadjusted data to the jury; true?

7 A. I showed all of the data, the unadjusted, yes.

8 Q. Now, the second -- the third column over here  
9 is whether the data itself was part of a later pooled  
10 analysis. Do you see that's how it's described?

11 A. I see that, yes.

12 Q. So, for example, if you look at the Hardell  
13 paper in 1999, you know that particular -- all those  
14 patients were included in the 2002 study; right?

15 A. Yes, but they added to them, as you know.

16 Q. Right. That's -- so what they've done here is  
17 they took all these patients from '99, added some and  
18 reanalyzed them in 2002?

19 A. Correct.

20 Q. So the Hardell study later became subsumed in  
21 a part of the 2002 paper; correct?

22 A. They tried to increase the sample size.

23 Q. And similarly if we look at some of these  
24 other papers here, McDuffie and De Roos, you're aware,  
25 sir, that to improve the reliability and power of those

1 studies, that they have been included in a pooled  
2 analysis of other case-controlled data; right?

3 A. Yes, I believe so.

4 Q. And you did not show the jury yesterday what  
5 the pooled analysis that included McDuffie and De Roos  
6 actually showed; true?

7 A. I'm not sure which analysis you're talking  
8 about.

9 Q. Have you heard of the NAPP?

10 A. I have heard of it. I'm not aware it's in  
11 manuscript form. I have not seen this as a  
12 peer-reviewed manuscript. I'm aware it was presented as  
13 abstract forms before, but I have not looked at it  
14 carefully.

15 Q. Just so we're oriented here, the jury has seen  
16 this, it's been published previously.

17 You know the North American Pooled Project  
18 includes data from McDuffie, data from De Roos, as well  
19 as other case-control data on glyphosate products and  
20 NHL; correct?

21 A. I'm aware of it. I'm still not aware this is  
22 a peer-reviewed manuscript. Is it? I apologize for  
23 asking, but I just may have missed something. I'm not  
24 aware it's a paper.

25 Q. It has not been published yet by



1 Dr. Weisenburger and his colleagues.

2 A. Okay.

3 Q. So what I'm just confirming is the data you  
4 showed yesterday from McDuffie and De Roos, you know  
5 have been pooled with other data to give more  
6 reliability and more power to the epidemiology; correct?

7 A. That's accurate.

8 Q. And because those researchers have not yet  
9 published their data, that's not something that you  
10 reviewed or considered in this case; correct?

11 A. I have not looked at this carefully. I'm  
12 aware of it, but I did not look at it carefully. I  
13 obviously plan on looking at it when it's published.

14 Q. Okay. So the jury has actually seen what that  
15 data shows, but that's information you didn't consider;  
16 true?

17 A. Correct.

18 **MR. ISMAIL:** Now, I am switching topics here,  
19 Your Honor. I'm happy to continue if you'd like.

20 **THE COURT:** We'll take another quick break,  
21 and then we'll have lunch by 12:15, 12:20.

22 (Recess taken at 11:20 a.m.)

23 (Proceedings resumed in open court in the  
24 presence of the jury at 11:32 a.m.)

25 **THE COURT:** All right. You may proceed.

1                   **MR. ISMAIL:** Thank you, Your Honor.

2                   **Q.** All set, Doctor?

3                   **A.** Yes.

4                   **Q.** Very good.

5                   I want to turn now, Doctor, to the discussion  
6 you had yesterday with Mr. Miller about the fact that  
7 both -- that Mr. Pilliod had a diffuse large B-cell  
8 lymphoma systemically and Mrs. Pilliod had a primary  
9 central nervous system lymphoma and how that informed  
10 your opinions in this case. Okay?

11                   **A.** Sure.

12                   **Q.** Now, you are aware that even before Roundup  
13 ever was on the market, there were reports in the  
14 medical literature of nonblood relatives in the same  
15 house developing non-Hodgkin's lymphoma; correct?

16                   **A.** Sure.

17                   **Q.** And indeed you showed an example of that  
18 yesterday, the Friedman article; right?

19                   **A.** I did.

20                   **Q.** And that paper involved four couples that were  
21 being discussed; correct?

22                   **A.** Correct.

23                   **Q.** And the period of when they were enrolled in  
24 the analysis was back in the late '60s, early '70s;  
25 correct?

1           **A.**    '64 to '72.

2           **Q.**    Thank you.

3                    And that's before Roundup was on the market;  
4 correct?

5           **A.**    That's correct.

6           **Q.**    And so to the extent there was any reference  
7 to pesticides in that paper, that necessarily does not  
8 include glyphosate formulations like Roundup; true?

9           **A.**    True, but that's partly true, actually. They  
10 followed these patients for 31 years, and the couple  
11 that were exposed to pesticides, it doesn't specify  
12 whether they were actually exposed after '72 as part of  
13 the follow-up, or before.

14           **Q.**    Right. It said when they were living in  
15 another country, they were exposed to pesticides.

16           **A.**    When they were living in Mexico, they were  
17 exposed to pesticides. But, again, remember it started  
18 '64 to '72 --

19           **Q.**    Right.

20           **A.**    -- and was followed for 31 years after that.

21           **Q.**    Correct. So if they left the Kaiser system,  
22 the follow-up ended; right?

23           **A.**    Say it again.

24           **Q.**    If anyone in that study left the Kaiser  
25 system, for example, moved to Mexico, they would no

1 longer be followed up; true?

2 A. True. But that's not -- that's not how it  
3 happened. The --

4 Q. So you agreed with me thus far; correct?  
5 Well, let me ask it this way. Rather than --

6 A. Well, we need to provide accurate methodology,  
7 what happened in the paper. I mean --

8 Q. Let me just ask and see if we can agree on  
9 this simple fact.

10 There's nothing in that paper that indicates  
11 that any of the couples were exposed to Roundup or  
12 glyphosate in particular; correct?

13 A. No, there was nothing in that paper. And  
14 again, just -- I mean, I prefaced yesterday, all of  
15 these concordance -- couple concordance papers simply  
16 generate the hypothesis that you're trying to look at  
17 the common denominating factor. That's what you're  
18 really trying to do.

19 So you're right, for example, there were  
20 paper -- there were some papers before Roundup was ever  
21 on the market that looked at spousal concordance, which  
22 means maybe there was another offending agent that were  
23 both -- they were exposed to.

24 So these studies try to look at what are --  
25 what is the common denominating factor that a couple

1 might be exposed to. That's the goal of these papers.

2 Q. Remember what my question was, Doctor?

3 A. I do remember it.

4 Q. Okay. My question was: The paper that you  
5 discussed with the jury, there was no indication that  
6 any of the couples were exposed to glyphosate in  
7 particular; true?

8 A. That's correct.

9 Q. Thank you.

10 Now you're aware that there are other  
11 epidemiological studies that have looked at this  
12 question. And what was the term you used, spousal  
13 concordance?

14 A. Spousal concordance. And I also used the term  
15 that you may not need studies to explain something that  
16 appears as common sense. I want to make sure I mention  
17 that.

18 Q. As you did several times yesterday.

19 A. Yes.

20 Q. Just so we're defining our terms correctly,  
21 spousal concordance as an objective of research is to  
22 look to see whether the fact that a couple -- one spouse  
23 has developed a particular form of cancer, what does  
24 that mean as to whether the other spouse is at an  
25 increased risk; correct?

1           **A.**    True.

2           **Q.**    And there actually has been research published  
3           on that very question with respect to non-Hodgkin's  
4           lymphoma; true?

5           **A.**    True.

6           **Q.**    And indeed that research involved many more  
7           couples and analysis, the size of the studies bigger  
8           than the one paper you referenced yesterday in your  
9           examination; correct?

10          **A.**    I think I referenced one of these papers in my  
11          report, to be complete.

12          **Q.**    Not yesterday; correct?

13          **A.**    Not yesterday, no, it's in my expert report.

14          **MR. ISMAIL:**    May I approach, Your Honor?

15          **THE COURT:**    Yes, you may.

16          **THE WITNESS:**    Yep, that's in my report.

17          **BY MR. ISMAIL:**

18          **Q.**    That's Exhibit 6501.  This is a paper that you  
19          reviewed and considered; correct, sir?

20          **A.**    Yes, I did.

21          **MR. ISMAIL:**    Permission to publish?

22          **MR. MILLER:**    No objection.

23                                    (Exhibit published.)

24          **BY MR. ISMAIL:**

25          **Q.**    Okay.  So this is a research paper that looks

1 to the question of spousal concordance and cancer types;  
2 correct?

3 A. Correct.

4 Q. And the researchers here include one, two,  
5 three, four different researchers from various places  
6 including from Stanford; correct?

7 A. That is correct.

8 Q. And what they did here in the methods to  
9 describe in the abstract, the Swedish Family-Cancer  
10 Database includes over 2 million couples; right?

11 A. Yes.

12 Q. And you're familiar that the Scandinavian  
13 cancer registries are well controlled, well done  
14 registries that allow for epidemiological research?

15 A. They do a good job, yes.

16 Q. And what these researchers did was look to see  
17 whether, on this question of spousal concordance --  
18 which was the subject of your testimony yesterday;  
19 correct?

20 A. That's correct.

21 Q. And if you go down to where they summarize  
22 their conclusions in the abstract, they say:

23 "The present population-based study  
24 confirms that the lifestyle shared by  
25 spouses plays a minor role in cancer

1 causation."

2 Did I read that correctly?

3 **A.** You read it correctly, yes.

4 **Q.** They go on to say:

5 "Only strong environmental risk  
6 factors such as smoking seem to influence  
7 cancer development in adulthood."

8 Correct?

9 **A.** Yes.

10 **Q.** And then what these researchers also did is  
11 actually provide the data; right?

12 **A.** Yes. But it's important to note when, you  
13 know, the follow-up and when the data was before. I  
14 mean, it's part of -- you know, to be complete, right,  
15 they collected data from 1958 to 2006. You see that  
16 that's part of the method.

17 So --

18 **Q.** Thank you.

19 **A.** Well, it's critical because we both know that  
20 Roundup and glyphosate came to market in 1976 or 1975,  
21 and they start collecting from 1958. So --

22 **Q.** So --

23 **A.** -- the devil is in the details.

24 **Q.** So my question to you, sir, is: Do these  
25 researchers report the data in their paper?



1           **A.**    They do.  But it's important to know what are  
2 they reporting.

3           **Q.**    So the answer is "yes"; right?

4           **A.**    Yes.

5           **Q.**    And if you go to Table 2.

6           **A.**    Uh-huh, yes.

7           **Q.**    So the way to read this table, cancer in wife,  
8 and then concordant cancer in husband.

9           **A.**    Correct.

10          **Q.**    So what they do is in the first column they  
11 say, okay, let's say, for example, if the wife has  
12 non-Hodgkin's lymphoma, what is the risk that the  
13 husband has developed non-Hodgkin's lymphoma; correct?

14          **A.**    Correct.

15          **Q.**    And what these researchers report here in that  
16 scenario is a 1.19 relative risk; correct?

17          **A.**    Right.

18          **Q.**    And that is not statistically significant;  
19 correct?

20          **A.**    Not significant.  It's not adjusted to other  
21 factors that you need to look for.

22          **Q.**    So the answer is yes, it is 1.19, not  
23 statistically significant; true?

24          **A.**    Yes.  I'm just trying to provide a complete  
25 picture of the data that you're showing me.

1           **Q.** Now, in Table 3, it asks the opposite  
2 question; right? Which is: If there's cancer in the  
3 husband, what is the relative risk that there's the same  
4 cancer in the wife; correct?

5           **A.** Yes.

6           **Q.** So we can do the same thing. We go down to  
7 non-Hodgkin's lymphoma, and we could see a 1.17 relative  
8 risk that also is not statistically significant;  
9 correct?

10          **A.** Sure.

11          **Q.** Now, yesterday when you were with Mr. Miller,  
12 you did this exercise of multiplying 125 to 125 and got  
13 a ratio of 1 in 15,000 or something to that effect.

14                   Do you recall doing that with Mr. Miller?

15          **A.** I recall the exercise. I don't recall the  
16 final number.

17          **Q.** Sure. And but when these researchers are  
18 actually investigating an issue, they don't do that  
19 exercise of multiplying ratios to come up with a number  
20 like you did with Mr. Miller; right?

21          **A.** I don't understand the question. I'm sorry.

22          **Q.** Sure.

23                   When they actually want to see whether there's  
24 an increased risk of nonblood relatives in the same  
25 house developing the same cancer, they actually develop

1 the data and analyze it; correct?

2 A. You do realize that you're just looking at  
3 cancer registries and how it's reported; right?

4 Q. So the answer is "yes"?

5 A. No. It's partly no. I mean, you didn't  
6 really actually ask the right question because --

7 Q. Then let me try again, Doctor.

8 A. Please do.

9 Q. When these researchers were looking at the  
10 question as they stated in their abstract about whether  
11 there is an increased risk of spousal concordance of  
12 particular cancers --

13 A. Okay.

14 Q. -- they looked at their cancer registry and  
15 analyzed the question; correct?

16 A. They just looked at the incidence of the  
17 cancer registry. That's the extent of the analysis.

18 Q. And what they --

19 A. So they didn't actually look -- I didn't  
20 finish my answer.

21 They looked at the cancer registry. They  
22 reported the incidence of cancer between the husband and  
23 the wife. They didn't look at the additional  
24 information that is important when you analyze such  
25 cases in terms of other factors. They try, to the

1 extent they can, in terms of other variables. But you  
2 keep asking me about adjusting and variables and  
3 confounders. They really couldn't have it, couldn't do  
4 that to the extent that they wanted to.

5 Q. So your analysis that you did with Mr. Miller  
6 yesterday, that was a population-based ratio analysis;  
7 correct?

8 A. Yeah. I think we did --

9 Q. Correct. That's all I'm asking. That's what  
10 you did.

11 A. It's based on the -- yes, without looking at  
12 the risk factor of each particular individual.

13 Q. Right. So when you did your 1 in 125 times  
14 1 in 125, I think you were even trying to tell  
15 Mr. Miller this, that this is only population-based and  
16 it's not the risk of the particular individual; correct?

17 A. Absolutely.

18 Q. And so the particular individual may have risk  
19 factors that increased their chances of developing a  
20 cancer at issue; correct?

21 A. Of course.

22 Q. So whether it's age, whether it's body weight,  
23 whether it's gender, whether it's ethnicity, whether  
24 it's autoimmune diseases, all of which may increase the  
25 odds that the person develops the disease; true?

1           **A.**    Yeah.  I may not agree with all of the  
2           examples you gave, but the principle is true.  I mean,  
3           the risk that we provided was just the population level.  
4           How does this really apply to a particular individual  
5           might differ based on that person.

6           **Q.**    Very good.

7                        So under that same principle, that's what you  
8           were -- well, you understand that there have been  
9           additional studies that have looked at this precise  
10          question about whether there is evidence of spousal  
11          concordance in non-Hodgkin's lymphoma; correct?

12          **A.**    Yes.  And there are plenty of these studies.  
13          But, again, at the end of the day, we use logic, common  
14          sense.

15          **Q.**    Right.  So you said that several times  
16          yesterday, "I don't need a study.  To me, it's just  
17          common sense."  So that's what informs your opinions;  
18          correct?

19          **A.**    Certain things I think are important to  
20          recognize that we don't need a study to show that if you  
21          jump off a plane, you need a parachute.  Common sense.

22          **Q.**    But apparently it's an open enough question  
23          that researchers continue to look at the issue; right?

24          **A.**    Some of them continue to do that.

25                       **MR. ISMAIL:**  May I approach, Your Honor?

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**THE COURT:** Yes.

**BY MR. ISMAIL:**

**Q.** Exhibit 6463, is this another analysis of this question that you said is common sense?

**A.** Yes.

**Q.** You're familiar with this paper?

**A.** I actually don't remember reading this paper. Maybe. I don't remember the details of this paper.

**MR. ISMAIL:** Permission to publish?

**MR. MILLER:** No objection.

**THE COURT:** Granted.

(Exhibit published.)

**BY MR. ISMAIL:**

**Q.** Okay. So cancer risk among long-standing spouses; right?

**A.** Yes.

**Q.** We estimated risk for concordant and discordant cancers in spouses in order to quantify cancer risk from the shared environment.

That was their objective here.

**A.** Sure. Is that a question?

**Q.** Yes.

**A.** Sure.

**Q.** And then they say in terms of what they found:

"Among the 18 cancer sites

1           considered, only three cancer sites,  
2           stomach, lung, and bladder; showed  
3           concordant increases in cancer among  
4           spouses, standardised incidence ratios  
5           ranging from 1.19 to 1.38."

6           Did I read that correctly?

7           **A.** You did.

8           **Q.** If you turn to Table 2 on this document, sir.

9           **A.** The follow-up of this, by the way, from 1958  
10          to 1999 -- 1998, just to be clear.

11          **Q.** And what we have here is spouse cancer site;  
12          right?

13          **A.** Table 2?

14          **Q.** Yep.

15          **A.** Yes, I see that.

16          **Q.** And what it did is the same thing we just  
17          looked at. If the husband has this particular type of  
18          cancer, what does the risk tell us about what the wife  
19          does, and vice versa; right?

20          **A.** Sure.

21          **Q.** And they have non-Hodgkin's lymphoma as one of  
22          the cancer sites of interest.

23          **A.** Sure.

24          **Q.** And either way you look at the equation, you  
25          have no statistically significant increased risk in this

1 analysis; true?

2 A. So you dismiss the findings because no  
3 statistical significant -- it's true what you're saying,  
4 but it is not necessarily clinically insignificant.

5 Q. 1.10, that is not statistically significant in  
6 the one case; 1.07 not statistically significant in the  
7 other; true?

8 A. It's not statistically significant.

9 Q. Thank you.

10 A. You're welcome.

11 Q. Now moving forward, sir. Actually I meant to  
12 do this earlier. The paper that you looked at with  
13 Mr. Miller I think first thing yesterday was a paper  
14 that came out on Friday, the Lamure paper; do you recall  
15 that?

16 A. Sure, the *JAMA* paper, yes.

17 Q. I just have a couple questions for you about  
18 that.

19 A. Sure.

20 Q. I believe it's in your binder under 3104. I  
21 have a copy if you can't locate it easily.

22 A. Do you mind repeating the number? On this  
23 one?

24 Q. No, it's in the binder Mr. Miller gave you.  
25 3104.



1           **A.**    I can follow with you on the screen.

2           **Q.**    I'm happy to provide you another copy if you'd  
3 like.

4           **A.**    Sure.  If you don't mind.  Thank you.

5           **Q.**    Sure thing.

6                    This is the paper that you referenced  
7 yesterday; am I correct?

8           **A.**    Yes.

9           **Q.**    And I think you told us yesterday that one of  
10 the exclusion criteria for this paper was the type of  
11 cancer that Mrs. Pilliod had; correct?

12           **A.**    Because they were looking at R-CHOP treated  
13 patients.

14           **Q.**    Right.  So the question didn't apply to her.  
15 She's exclude -- her type of cancer is excluded from  
16 this paper.  You agree with that?

17           **A.**    Right.  This paper is looking -- I mean, is  
18 looking at the outcomes.  So they had to choose patients  
19 that were treated in the same regimen.  That's why the  
20 primary CNS lymphoma patients were excluded because  
21 they're treated differently.

22           **Q.**    So -- but they -- Mr. Miller started talking  
23 to you about the pesticide exposures in this paper.  Do  
24 you recall that?

25           **A.**    Sure.

1 Q. I'm on page 3, bottom paragraph.

2 A. Yes.

3 Q. And these were all occupational exposures;  
4 correct?

5 A. Correct.

6 Q. And there was different types of occupational  
7 exposures. There was agriculture exposures for workers;  
8 right?

9 A. Sure.

10 Q. There was woodwork, carpenters; right?

11 A. Sure.

12 Q. Public hygiene pest control workers?

13 A. Yes.

14 Q. And then there was this one that he asked you  
15 about, green spaces or e.g, gardeners.

16 A. Sure.

17 Q. They used the spray in green spaces in there;  
18 correct?

19 A. That's what they used, yes.

20 Q. And Mr. Pilliod is not an occupational  
21 gardener; correct?

22 A. No, he's not.

23 Q. But you understand his use of lawn care  
24 products that he was using was with respect to  
25 maintaining his various properties; correct?

1           **A.**    Yes.

2           **Q.**    Now, the researchers here published their  
3 results based on the different types of occupational  
4 exposure they had to the pesticide; correct?

5           **A.**    I'm not sure I understand your question,  
6 counsel.

7           **Q.**    So they actually looked at this question based  
8 on what your occupational exposure was; correct?

9           **A.**    Table 1?

10          **Q.**    I'm on Table 2.

11          **A.**    Sure.

12          **Q.**    So, for example -- let me just get the titles  
13 up here.

14                    So if we look at the gardener, professional  
15 gardener, not residential gardener, you have the  
16 reference is no green space exposure; correct?

17          **A.**    I'm just struggling to find -- hold on one  
18 second.

19                    Yes, I see the no green spaces and green  
20 spaces. Yes, I'm with you.

21          **Q.**    And what they report here is a  
22 nonstatistically significant difference based on those  
23 exposures; correct?

24          **A.**    Sure. The numbers are very, very small. I  
25 mean, if you look at the numbers, it's expected.

1           Q.    So it's not --

2           A.    The study was not designed to look at that.  
3           That's why you don't see that.

4           Q.    So when they report with respect to green  
5           space exposures, can you just agree, sir, that the  
6           results they report on the paper that you talked about  
7           on Friday shows no statistically significant difference;  
8           true?

9           A.    I can agree with what you're saying --

10          Q.    Thank you.

11          A.    -- here.  However, it's important to  
12          understand that the power of the study was not even --  
13          the study wasn't even designed to look at this.

14                 So you're trying to tell me that this is  
15          looking at what it's not designed for.  It's looking at  
16          the outcomes of patients with pesticides.

17                 **MR. ISMAIL:**  Your Honor, may I ask that the  
18          witness limit his answers.

19                 **THE COURT:**  If you can answer just what's  
20          asked.  You may be able to discuss this later, but for  
21          the moment --

22                 **THE WITNESS:**  Sure, Your Honor.  Sometimes  
23          some questions can't be answered easily.  I apologize.

24          **BY MR. ISMAIL:**

25          Q.    Now, with respect to the scope of this paper,

1 this was looking at two-year outcomes; correct?

2 A. Certainly, yes.

3 Q. And I think you told us yesterday that happily  
4 Mr. Pilliod is coming up on eight years of being  
5 cancer-free; correct?

6 A. Correct.

7 Q. Now, if we continue forward --

8 MR. ISMAIL: Your Honor, you said 12:15 you  
9 wanted to break?

10 THE COURT: Yes.

11 BY MR. ISMAIL:

12 Q. So, Doctor, let's continue -- now, you agree  
13 that there is --

14 A. Am I done with this paper? Okay.

15 Q. You agree there's some level of glyphosate  
16 exposure that does not increase the risk of  
17 non-Hodgkin's lymphoma; correct?

18 A. I'm sure there is.

19 Q. And I think you've told us earlier in your  
20 prior testimony that you don't know what that level is;  
21 true?

22 A. That's correct.

23 Q. Now, you didn't see any medical record in  
24 terms of blood or urine testing in Mr. Pilliod's case  
25 that showed presence of glyphosate; correct?

1           **A.**    No, this was not tested or done.

2           **Q.**    And same question with respect to  
3 Mrs. Pilliod. You never saw any blood work or urine  
4 testing to show that she ever had glyphosate that was  
5 tested and found in her body; true?

6           **A.**    Such test was not performed.

7           **Q.**    So, and with respect to how much product  
8 Mr. Pilliod and Mrs. Pilliod used of Roundup, you have  
9 some estimates in your report about how much they  
10 sprayed over the years; correct?

11          **A.**    Correct.

12          **Q.**    You certainly acknowledge then that you have  
13 no idea how much Roundup they actually were in contact  
14 with over the years; correct?

15          **A.**    I'm not sure I understand the question. I  
16 know how much they sprayed based on what they told me  
17 and the depositions and so forth.

18          **Q.**    Then let me rephrase my question.

19          **A.**    Sure.

20          **Q.**    You have estimates as to how much they sprayed  
21 that they were provided by Mr. and Mrs. Pilliod;  
22 correct?

23          **A.**    Along with their deposition that I read.

24          **Q.**    Correct. And I'll get to that in a minute.

25                    But with respect to whatever it is that they

1 sprayed, you have no idea how much of that Roundup  
2 actually became in contact with their skin, for example;  
3 true?

4 A. Yeah, the exact amount I'm not aware of. I do  
5 know that it did happen several times based on what they  
6 told me.

7 Q. Sure. So, for example, your expert report  
8 says over the 20 to 30 years that Mr. Pilliod was  
9 estimating his exposure to Roundup, that he spilled  
10 Roundup one or two times; you have that in your report.

11 A. Yes, I think a couple of times. Yes, I recall  
12 that.

13 Q. And you got that information either from his  
14 deposition or speaking to him personally; correct?

15 A. During our December '018 interview.

16 Q. And similarly, you said in your report that  
17 over the 25 to 30 years that Mrs. Pilliod was spraying  
18 Roundup, she remembers getting in contact with it 10 to  
19 20 times.

20 A. Yes, I recall saying that.

21 Q. So less than once a year on average.

22 A. Sure. I mean, if it's happening once a year,  
23 I don't know.

24 Q. So 30 years, 10 to 20 is the estimate.

25 A. No, I understand the math. I'm just saying I

1 don't know if this happened all in one year or two  
2 years. But the bottom line is between 10 and 20 times I  
3 was informed that it got on the skin.

4 Q. So, now with respect to the expose -- I'm  
5 sorry -- the usage assumptions you had in your report,  
6 you started to tell us this chronology yesterday with  
7 Mr. Miller. As I understand it, you arranged for -- or  
8 Mr. Miller arranged for Mr. and Mrs. Pilliod to come  
9 visit you in Chicago; correct?

10 A. Yes.

11 Q. And in the course of your meeting with them,  
12 you asked them how much Roundup they used; correct?

13 A. I did. I asked about everything, not just  
14 Roundup. I usually ask an open-ended question just to  
15 let them talk because that's always the best thing to  
16 allow the patient to tell you everything, to be  
17 inclusive, including Roundup.

18 Q. I didn't ask if that was the only thing you  
19 talked about. But certainly one of the questions you  
20 posed to them was: How much did you use Roundup?

21 A. Sure. Of course.

22 Q. And what Mrs. Pilliod and Mr. Pilliod told you  
23 was they remember using the product frequently, but they  
24 couldn't give you a specific range of how much they  
25 actually used; correct?



1           **A.**    Yeah.  I recall the first answer was pretty  
2           general.  It wasn't really very specific, and I really  
3           needed more to be more thorough and be more detailed.  
4           So I said I really need to know how many hours, how many  
5           days, how many weeks.  Just telling me "a lot for a long  
6           time" is not enough.

7           **Q.**    And that's what you told Mrs. Pilliod, which  
8           is, "For your lawsuit here, I need you to be much more  
9           specific and granular as to the amount of Roundup that  
10          you used over the years."  Correct?

11          **A.**    Nothing to do with the lawsuit.  If you're  
12          asking a question, you need to know exactly the details.

13          **Q.**    Well, the only reason why you were meeting  
14          with the Pilliods in December of 2018 was to support  
15          your opinion as a retained witness on behalf of  
16          Mr. Miller; true?

17          **A.**    But my opinion will have to depend on whether  
18          there's a lot of exposure or not, so I needed to get  
19          more details and be more thorough.

20          **Q.**    My question is:  The whole context of you  
21          asking the question of how much Roundup did you use was  
22          in connection with your work in this lawsuit; true?

23          **A.**    That's the reason we met, yes.

24          **Q.**    Now, when you gave that request to Mr. and  
25          Mrs. Pilliod, you understand that thereafter

1 Mrs. Pilliod did her best to jot down some notes and  
2 come up with an estimate of how much Roundup she used  
3 and Mr. Pilliod used over the years; correct?

4 A. And even during my interview, she was starting  
5 to recall, you know, how many hours. And we went  
6 through each property because they did have four  
7 properties. And she was able to give me a little bit  
8 more detail when I asked the question.

9 Q. So, and you know that Mrs. Pilliod made those  
10 notes that were produced in the case, and she testified  
11 from those notes in her deposition. Do you recall that?

12 A. I recall that, yes.

13 Q. And you took the estimates provided by  
14 Mrs. Pilliod as part of that process as your assumed  
15 exposure, as it were, to Roundup for both individuals in  
16 your opinions in this case; correct?

17 A. I have no reason not to believe the patient.

18 Q. I wasn't suggesting or anyone --

19 A. I think it was implied.

20 Q. Sure, Doctor. My question was simply: In  
21 your report you put your assumptions and the  
22 calculations made by Mrs. Pilliod for their assumed  
23 exposure; correct?

24 A. Sure.

25 Q. And I think the number on -- that you had in

1 your report that you added up was about 385 gallons;  
2 correct?

3 A. So the gallons actually I took all from their  
4 deposition because I didn't -- I didn't get the detail  
5 of the number of gallons during my interview. I got  
6 more of the detail on the hours and the weeks, and I  
7 captured the number of gallons when they testified to  
8 this in their deposition.

9 Q. Right. And so I think I laid out the  
10 sequence. And hopefully you can agree. Mrs. Pilliod  
11 makes the notes after visiting with you, has those notes  
12 at her depositions, testifies to the amount of gallons,  
13 that's where you got the information.

14 A. For the gallons, yes.

15 Q. Right. And some amount of that 385 gallons  
16 relates to Mr. Pilliod using the product after he is in  
17 remission with non-Hodgkin's lymphoma; true?

18 A. Yes. I believe he stopped using it in 2017,  
19 if my memory serves me right.

20 Q. So now with respect to the estimates, you  
21 understand that there are, for example, no purchase  
22 records for the product that the individuals were using  
23 residentially on their home; correct?

24 A. I don't know if they have receipts or not.  
25 Again, I have no reason to doubt them.

1           **Q.**    Right.  So, but you understand the exercise  
2 was trying to remember back 25 or 30 years how much of a  
3 lawn care product that you used that particular --

4           **A.**    I think you could be off by a few gallons, but  
5 you're unlikely to be off by a hundred gallons.

6           **Q.**    That was the exercise that you asked them to  
7 go through; correct?

8           **A.**    Not about the gallons.  I wanted to know the  
9 hours and the days and the weeks.

10          **Q.**    So with respect to the -- with respect to the  
11 properties -- well, let me ask this question of you,  
12 Doctor:  The jury has heard a bit about something called  
13 surfactants.  You've heard that term before; right?

14          **A.**    I have.

15          **Q.**    Other than glyphosate, you're not aware of any  
16 other ingredients with respect to the Pilliods'  
17 particular Roundup usage; correct?

18          **A.**    Can you rephrase, please, the question?  
19 You're asking about other type of Roundup products?

20          **Q.**    No.  With respect to the ingredients in the  
21 Roundup bottle, other than the glyphosate, you're not  
22 aware of any other particular ingredients in their  
23 Roundup; correct?

24          **A.**    Well, I know in Roundup products there are  
25 surfactants.  I just don't know the type of surfactant

1 that exists in the product that they used. But I do  
2 know surfactant exists.

3 Q. That's where I was getting to. So you don't  
4 know the amount or the type of surfactant in the Roundup  
5 they used; correct?

6 A. No, I don't.

7 Q. And in fact, you're not assuming any  
8 particular component or ingredient in the Roundup that  
9 they used as being important to your opinions in this  
10 case; true?

11 A. Not other ingredients, no. Again, I don't  
12 know all the ingredients in the Roundup that they used,  
13 but I know that surfactant is in it.

14 Q. Right. And all I asked you is whether --  
15 well, you've answered my prior question. So moving  
16 forward.

17 Now, with respect to the visit you had with  
18 Mr. and Mrs. Pilliod in December of 2018, that was a  
19 period in time which you had ceased seeing patients  
20 clinically; right?

21 A. Yes.

22 Q. And so -- and I think this is clear, but just  
23 so there's no confusion, you have never acted as  
24 Mr. Pilliod or Mrs. Pilliod's treating physician.

25 A. No, I'm not. And I've never acted as their

1       treaters.

2           **Q.**    And so you did your exam of Mr. Pilliod and  
3       Mrs. Pilliod at your corporate office of Cardinal  
4       Health?

5           **A.**    At the time, yes.

6           **Q.**    And you did not order any tests or anything of  
7       the sort when you visited with the Pilliods in  
8       December 2018; true?

9           **A.**    I did not.  I'm not their physician.

10          **Q.**    So your physical examination of Mr. Pilliod  
11       did not reveal whether he ever used Roundup; true?

12          **A.**    You can't tell by physical exam any etiology.

13          **Q.**    So the answer is "yes"?

14          **A.**    Yes, but it's important to recognize that  
15       applies to other etiologies as well.

16          **Q.**    So just to continue on that conversation, your  
17       physical examination of Mr. Pilliod did not reveal the  
18       cause of his non-Hodgkin's lymphoma; true?

19          **A.**    Physical examinations are unable to determine  
20       the cause.

21          **Q.**    Can't you just answer that "yes," Doctor?

22          **A.**    I think I answered it.  I just answered the  
23       entire sentence.

24          **Q.**    Similarly, Doctor, your physical examination  
25       of Mrs. Pilliod did not reveal the cause of her NHL;

1 true?

2 A. Physical examinations do not determine the  
3 cause.

4 Q. Now, with respect to -- with respect to your  
5 analysis that you did with respect to other risk factors  
6 for Mr. Pilliod and Mrs. Pilliod, other witnesses have  
7 testified to this definition of a risk factor, and  
8 hopefully we'll have your agreement on this.

9 A risk factor is something that puts an  
10 individual at an increased risk of developing a  
11 particular disease; correct?

12 A. Sure.

13 Q. And what you did is -- this is the board that  
14 you had for -- this is Mr. Pilliod; correct?

15 A. Correct.

16 Q. And what you did here, just so we're all  
17 aligned, is in the first column you said known risk  
18 factors for NHL; right?

19 A. Correct.

20 Q. And what you did here is you put down the  
21 things that you thought that, at least to you,  
22 Dr. Nabhan, are known risk factors for NHL; right?

23 A. I was very inclusive, yes.

24 Q. And then what you did here was which of the  
25 ones in column one Mr. Pilliod has.

1           **A.**    True.

2           **Q.**    And then this last column is where you decided  
3 whether or not you were going to move any of those risk  
4 factors over to the cause part of the equation; right?

5           **A.**    That's where you hope you use the clinical  
6 judgment, the expertise, and try to make a decision.

7           **Q.**    So you, if I remember correctly, on your  
8 board, one X you gave here for a risk factor was for  
9 body weight; correct?

10          **A.**    I did give an X, yes.

11          **Q.**    And another X that you gave was in  
12 Mr. Pilliod's case was in autoimmune diseases; correct?

13          **A.**    I did, yes.

14          **Q.**    And in his case, the particular autoimmune  
15 disease was ulcerative colitis?

16          **A.**    Correct.

17          **Q.**    And you also put an X here down for pesticide  
18 use; correct?

19          **A.**    Correct.

20          **Q.**    Now, in the first three rows, you said that  
21 age, gender, and race are known risk factors for NHL;  
22 correct?

23          **A.**    They don't cause NHL. So there are risk  
24 factors that are causative risk factors and there are  
25 risk factors just because we get old, we get sick.



1           **Q.**    And I understood that was your testimony  
2 yesterday.  But if we're listing which of  
3 Mr. Pilliod's -- which of the known risk factors in  
4 column 1 Mr. Pilliod has, he is of the age that put him  
5 at an increased risk of developing NHL; true?

6           **A.**    I don't disagree with that -- I don't agree  
7 with that X at all.  Age is the -- the second column is  
8 for causative risk factors.  If you are going to include  
9 age, then you put age in every single disease known to  
10 man.  As we age, we get sick.  So I'm going to disagree  
11 with the X that you put on age.

12           **Q.**    So here, your column is entitled "Alva  
13 Pilliod's Risk Factors for NHL"; correct?  Have I read  
14 the title correctly?

15           **A.**    Yes, but you didn't explain how I explained it  
16 yesterday.  I said age, sex, and race are not causative  
17 risk factors, in my view, for NHL.

18           **Q.**    So over here --

19           **A.**    Whether it's Alva or somebody else.

20           **Q.**    Over here is where you describe whether the  
21 risk factor at issue is a substantial factor in causing  
22 Mr. Pilliod's risk of NHL; correct?

23           **A.**    Yes.

24           **Q.**    And when you look at what you called the known  
25 risk factors for NHL, whether you want to put an X here

1 or not, Mr. Pilliod is of the age that put him at an  
2 increased risk of developing non-Hodgkin's lymphoma;  
3 true?

4 A. He is of the age that you see more  
5 non-Hodgkin's lymphoma at. It doesn't mean age causes  
6 NHL. I'm going to say that again and again.

7 Q. And indeed Mr. Pilliod was of the age that  
8 would have put him at what, five, six times increased  
9 risk of developing NHL compared to a man 20 years  
10 younger?

11 A. Like all older people, yes.

12 Q. And whether you want to put an X here or not  
13 for Mr. Pilliod, men are at an increased risk; correct?

14 A. Sure.

15 Q. And so when you say known risk factors for NHL  
16 that Mr. Pilliod has, you will say, "Don't put an X  
17 here, but he has that risk factor"; correct?

18 Correct?

19 A. So you're telling me that gender by itself is  
20 a risk factor for non-Hodgkin's lymphoma?

21 Q. You said gender is a risk factor.

22 A. I put them there. I didn't say it's  
23 causative. I was inclusive.

24 Q. Neither was my question. I didn't say  
25 causative. I said risk factor. Gender is a risk factor

1 for non-Hodgkin's lymphoma; yes or no?

2 A. Well, describe -- I mean, I know I can't ask  
3 you question. I want to make sure we are level setting  
4 the type of -- what do you mean by risk factor?

5 Q. How about I phrase it the way you phrase it?  
6 Is gender a known risk factor for NHL?

7 A. You see NHL more common, slightly more common  
8 in men than you see in women.

9 Q. And --

10 A. So my opinion it's not a risk factor. It's  
11 just something it's more prevalent in men than in women.

12 Q. So when you created this chart and you had a  
13 column that said "Known Risk Factors for NHL" and you  
14 put gender there, what you really meant to say was it's  
15 not a risk factor for NHL?

16 A. It's more prevalent in men than in women.

17 Q. And so when you --

18 A. Prostate cancer happens more in men because we  
19 have prostates.

20 Q. And when you said age is a known risk factor  
21 for NHL, what you meant to say is age is not a risk  
22 factor for NHL; right?

23 A. Counsel, I know what I meant to say. So let  
24 me tell you what I meant to say.

25 Q. And then when you said --

1           **A.**    Okay.

2           **Q.**    -- race and so Caucasians --

3           **MR. MILLER:**  Your Honor, he interrupted the  
4 witness.

5           **THE COURT:**  Okay, so everybody is interrupting  
6 everyone.

7                    I want you to just listen carefully to the  
8 question and respond to the question in however you want  
9 to respond.  But not everything can require either  
10 repetition or an explanation or something that's not  
11 directly referenced to the question.  You may have an  
12 opportunity to talk about it later, but just respond to  
13 Mr. Ismail.

14                   And, Mr. Ismail, don't step on the answers.  
15 Thank you.

16           **MR. ISMAIL:**  I apologize, Your Honor.

17           **Q.**    Let's just do it this way.  Age, gender, and  
18 race, you identified as known risk factors for  
19 non-Hodgkin's lymphoma; true?

20           **A.**    What I meant by that, that we see them in  
21 older patients, in white patients, and more in men.  So  
22 I put them there because that's the prevalence of when  
23 you see non-Hodgkin's lymphoma.  It is not my belief  
24 that age causes or gender causes or race causes the  
25 disease.

1           **Q.**    Which we all understand that is your view,  
2    Doctor.

3                    And with respect to Mr. Pilliod, each of those  
4    factors which you said put him at an increased  
5    prevalence of getting non-Hodgkin's lymphoma are  
6    positive for him; true?

7           **A.**    Older people are at increased risk of NHL.  He  
8    was at the age of possibly getting NHL.  We've gone  
9    through this.

10           **Q.**    And with respect to Mrs. Pilliod, we could do  
11    the same exercise.  Age and race would be, in her case,  
12    factors that put her in the group that had a higher  
13    prevalence of non-Hodgkin's lymphoma; true?

14           **A.**    And using your argument, sex would be  
15    protected then because it happens less in women.  Yes,  
16    age --

17                    **MR. ISMAIL:**  Your Honor.

18                    **THE WITNESS:**  I'm sorry.  I apologize,  
19    Your Honor.

20                    **THE COURT:**  Thank you.

21                    **THE WITNESS:**  But, I mean, the issue requires  
22    explanation.  You know, it's taking things in abstract.  
23    That's why.  So my apologies.

24           **BY MR. ISMAIL:**

25                    **Q.**    And with respect to the additional risk

1 factors that you identified here, you had body weight  
2 and again autoimmune diseases; correct?

3 **A.** Yes.

4 **Q.** And in Mrs. Pilliod's case, the autoimmune  
5 disease that you had found in her case was the  
6 Hashimoto's thyroiditis; correct?

7 **A.** Correct.

8 **MR. ISMAIL:** Perhaps that's a good place to  
9 leave it for lunch, Your Honor.

10 **THE COURT:** It is.

11 So we're going to resume in an hour, take an  
12 hour for lunch.

13 **MR. WISNER:** Your Honor, I hate to be the  
14 spoil sport, but I'm trying to get done today. Can we  
15 take a shorter lunch and regroup at 1:00. I don't know  
16 if Your Honor has a schedule for that.

17 **THE COURT:** We can take 45 minutes.

18 **MR. WISNER:** Is that okay? Sorry.

19 **THE COURT:** All right. We're going to resume  
20 at 1:00.

21 **MR. MILLER:** Thank you, Your Honor.

22 (Jury excused for lunch recess.)

23 (Proceedings continued in open court outside  
24 the presence of the jury:)

25 **THE COURT:** Did you want to do that right now?

1                   **MR. WISNER:** Yeah. I just want to get it read  
2 into evidence.

3                   These are the exhibits played during the  
4 depositions of Daniel Goldstein and will be played in  
5 Samuel Murphey and Mr. Guard later today. I've  
6 discussed this with counsel. Obviously this is over  
7 their objection, but we're moving the following into  
8 evidence:

9                   Exhibit 452, 4, 448, 456, 460, 2019, 524, 522,  
10 539, 601, 1046, 1060, 978, 1131, 3107, 464, 622, 94,  
11 621, 8, 93, 95, 597.

12                   **THE COURT:** So moved.

13                   (Trial Exhibits 4, 8, 93, 94, 95, 448, 452,  
14 456, 460, 464, 522, 524, 539, 597, 601, 621,  
15 622, 978, 1046, 1060, 1131, 2019, and 3107  
16 received in evidence.)

17                   **MR. WISNER:** Thank you, Your Honor.

18                   **THE COURT:** See you at 1:00 o'clock.

19                   (Luncheon recess was taken at 12:17 p.m.)

20                   AFTERNOON SESSION

1:07 p.m.

21                   **THE COURT:** Good afternoon, ladies and  
22 gentlemen.

23                   We'll resume with cross-examination of  
24 Dr. Nabhan.

25                   **MR. ISMAIL:** Thank you, Your Honor.

1       **BY MR. ISMAIL:**

2           **Q.**    Ready to proceed, Doctor?

3           **A.**    Yes.

4           **Q.**    So, Doctor, we were talking before the lunch  
5 break with respect to the -- there we go -- the board  
6 that you put up and you walked through with Mr. Miller  
7 yesterday with regard to Mr. Pilliod and Mrs. Pilliod.

8                    Do you recall that?

9           **A.**    Yes, I recall that.

10          **Q.**    What you told us you wanted to put in the  
11 middle column were the causative risk factors, correct?

12          **A.**    Correct.

13          **Q.**    So for the causative risk factors for  
14 Mr. Pilliod, you determined -- actually, let's do  
15 Mrs. Pilliod first.

16                    You determined -- I believe you said pesticide  
17 use, correct?

18          **A.**    Correct.

19          **Q.**    And you had body weight, correct?

20          **A.**    Correct.

21          **Q.**    And you had autoimmune disease, which was  
22 Hashimoto's, correct?

23          **A.**    Correct.

24          **Q.**    All of which met your definition of causative  
25 risk factors?



1           **A.**    Correct.

2           **Q.**    In terms of how you decided to move things  
3 over to the right column, what additional factors to  
4 include into -- let me rephrase.

5                    You had to make some decisions about what to  
6 put in the left column here, correct?

7           **A.**    Farther left?

8           **Q.**    Yes, the known risk factors for NHL.

9           **A.**    Sure.

10          **Q.**    Then you had to decide which of these you were  
11 going to put in the middle column. You and I had  
12 chatted about that right before lunch.

13          **A.**    Correct.

14          **Q.**    And then you had to decide which of these you  
15 were going to move over to the right.

16          **A.**    Sure.

17          **Q.**    So since Dr. Weisenburger -- you know that  
18 Dr. Weisenburger testified earlier in this trial?

19          **A.**    I know that he was here.

20          **Q.**    Yes. And conveniently enough, you and he used  
21 the exact same board to talk about these risk factors.

22                    And when Dr. Weisenburger was here, I had the  
23 chance to go over many of the articles that talk about  
24 other risk factors and the significance of that risk.

25                    And for the sake of everyone's patience and

1 whatnot, we're not going to go through all those same  
2 articles again today, okay?

3 A. Sure.

4 Q. What I do want to do with you is get some  
5 sense of the methodology you employed to decide whether  
6 things belonged in certain columns or at all, okay?

7 A. Sure.

8 Q. So one of the things we talked about was  
9 Hashimoto's in Mrs. Pilliod's case, right?

10 A. Yes.

11 Q. And I think you told us yesterday, based on  
12 some of the records you reviewed at your deposition and  
13 subsequently, that there was some indication she has  
14 that condition, true?

15 A. Yes.

16 Q. And so then we -- you talked with the jury  
17 about it being an autoimmune disease, correct?

18 A. Correct.

19 Q. And as an autoimmune disease, there's some  
20 literature about whether it increases the risk of  
21 developing non-Hodgkin's lymphoma, correct?

22 A. There is some literature, yes.

23 Q. And I think you told us that one of the  
24 reasons why -- even though Mrs. Pilliod has this  
25 causative risk factor, Hashimoto's -- you didn't put it

1 over into this third column was because you thought the  
2 evidence was weak.

3 Do you recall saying words to that effect?

4 **A.** Yes, I said it's weak. There's some evidence  
5 for thyroid lymphoma, but it's weak for systemic  
6 lymphoma.

7 **Q.** So one of the things you considered as to  
8 whether something should be considered a substantial  
9 factor in Mr. Pilliod's case or Mrs. Pilliod's case, is  
10 whether the epidemiology shows potential confounders,  
11 right?

12 **A.** Amongst other things; not the only thing.

13 **Q.** We're going to go through a couple.

14 But that's one of the things you thought?

15 **A.** Among others, yes.

16 **Q.** So for Hashimoto's, you thought the data  
17 showing an increased relative risk for developing  
18 non-Hodgkin's lymphoma might be confounded by the  
19 question of whether it's thyroid lymphoma or systemic  
20 lymphoma?

21 **A.** And the fact that there are a lot of articles  
22 that show, actually, no increase at all in non-Hodgkin's  
23 lymphoma.

24 **Q.** That's the second point I'm going to get to.  
25 Another thing you said as to why you wouldn't

1 want to put autoimmune diseases over into the third  
2 column, in addition to confounders, is if there's  
3 conflicting data?

4 **A.** Not autoimmune diseases. Specifically  
5 Hashimoto's, to be correct.

6 **Q.** I appreciate that. Let's be specific.

7 One of the things you pointed out as to why  
8 you wouldn't put Hashimoto's into the substantial factor  
9 column, in the third column, is because there's  
10 conflicting data in the epidemiology, right?

11 **A.** Amongst other things, yes.

12 **Q.** With respect to the question of whether  
13 Hashimoto's is associated with just thyroid lymphoma or  
14 other types of lymphoma, you agree that there's some  
15 literature that goes both ways on that question?

16 **A.** About Hashimoto's?

17 **Q.** Yes.

18 **A.** Yes.

19 **Q.** Okay. So, for example, a DLBCL lymphoma, that  
20 would be not a thyroid lymphoma, correct?

21 **A.** No. Actually, you could have DLBCL in the  
22 thyroid. Lymphoma can occur in any organ in the body.

23 **Q.** Let me phrase it this way: You are aware that  
24 there is epidemiology evidence showing there's a  
25 generalized risk of non-Hodgkin's lymphoma in patients

1 who have Hashimoto's, correct?

2 A. There is some evidence to association.

3 Association is not causation.

4 Q. Right. But we already know you put it on the  
5 causal risk factor column?

6 A. Yes.

7 Q. And you're aware that there is information in  
8 the literature that shows, for example, that DLBCL is  
9 increased in -- let me rephrase, be more specific.

10 There are studies that show patients with  
11 Hashimoto's have an increased risk of DLBCL in  
12 particular, true?

13 A. These studies, to my knowledge, don't tell you  
14 where the DLBCL is.

15 Q. The question was different, sir.

16 Can you acknowledge that the studies exist?

17 A. There are studies, of course. That's why I  
18 put it there.

19 Q. Specific to DLBCL?

20 A. You know, it escapes me whether they are  
21 specific to DLBCL. I believe they exist. I just don't  
22 believe that these studies, if existed, differentiate  
23 whether it was in the thyroid or outside the thyroid.

24 Q. Based on that confounding and conflicting  
25 evidence, you concluded in your judgment not to include

1 Hashimoto's in this right column for Mrs. Pilliod,  
2 right?

3 A. That's not the only reason. I'm happy to tell  
4 you the other reasons I excluded that.

5 Q. Were those two reasons you used to exclude?

6 A. Amongst additional reasons.

7 Q. With respect to Mr. Pilliod, again, this is  
8 the same exercise; and again, this is the same list  
9 Dr. Weisenburger used. So we're not going to go through  
10 all the literature we did with the jury previously. But  
11 again, you had to go through the same exercise.

12 What am I going to put in the left column,  
13 what am I going to move over to the middle, and from  
14 those, what am I going to move over to the far right  
15 column, right?

16 A. Sure.

17 Q. In Mr. Pilliod's case, you included, again,  
18 the same three. And I know we're not going to put Xs at  
19 the top three; you told us that before lunch.

20 But these are the three you checked when you  
21 were talking with Mr. Miller yesterday, right?

22 A. Correct.

23 Q. In Mr. Pilliod's case, the autoimmune disease  
24 is not Hashimoto's; it's ulcerative colitis?

25 A. Correct.

1           Q.    One of the things that you said yesterday that  
2 you weren't going to put on the list is skin cancer,  
3 correct?

4           A.    Say again?

5           Q.    Skin cancer.

6           A.    Yeah, I didn't put it on the list.

7           Q.    Correct.

8                    By the way, you did put immunodeficiency on  
9 this list, right?

10          A.    I did, yes.

11          Q.    And you would agree, sir, that in some cases,  
12 non-Hodgkin's lymphoma is due to a weakened immune  
13 system?

14          A.    Certainly, such as HIV.

15          Q.    A weakened immune system can be a risk for  
16 non-Hodgkin's lymphoma?

17          A.    Right. It depends on what weakened the immune  
18 system.

19          Q.    In Mr. Pilliod's case, you made the decision  
20 not to put skin cancer as one of the factors that could  
21 explain why he was at an increased risk, true?

22          A.    True.

23          Q.    I think you referenced this yesterday, but you  
24 would acknowledge for the jury that there are several  
25 papers and studies in peer-reviewed journals that look

1 at the question of whether patients with recurrent skin  
2 cancers are at increased risk of NHL, true?

3 A. I'm aware of these studies, and a lot of them  
4 are flawed studies.

5 Q. So in Mr. Pilliod's case, he had a history of  
6 melanoma, correct?

7 A. In 2010, if I recall.

8 Q. And Mr. Pilliod had a history of basal cell  
9 skin cancer, correct?

10 A. That's correct.

11 Q. In fact, he had multiple recurrent episodes of  
12 basal cell skin cancer, correct?

13 A. Which is the normal behavior of basal cell  
14 skin cancer. It goes and comes back.

15 Q. So the answer is yes?

16 A. Yes.

17 Q. And Mr. Pilliod had multiple recurrent  
18 episodes of squamous cell skin cancer, right?

19 A. Which is not unusual. The answer is yes.

20 Q. And in Mr. Pilliod's case, as it turned out,  
21 he had all three of those within one year of developing  
22 non-Hodgkin's lymphoma, correct?

23 A. I don't remember the exact dates, but he did  
24 have a lot of them before the diagnosis. As well, he  
25 had many of them after the diagnosis.



1           **Q.**    And you're not offering the opinion here that  
2 Roundup caused any of Mr. Pilliod's skin cancers, true?

3           **A.**    I did not look into that.

4           **Q.**    So with respect to what you did look at, you  
5 looked at this question of whether non-Hodgkin's  
6 lymphoma is associated with skin cancer, correct?

7           **A.**    Yes.

8           **Q.**    And you saw multiple papers on this question,  
9 correct?

10          **A.**    Yes. I looked at it after the deposition.  
11 Because in my mind, basal cell cancer and squamous cell  
12 cancer is not a risk factor for non-Hodgkin's lymphoma.  
13 That's why it wasn't included.

14                   And then after my deposition, I looked into it  
15 because you provided some papers that I looked into.

16           **MR. ISMAIL:** May I approach, Your Honor?

17           **THE COURT:** Yes, you may.

18           **BY MR. ISMAIL:**

19           **Q.**    Doctor, we're not going to go through each and  
20 every one of the papers that the jury has seen  
21 previously, but I just wanted to use one as an example  
22 of the type of information that's out there, okay?

23                   So Exhibit 6502 is a meta-analysis done on the  
24 question of whether skin cancer increases the risk of  
25 non-Hodgkin's lymphoma.

1                   Have you seen this paper, Doctor?

2                   **A.** I don't recall seeing this exact paper. I may  
3 have. I don't recall, exactly, the authors.

4                   **Q.** Okay. It's been published previously.

5                   So just so we can orient everyone here, this  
6 particular paper looked at 21 different studies.

7                   Do you see where I am in the results?

8                   **A.** I'm trying to get up to speed with the  
9 methodology.

10                   Go ahead. Yes.

11                   **Q.** And of the 21 studies they looked at, they  
12 found that 15 reported an association between -- and  
13 they have this term here, NMSC.

14                   That's non-melanoma skin cancer?

15                   **A.** Sure.

16                   **Q.** And they found that 15 showed a positive  
17 association with non-Hodgkin's lymphoma?

18                   **A.** Sure.

19                   **Q.** So let's look at the actual data, Doctor, if  
20 you could. Turn to page -- Bates page 6. And it's  
21 Table 3.

22                   **A.** Okay.

23                   **Q.** Let's just orient everyone here.

24                   So this whole analysis was looking at folks  
25 who developed skin cancer as their first primary cancer.

1 And then the question was, okay, were they at an  
2 increased risk relative to people without skin cancer  
3 for developing a second cancer?

4 A. Sure.

5 Q. And so they had different types of cancer  
6 here, one of which is non-Hodgkin's lymphoma, correct?

7 A. Okay.

8 Q. And again, this acronym, NMSC, that's  
9 non-melanoma skin cancer, right?

10 A. Okay.

11 Q. So the overall relative risk is 1.58;  
12 statistically significant, correct?

13 A. Yes.

14 Q. Then they look at it as to males, where  
15 Mr. Pilliod would fall in, correct?

16 A. Yes.

17 Q. And they again find a 1.56; statistically  
18 significant, correct?

19 A. Yes.

20 Q. And then they said, well, what if you had  
21 basal cell and what if you had squamous cell?

22 That's what the "BCC" and "SCC" are?

23 A. Sure.

24 Q. What they found is that both of those had a  
25 significant increased risk, true?

1           **A.**    True.

2           **Q.**    And in squamous cell, it's a doubling of the  
3 risk?

4           **A.**    I see that.

5           **Q.**    This is an analysis -- again, the jury has  
6 heard about the meta-analysis concept.

7                   Where the researchers, to improve the power of  
8 the analysis, will bring together multiple studies and  
9 analyze them in ways that biostatisticians usually  
10 analyze this type of data, right?

11           **A.**    But they didn't adjust for confounders.

12           **Q.**    And adjustment for confounders, that's another  
13 reason why Dr. Nabhan doesn't want to put skin cancer on  
14 the list, correct?

15           **A.**    Well, it's important to adjust where you can,  
16 right?

17           **Q.**    So these researchers report their relative  
18 risks here. And then they actually describe in this  
19 paper, biologically plausible mechanisms for why people  
20 with skin cancers might be at an increased risk for  
21 developing non-Hodgkin's lymphoma.

22                   If you turn to page 7. This is on the bottom  
23 part.

24                   This is after noting that there is an  
25 association between non-melanoma skin cancer and risk of

1 other cancers. And they say:

2 "It is likely to represent a true etiologic  
3 association."

4 Do you see that?

5 **A.** I do.

6 **Q.** "Etiologic" means causal, right?

7 **A.** It's causal, yes.

8 **Q.** Well, the word etiology, for those of us not  
9 in the medical field, that means causal, correct?

10 **A.** True.

11 **Q.** And these researchers say, based on their  
12 data, that there's a reason to believe there's a causal  
13 relationship between skin cancer and the second cancer  
14 that there was a positive association for.

15 Is that correct?

16 **A.** That's what they propose.

17 **Q.** And they say why they've come to that  
18 conclusion. First of which, they've described what they  
19 think are the strengths of their study: Looking at the  
20 timing of when the cancer developed relative to the skin  
21 cancer.

22 That's the first thing they point out,  
23 correct?

24 **A.** Yes.

25 **Q.** And then if you go with me to the carryover

1 paragraph, they describe:

2 "The large number of studies was remarkably  
3 consistent, almost all studies showed a  
4 significantly increased risk for all other  
5 cancers."

6 Did I read that correctly?

7 **A.** Yes.

8 **Q.** And so these researchers said that one of the  
9 reasons why we have some reason to believe it's not just  
10 an association, but cause and effect, is because we see  
11 a really strong consistency of results, right?

12 **A.** That's what they said.

13 **Q.** And then they talked about this question of  
14 confounders, that you just pointed out.

15 **A.** Sure.

16 **Q.** They said:

17 "The association between non-melanoma skin  
18 cancers and other cancers not only persisted,  
19 but actually increased in strength among  
20 studies adjusting for potential confounders,  
21 such as smoking status."

22 Did I read that correctly?

23 **A.** It looks like they adjusted for smoking, yes.

24 **Q.** Among other things.

25 They have references to the papers that

1 adjusted for other confounders?

2 A. I don't know what the confounders are, so we  
3 have to pull these references.

4 Q. Well, accepting these researchers at face  
5 value, and what they describe, they found that this  
6 relationship between having skin cancer and developing  
7 non-Hodgkin's lymphoma actually was stronger when you  
8 adjusted for confounders, by their research protocol,  
9 correct?

10 A. That's what they said, yes.

11 Q. And they go on to say:

12 "There are also several plausible biological  
13 mechanisms that can explain the association  
14 between non-melanoma skin cancer and risk of  
15 other cancers, including immunosuppression,  
16 chronic inflammation, and variation in DNA  
17 repair efficiency, all of which act  
18 systemically and play a role in cutaneous and  
19 internal carcinogenesis."

20 Did I read that correctly?

21 A. Yes.

22 Q. And "cutaneous" means skin in this sentence?

23 A. Correct.

24 Q. So that's how they've articulated the  
25 biologically-plausible mechanism that can explain the

1 consistent results they report in this paper, correct?

2 A. In this paper, those were the results. There  
3 are others that show the opposite.

4 Q. Sure. But in fairness, Doctor, this is a  
5 21-study meta-analysis, correct?

6 A. It is. But again, there are other papers that  
7 show the opposite.

8 Q. And there are other papers that show increased  
9 risk for non-Hodgkin's lymphoma in patients with  
10 melanoma, like Mr. Pilliod had, correct?

11 A. Yes. Very rare.

12 Q. And there are --

13 A. It's a rare occurrence -- I apologize. I was  
14 just finishing my answer.

15 It's a rare occurrence after melanoma, but  
16 these studies do exist.

17 Q. And there are papers like the one we're  
18 looking at now that show increased risk in patients with  
19 basal cell and squamous cell skin cancers with respect  
20 to developing NHL, true?

21 A. And there are studies that show no risk.

22 Q. You found some going one way, some going the  
23 other way.

24 One of the reasons why you didn't put skin  
25 cancer on Mr. Pilliod's differential etiology?



1           **A.**    One, but it's not the sole reason.  And I'm  
2 more than happy to explain to you the other reason.

3           **Q.**    In your case, in terms of the skin cancer  
4 finding or the skin cancer risk, it didn't matter to you  
5 whether Mr. Pilliod had one skin cancer or five skin  
6 cancers or ten skin cancers; you weren't going to put it  
7 on the list, true?

8           **A.**    Basal skin cancer and squamous cell cancer, in  
9 my opinion, are not a risk factor for developing  
10 non-Hodgkin's lymphoma.  They occur with sun exposure.

11                    If you're in the sun enough, you're going to  
12 get these cancers.

13           **Q.**    Do you remember my question, Doctor?

14           **A.**    I answered it.

15           **Q.**    My question was:  It did not matter for your  
16 analysis in this case as to whether or not you were  
17 going to put skin cancer on the differential etiology  
18 for Mr. Pilliod, whether he had 5, 10, 15 cancers before  
19 he developed NHL, true?

20           **A.**    That is true.  Because they usually keep  
21 recurring.  That's the common, natural history of basal  
22 and squamous cell cancer.

23           **Q.**    So, now, with respect to sticking with  
24 Mr. Pilliod's discussion here, in terms of the timing of  
25 Mr. Pilliod's NHL, he was diagnosed in June of 2011,

1 correct?

2 **A.** Correct.

3 **Q.** And you believe that the cancer was coming on  
4 in months, not years, correct?

5 **A.** Based on histology, large-cell lymphoma is an  
6 aggressive disease. You never know when it started, but  
7 it's probably measured in months.

8 **Q.** And in Mrs. Pilliod's case, her primary  
9 central nervous system lymphoma, that was diagnosed in  
10 April of 2015?

11 **A.** Correct.

12 **Q.** And in her case, her cancer likely developed  
13 weeks or shorter months previous to her diagnosis?

14 **A.** I think weeks, because of the location.  
15 Primary central nervous system lymphoma does not linger  
16 for a long time without causing symptoms. Maybe a  
17 couple months.

18 **Q.** In terms of a reasonable estimate of the onset  
19 of Mrs. Pilliod's cancer would be February of 2015?

20 **A.** It's very difficult, nearly impossible to tell  
21 when the cancer started.

22 All I can tell you is that the brain lymphoma  
23 will cause symptoms that most patients aren't going to  
24 go on with for months without presenting to a physician.

25 I can say, in my estimate, it probably started

1 several weeks to a few months before April 2015. That's  
2 really the best I could say.

3 Q. Thank you.

4 Now, there's been some discussion in the trial  
5 already about, sort of, the process by which cancer  
6 develops at a cellular level. And that there has to be  
7 genetic mutations along the path to develop a cancer.

8 You would agree with that as a general  
9 proposition?

10 A. Yeah, at some point.

11 Q. And in terms of those genetic mutations, you  
12 do not know -- nobody knows -- how many genetic  
13 mutations it takes for a single cell to become a  
14 non-Hodgkin's lymphoma cancer cell, true?

15 A. True. Nobody knows that.

16 Q. And so looking at Mr. Pilliod's case in  
17 particular, there's no way for you to determine when  
18 that genetic mutation in a cell occurred and in him  
19 developing non-Hodgkin's lymphoma, true?

20 A. Again, nobody could tell when the actual  
21 genetic mutation has occurred. I don't know if you're  
22 talking about the development of the actual lymphoma  
23 cell or you're talking way before. I'm not really clear  
24 which one you're asking about.

25 Q. Well, the development of the lymphoma cell, we

1 talked about a little bit ago in the prior questions and  
2 answers.

3 I'm talking about the genetic mutations.

4 A. Well, because the genetic mutations could  
5 happen years before the lymphoma develops, if that's  
6 your question.

7 Q. Here is my question: In Mr. Pilliod's case,  
8 there's no way for you to know -- or, indeed, anyone to  
9 know -- when Mr. Pilliod first had a genetic mutation of  
10 a cell that ultimately became his non-Hodgkin's  
11 lymphoma, correct?

12 A. That's a correct statement.

13 Q. And again, applying that same concept to  
14 Mrs. Pilliod, it would be the same answer: There's no  
15 way for anyone to determine when she first had that  
16 genetic mutation in a cell that resulted in her  
17 non-Hodgkin's lymphoma, true?

18 A. I agree with that.

19 Q. Now, you told Mr. Miller yesterday that, in  
20 the majority of cases, doctors do not know why their  
21 patients develop non-Hodgkin's lymphoma, true?

22 A. True.

23 Q. But it's still necessarily the case for those  
24 patients who have unknown causes of their NHL, that they  
25 have to have these genetic mutations to result in the

1 cancer cell, correct?

2 A. At some point, yes.

3 Q. At some point.

4 And when we say a cancer's cause is unknown,  
5 what you're saying, in part, is that we don't know why,  
6 in that patient, he or she had a genetic mutation to  
7 result in a lymphoma cell, true?

8 A. Yeah. We don't have the answer as to why the  
9 cancer occurred in the majority of patients.

10 Q. Right. And more specifically than that, you  
11 don't -- when I say "you," collectively, doctors do not  
12 know why it is in those patients, when we can't find a  
13 cause, what it is that's causing their genetic mutation  
14 on a cellular level, correct?

15 A. That's correct.

16 Q. But it has to be something. Something is  
17 causing that patient to develop a cellular mutation that  
18 results in a cancer cell, true?

19 A. Well, I mean, we both know that as we age,  
20 right, as we get older, some of this disruption of the  
21 cell does occur.

22 I mean, sometimes it just happens as a natural  
23 process when you're 90 or 100 years old. Nobody lives  
24 forever. These do occur, even if you're not exposed to  
25 anything.

1                   But you're right, we don't know in most cases,  
2 the genetic mutations, why they occur.

3           **Q.**   That's exactly where I was going.

4                   In most cases, the physician or researchers  
5 looking into this question do not know why an individual  
6 patient has the necessary genetic mutation to develop  
7 NHL, correct?

8           **A.**   You try to look. In most cases, you can't  
9 find it; in some cases, you do.

10           **Q.**   So when we say a cancer is idiopathic, that  
11 doesn't mean the person did not have something cause  
12 their -- the genetic mutations necessary to develop the  
13 disease, true?

14           **A.**   I'm not sure I understand your question at  
15 all, actually.

16           **Q.**   I'll rephrase.

17           **A.**   Please.

18           **Q.**   Calling a cancer idiopathic doesn't mean that  
19 the patient -- that something didn't cause genetic  
20 mutations that resulted in a cancer cell, true?

21           **A.**   I still don't understand your question.

22                   Idiopathic means we don't know the cause of  
23 the cancer. It's as simple as that. You don't need to  
24 complicate it.

25           **Q.**   Let me rephrase. It's not so complicated.

1           **A.**    Idiopathic, looking at the cause.

2           **Q.**    Let me rephrase the question.

3           **A.**    Please.

4           **Q.**    When we say a cancer is idiopathic, we don't  
5 know the cause for why the genetic mutations occurred in  
6 that patient, true?

7           **A.**    We don't know the cause of the cancer.

8           **Q.**    And the cause of the genetic mutation in that  
9 patient, true?

10          **A.**    Yes.

11          **Q.**    And -- but we know something did cause it,  
12 true?

13          **A.**    We believe that there's something that has  
14 happened, yes.

15          **Q.**    Now, you would agree that in most cases,  
16 people diagnosed with non-Hodgkin's lymphoma do not have  
17 any obvious risk factors for developing the disease,  
18 correct?

19          **A.**    I've said that before. The majority of  
20 patients with non-Hodgkin's lymphoma have no  
21 identifiable causative factor that we're aware of.

22          **Q.**    Not just causative factor, because I didn't  
23 want to get caught up in the distinction you were  
24 drawing previously.

25                    Most of the patients that develop NHL don't

1 have any identifying risk factors, correct?

2 A. Sure.

3 Q. And many people who have multiple risk factors  
4 for NHL do not develop the disease, correct?

5 A. I don't know. It's a matter of timing. I  
6 mean, sometimes if you smoke, you may not have a heart  
7 disease until you're 60; you may have it in your 50s.  
8 So if you have a risk factor, you could develop it at  
9 some point, it's just a matter of time.

10 But I agree with that general statement, yes.  
11 Many people with risk factors, they may not develop the  
12 disease.

13 Q. So you're familiar with the WHO Classification  
14 of Tumors of Hematopoietic and Lymphoid Tissues?

15 A. Yes, I am.

16 Q. And this resource is a well-known and  
17 well-used resource for lymphoma specialists, correct?

18 A. Yes.

19 Q. And, in fact, provides the definitive  
20 classification for the very subtypes of NHL?

21 A. It looks at classification, correct.

22 Q. We say it's the WHO classification; it's the  
23 World Health Organization classification, correct?

24 A. That's correct.

25 **MR. ISMAIL:** Permission to publish



1 Exhibit 6184?

2 MR. MILLER: No objection, Your Honor.

3 THE COURT: Granted.

4 BY MR. ISMAIL:

5 Q. The various subtypes of NHL are discussed in  
6 this document, correct?

7 A. Yes. It's looking at leukemia and lymphoma  
8 and various categories, and what they are and so forth.

9 Q. If you look at Bates page 33, there's the  
10 section on primary diffuse large B-cell lymphoma of the  
11 central nervous system?

12 A. Yes, I see that.

13 Q. That would be the subtype of cancer that  
14 Mrs. Pilliod developed?

15 A. Correct.

16 Q. Then we have a section down here on etiology?

17 A. Yes.

18 Q. And etiology is cause, right?

19 A. Yes.

20 Q. So with respect to what the World Health  
21 Organization document says is that "immunocompetent  
22 individuals."

23 Would that describe Mrs. Pilliod?

24 A. Yes, in my opinion.

25 Q. It says:

1 "The etiological factors are unknown."

2 Did I read that correctly?

3 A. Yes. On a population level, when you look at  
4 the majority, you look at everyone, it's unknown.  
5 That's why you look at every case individually.

6 Q. And etiological factors would be causal  
7 factors, correct?

8 A. Correct.

9 Q. Or unknown.

10 That's what the document says?

11 A. For the majority of patients. Again, you're  
12 looking at population level.

13 Q. Now, you would agree, Doctor, that the vast  
14 majority of lymphoma cases occur in individuals who have  
15 never been exposed to Roundup, correct?

16 A. I agree with that.

17 Q. And that's true for all the subtypes of NHL,  
18 correct?

19 A. I agree.

20 Q. And you're not aware of any imaging studies  
21 that were done to differentiate a -- let me rephrase.

22 There's no imaging study that was done in  
23 Mr. Pilliod's case that would allow clinicians to  
24 identify Roundup as the cause of his particular cancer,  
25 correct?

1           **A.**    Correct.

2                    And similarly, there's no imaging study to say  
3           it's skin cancer that led to the non-Hodgkin's lymphoma.

4           **Q.**    And there's no imaging study that was done in  
5           Mrs. Pilliod's case to identify Roundup as the cause of  
6           her non-Hodgkin's lymphoma, correct?

7           **A.**    Imaging studies do not identify the cause.

8           **Q.**    Nor is there any medical records that you saw  
9           in this case for Mr. Pilliod that -- wherein his  
10          clinicians indicate that Roundup increased his risk of  
11          developing NHL, correct?

12          **A.**    I don't believe the clinicians inquired about  
13          that topic.

14          **Q.**    The answer is yes?

15          **A.**    Yes.  If you don't inquire about it --

16          **Q.**    You did not see any evidence in the medical  
17          records you reviewed -- and you said you reviewed  
18          thousands of them -- for either Mr. Pilliod or  
19          Mrs. Pilliod's case that indicated that Roundup or  
20          glyphosate contributed to either of them developing  
21          non-Hodgkin's lymphoma, true?

22          **A.**    Correct.  I don't believe their physicians  
23          looked into that.

24          **Q.**    Now, the exact same cancer and the exact same  
25          course of the disease that Mr. Pilliod had happens in

1 patients who have never been exposed to Roundup,  
2 correct?

3 A. Of course.

4 Q. Similar question for Mrs. Pilliod.

5 A. Of course.

6 Q. I'll just get it out so it's clear for the  
7 record: The exact same cancer and exact same course of  
8 her disease happens in patients never exposed to  
9 Roundup, correct?

10 A. Of course.

11 Q. And Mr. Pilliod could have developed the  
12 diffuse large B-cell lymphoma that he developed and have  
13 the same course of his disease, had he never been  
14 exposed to Roundup, correct?

15 A. All of us could develop cancer at any time.  
16 Our risk does change based on other factors.

17 Q. And same question for Mrs. Pilliod: She could  
18 have developed the exact same cancer at the exact same  
19 time and had the same course of her disease if she  
20 hadn't been exposed to Roundup, correct?

21 A. We all could have the same disease.

22 Q. The answer is yes?

23 A. Yes.

24 **MR. ISMAIL:** Thank you, Doctor, that's all the  
25 questions I have.

1                   **MR. MILLER:** I thank Counsel for sparing us a  
2 lot of studies, and I'll return the favor.

3                   **REDIRECT EXAMINATION**

4 **BY MR. MILLER:**

5                   **Q.** Skin cancer causing non-Hodgkin's lymphoma.  
6 In the 25 years you're practicing as a non-Hodgkin's  
7 lymphoma specialist, was when Monsanto asked you at  
8 deposition the first time you had ever heard anybody  
9 suggest skin cancer causes non-Hodgkin's lymphoma?

10                  **A.** Yes. Skin cancer does not cause non-Hodgkin's  
11 lymphoma. I looked at the studies that were provided in  
12 my deposition. And I was, frankly, extremely curious --  
13 similar to my curiosity with Hashimoto's -- about the  
14 allegation that skin cancer, basal cell and squamous  
15 that everybody gets from sun exposure, causes  
16 non-Hodgkin's lymphoma. And I found a lot of studies  
17 that show the opposite.

18                   There are studies that say skin cancer is  
19 associated. Again, association is not causation. We  
20 have to be very careful when we say something is  
21 associated with something.

22                  **Q.** You reviewed the Reed study on melanoma; you  
23 reviewed the Wheless study on non-melanoma skin cancers.

24                   Did you read them both?

25                  **A.** Yeah. Counsel just gave me the Wheless study

1 that we just looked at.

2 Q. The Wheless study, he didn't show you this.

3 MR. MILLER: Put it on the Elmo, please.

4 BY MR. MILLER:

5 Q. It shows in this study, a 10 percent increased  
6 risk of another cancer if you've been exposed to a skin  
7 cancer, right?

8 A. Yes.

9 Q. What's the risk of Roundup, with 30 years of  
10 using Roundup? Or 28 years of using Roundup?

11 A. In my opinion, the risk is substantial for  
12 non-Hodgkin's lymphoma. And the best estimate looks  
13 like, from the epidemiology literature, it doubles the  
14 risk of developing non-Hodgkin's lymphoma.

15 Q. So since these folks are going to play  
16 scientist, there's a possible 10 percent increased risk  
17 in Monsanto's study for skin cancer causing it, and a  
18 200 percent risk from the Roundup exposure.

19 Is that what you're telling me?

20 MR. ISMAIL: Objection. Leading, Your Honor.

21 THE COURT: Sustained. I'm going to overrule  
22 it and allow his answer to stand, but please don't lead.

23 MR. MILLER: Yes, Your Honor.

24 BY MR. MILLER:

25 Q. Answer the question.

1           **A.**    It's possible.

2           **Q.**    Let's look at some of the documents that  
3 Counsel asked you about.

4                   Remember the line of questions about how  
5 Australia thinks it's okay and, I think, maybe  
6 New Zealand and Europe?

7                   That general line of questions?

8           **A.**    I do remember these questions, yes.

9           **Q.**    Let's look at the document that he showed you  
10 about Australia.

11          **A.**    Which exhibit?

12          **Q.**    We're going to look at it and put it on the  
13 Elmo.

14          **A.**    Sure.

15          **Q.**    This is Exhibit 4136. Let me back this up  
16 here.

17                   Did he show you this?

18          **A.**    I believe it's amongst -- there's so many  
19 papers. I'm not sure which one exactly.

20          **Q.**    We're going to look at what his document says  
21 from Australia on page 25.

22                   What they tell us down in Australia is:

23                   "Subsequently, on June 29th, the EC" -- that's  
24 the European Community -- "extended the  
25 approval of glyphosate in the European Union

1 to allow the European Chemicals Agency to  
2 complete an assessment of glyphosate. On  
3 July 11, 2016, Member State experts voted as a  
4 qualified majority in favor of two  
5 recommendations proposed by the European  
6 Community as conditions to the registration  
7 extension, at a meeting of the Standing  
8 Committee. These restrictions included,  
9 number one, an European Union-wide ban of  
10 POEA."

11 He didn't show you that, did he?

12 **A.** No, he did not.

13 **Q.** So they approved it, but not with what's in it  
14 here in America?

15 **MR. ISMAIL:** Objection, Your Honor. Lack of  
16 foundation.

17 **THE COURT:** Sustained. And it's stricken.

18 **BY MR. MILLER:**

19 **Q.** They also demanded:

20 "Restrict the use of Glyphosate-based  
21 formulations in public parks, in playgrounds,  
22 and in home gardens, and for preharvest  
23 application."

24 He didn't show you that, did he?

25 **A.** No, he did not.



1           **Q.**    That's the rest of the story.

2           **MR. ISMAIL:**   Move to strike.

3           **THE COURT:**   It will be stricken.

4           **MR. MILLER:**   I'm sorry, Your Honor.  I  
5 apologize.

6                     Your Honor, I would like to mark the label in  
7 Australia for Roundup with an exhibit number.

8           **MR. ISMAIL:**   May we approach, Your Honor?

9           **THE COURT:**   Yeah.

10                    (Sidebar discussion not reported.)

11 **BY MR. MILLER:**

12           **Q.**    Do you have any knowledge of what the warning  
13 is on Australia?

14           **A.**    I do not know.

15           **Q.**    Okay, then we'll move on.

16                    Monsanto's lawyers showed you a document from  
17 the European Chemical Agency.

18                    Do you remember having that line of questions  
19 with him?

20           **A.**    I do remember, yes.

21           **Q.**    And that was Exhibit 4722.  I want to show you  
22 a page that he didn't show you.  Page -- oh, goodness.

23                    This is page --

24           **THE COURT:**   Which exhibit?  Is it your binder  
25 or Mr. Ismail's binder that we're referring to?

1                   **MR. MILLER:** Your Honor, I apologize. It's  
2 actually the Exhibit 4727, which is a document that  
3 Mr. Ismail showed the jury from the European Food Safety  
4 Authority.

5                   **THE WITNESS:** This is 4722?

6 **BY MR. MILLER:**

7                   **Q.** Yes. And we're going to look on the Elmo at  
8 page 11.

9                   **A.** I'm sorry, which exhibit number?

10                  **Q.** Page 11. And the exhibit is 4727.

11                  **A.** Okay, thank you.

12                  **Q.** What he didn't show you was what they say  
13 here. They say:

14                               "There are several reasons explaining the  
15 diverging views between the different groups  
16 of experts. On the one hand, IARC did not  
17 only assess glyphosate, but assessed  
18 glyphosate-based formulations; while the EU  
19 peer review is focused on the pure active  
20 substance."

21                               Explain what that means to us.

22                  **A.** I think it's an important distinction.

23                               What IARC looked at was not just on  
24 glyphosate, which is the active ingredient in the entire  
25 formulation of Roundup, which usually includes

1        glyphosate plus surfactants and other materials. I'm  
2        not familiar with them, but usually there are  
3        surfactants in there.

4                    And this agency only focused on glyphosate  
5        itself, without looking at the entire formulation that  
6        people usually use to spray.

7                    **Q.**    So that's Europe.

8                    Let's go to the Pilliods again.

9                    Now, again, I will return the favor and not go  
10       over a lot of studies. But they did mention Hashimoto's  
11       disease.

12                    And I think you've explained to this jury  
13       before, but explain why, in this case, Hashimoto's  
14       disease simply doesn't fit with primary central nervous  
15       system cancer.

16                    **A.**    Just to level-set, Hashimoto's is an  
17       autoimmune disease of the thyroid gland. And it's  
18       actually pretty common, in terms of how often it exists.

19                    The way to diagnose Hashimoto's, generally, is  
20       by detecting antithyroid antibodies in the blood. They  
21       are untied TPO. So usually, the doctor will do a blood  
22       test, they ask for untied thyroid antibodies, and they  
23       try to detect them as the definitive diagnosis of  
24       Hashimoto's.

25                    When I was asked about Hashimoto's in

1 Mrs. Pilliod's case, I frankly wasn't aware of that  
2 initially, because I didn't really see anything in the  
3 records for these antithyroid antibodies. I went back  
4 and looked, and found several notes referring that she  
5 has Hashimoto's.

6 And there were a couple of imaging studies,  
7 ultrasounds of the thyroid, to suggest that the  
8 radiographic appearance is similar to Hashimoto's. So I  
9 think it's reasonable to assume, just to be more  
10 inclusive, that she probably had Hashimoto's as opposed  
11 to not.

12 So when you go and research about Hashimoto's  
13 and the possibility of association with non-Hodgkin's  
14 lymphoma, there is some literature to suggest that there  
15 is some association between Hashimoto's and  
16 non-Hodgkin's lymphoma. But these studies did not look  
17 specifically as to whether it's lymphoma of the thyroid  
18 gland or outside the thyroid.

19 The literature that is more convincing  
20 actually shows that there is some association with the  
21 thyroid lymphoma. There are other studies that show  
22 absolutely no risk, even -- not with thyroid lymphoma,  
23 not with non-Hodgkin's lymphoma whatsoever.

24 And again, this was -- I looked at a paper in  
25 the British Journal of Cancer, by Chen and colleagues,

1 and it says there's no risk of any types of lymphoma.

2 So in her situation, Mrs. Pilliod has primary  
3 central nervous system lymphoma. It's not thyroid  
4 lymphoma.

5 When you look at a lot of the American Cancer  
6 Society, a lot of the patient websites, you are not  
7 going to see anywhere that Hashimoto's increases the  
8 risk of non-Hodgkin's lymphoma as a warning.

9 And frankly, in my own practice, when I saw a  
10 lot of patients, it was never something that I would  
11 say, okay, well, this -- it happens more in women as  
12 opposed to men. This woman has Hashimoto's thyroiditis,  
13 then that explains her non-Hodgkin's lymphoma.

14 It's just not something that we believe in the  
15 lymphoma world, people who treat a lot of lymphoma, that  
16 it causes it.

17 And lastly, I would say association is not  
18 causation. This is really important. You might see two  
19 diseases associated with each other. It doesn't mean  
20 that one causes the other one, right? I mean, there's a  
21 distinction. I will just try to bring it home to  
22 explaining the difference between association and  
23 causation.

24 As we get older, we may get, let's say, you  
25 know, lymphoma. This is the disease that we are talking

1 about. But as we get older, people get cataracts, as  
2 well, don't we? I mean, I'm sure you know somebody who  
3 got cataracts.

4 So if you look at cataracts and you look at  
5 non-Hodgkin's lymphoma, you will see that, probably,  
6 there's association. Because these are two things that  
7 occur to people when they age. Can we logically  
8 conclude that cataracts cause non-Hodgkin's lymphoma or  
9 non-Hodgkin's lymphoma causes cataracts? No.

10 We have to exercise logic, common sense.  
11 There could be some diversion data. The burden of proof  
12 is on us to try to better understand what that data  
13 means.

14 Q. You're talking about age.

15 You read Dr. Levine's report, the expert for  
16 Monsanto?

17 A. I have.

18 Q. You agree that it doesn't cause non-Hodgkin's  
19 lymphoma?

20 A. We both agree on that.

21 Q. And you agree with Dr. Raj that Hashimoto's  
22 did not cause Al's non-Hodgkin's lymphoma?

23 A. Absolutely.

24 Q. Talk about how the tumor was there for maybe  
25 weeks or months -- for weeks for Alberta, a couple

1 months.

2 Describe for us what latency means. When did  
3 the genetic hits occur? Was it within weeks or months,  
4 or was it years?

5 **A.** That's why I was trying to clarify with  
6 Counsel the question.

7 The actual mutation or the genetic hit occurs  
8 years before, when you get exposed to whatever that  
9 agent or hazardous material that may have contributed to  
10 the development of cancer. That doesn't mean you get  
11 development of that cancer right away.

12 I mean, again, to bring it home, because I  
13 always find bringing examples will make things easier  
14 for all of us to understand.

15 You can use tanning beds in your teenage  
16 years, but unfortunately, if you are going to get  
17 melanoma, it happens later on, 30 years later. It's not  
18 like you get exposed to the sun on Thursday, and then a  
19 week later, you get the actual skin cancer.

20 The actual genetic hits occur years before,  
21 and it's not clear what happens until you are able to  
22 detect the actual cancer on imaging or on exam or  
23 something like that. And that's what I tried to  
24 clarify.

25 **Q.** The -- there was mention about autoimmune

1 disorders and EBV.

2 What is EBV?

3 A. Epstein-Barr virus. That is usually the virus  
4 that causes infectious mononucleosis, which 95 percent  
5 of us have.

6 Q. And did they look for Epstein-Barr virus in  
7 Alberta Pilliod's tumor?

8 A. They did, and they didn't find it. PCNS  
9 lymphoma occurs more commonly in immunocompromised  
10 patients, usually in patients who have HIV- or  
11 EBV-positivity.

12 In Mrs. Pilliod's case, she doesn't have HIV.  
13 And when they looked at the EBV in the tumor specimen,  
14 the EBV was negative.

15 So you have a disease that usually occurs more  
16 commonly in immunocompromised. It's associated with  
17 EBV, occurring without EBV.

18 I think you're more obligated, in situations  
19 like this, to even look further at causative factors in  
20 this particular situation.

21 Q. We know Alberta was negative for mononucleosis  
22 or EBV.

23 And then there was a test done on Al for EBV,  
24 right?

25 A. Yes. And that was equivocal. Remember,



1 Mr. Pilliod had the bone biopsy. And it is not unusual,  
2 when you do a bone biopsy, that you're not able to do  
3 all the testing you want to do. So it's pretty  
4 standard, any time you check for lymphoma, you check for  
5 EBV and other things.

6 When they tried to do that for Mr. Pilliod, it  
7 was equivocal, partly because it's a bone biopsy.  
8 Oftentimes, you may not be able to identify it.

9 But my interpretation of this result is  
10 negative. You have two married couples that, if there  
11 was EBV, both of them will have EBV. And Mrs. Pilliod  
12 had EBV-negative disease in a disease that is most  
13 commonly associated with EBV.

14 So again, putting one and one together, it's  
15 fair to say that it was negative.

16 Now, again, it was equivocal by report, which  
17 some people might interpret positive, some people might  
18 interpret negative. My interpretation, looking at both  
19 cases, is that this would be negative.

20 Q. You've been deposed by Monsanto for over  
21 12 hours, and you've been cross-examined for several  
22 hours here today.

23 Has anything that they've shown you changed  
24 your opinion that Roundup was a substantial cause in Al  
25 Pilliod's non-Hodgkin's lymphoma?

1           **A.**    Absolutely not.

2           **Q.**    Anything change your opinion that it was a  
3 substantial cause in Alberta?

4           **A.**    Absolutely not.

5           **Q.**    They mentioned that you are getting paid for  
6 your time here.

7                    Are you giving your opinion here because you  
8 honestly hold it?

9           **A.**    Absolutely.

10           **MR. MILLER:**  I thank you so much for your  
11 time.

12           **THE WITNESS:**  Thank you.

13           **THE COURT:**  Any additional questions?

14           **MR. ISMAIL:**  Briefly, Your Honor.

15                            **REXCROSS-EXAMINATION**

16           **BY MR. ISMAIL:**

17                    **Q.**    You mentioned, in response to Mr. Miller's  
18 questions, that you would find a doubling of the risk of  
19 developing non-Hodgkin's lymphoma significant in an  
20 individual patient's case.

21                            Do you recall that?

22                    **A.**    In Mr. and Mrs. Pilliod's case?

23                    **Q.**    For example.

24                            So he showed you a paper that suggested there  
25 was a 10 percent increased risk of developing cancer

1 following skin cancer. And you compared that to  
2 something that would be a higher risk, like a doubling,  
3 as being more significant.

4 Do you recall doing that just a moment ago?

5 **A.** I recall that, yeah.

6 **Q.** Can you pull up 6502. This is the paper  
7 Mr. Miller was asking you about.

8 And this is the paper on the meta-analysis of  
9 skin cancers and subsequent secondary cancer, correct?

10 **A.** Correct.

11 **Q.** And he showed you the last paragraph, which  
12 looked at subsequent cancers overall, not non-Hodgkin's  
13 lymphoma specifically, correct?

14 **A.** True. That's all the cancers they looked at.

15 **Q.** So if you can go to page 6 and pull out  
16 Table 3, please.

17 If you highlight non-Hodgkin's lymphoma, and  
18 you go across, indeed, what you'll see is a doubling of  
19 the risk of non-Hodgkin's lymphoma in patients with a  
20 history of squamous cell skin cancer, true?

21 **A.** I see that, yes.

22 **MR. ISMAIL:** Thank you, Doctor.

23 **THE WITNESS:** You're welcome.

24 **THE COURT:** Any additional questions?

25 **MR. MILLER:** No, Your Honor.

1                   **THE COURT:** Dr. Nabhan, you're excused.

2                   **MR. WISNER:** Our next witness will be by video  
3 deposition.

4                   Do you want us to continue?

5                   **THE COURT:** Let's take a short break to  
6 stretch. And we are going to come back for a video.

7                   (Recess taken at 2:03 p.m.)

8                   (Proceedings resumed at 2:16 p.m.)

9                   (The following proceedings were heard out of  
10 the presence of the jury:)

11                   **MR. WISNER:** The reason why we were calling a  
12 video is because, actually, our next witness is  
13 Mr. Mills, but we don't know the status --

14                   **THE COURT:** I was going to talk to you about  
15 that. I have been looking at these cases, and I read  
16 two cases that Counsel provided me this morning, and I'm  
17 going to come back to my first position.

18                   I think all the evidence about whether she  
19 will recover and what will happen to her, that's wrong.  
20 And we cannot base a decision on whether or not she's  
21 going to prevail and, therefore, what is her situation  
22 when she prevails.

23                   So thank you for the information, but I can't  
24 base a decision on that.

25                   And so I came back to, there's nothing

1 precisely on point. What's in the record is that  
2 Mrs. Pilliod has never paid, that she does get a  
3 charitable contribution from whoever for her medication.  
4 And I think I'm going to leave it to the jury to hear  
5 that she's never paid, why she has never paid, that  
6 there is a number out there.

7           And I think the number has to be the number  
8 that is the cost of the drug, if she were to have to pay  
9 for it. Why she may have to pay for it is not ever  
10 going to be in evidence or before the jury. But I do  
11 think that it's not just a number based on nothing; it  
12 is the cost of the drug.

13           So going forward, if she has to pay for that,  
14 I think the jury has to consider whether or not she  
15 might have to pay for it, and if so, what her costs will  
16 be.

17           And there is both that number and, I guess,  
18 the 3,000 number from Rubenstein. I don't know how you  
19 want to argue that. But I think it is argument, in  
20 terms of taking what's in the record regarding her --  
21 regarding the variables that kind of contribute to what  
22 her damages are now, and then based on that, what they  
23 may be.

24           So I think I have to stick with allowing  
25 Mr. Mills to testify to that. But, you know, it's open

1 argument as to whether or not that's ultimately what the  
2 jury should consider or whether they should consider a  
3 lesser number. Because she has never paid, they really  
4 ought not consider that she should. Although there is  
5 the evidence that they do review her every year and make  
6 a decision about her.

7 And that, too -- I don't know whether or not  
8 she's testified to that.

9 **MR. BRADY:** The only problem with Rubenstein's  
10 number is that it was kind of a general estimate of cost  
11 based on varieties of --

12 **THE COURT:** It's in the record, is what I'm  
13 saying. His number is in the record. That is what it  
14 is. That's where I'm coming from.

15 It was a hard decision. Because, you know,  
16 having reached this point where she has not paid, there  
17 is no track record. There is no gross amount billed --  
18 which is really what cases would address, which is  
19 whether or not you can base it on what was billed versus  
20 what was paid -- I'm just coming down this way.

21 I'm going to allow the jury to take all that  
22 into consideration and ultimately make its decision  
23 about what it thinks Mrs. Pilliod's future --

24 **MR. MILLER:** I want to make sure I understand.  
25 I'm not arguing it.

1                   Do I understand that he can calculate it based  
2 upon the testimony in the record about the  
3 14-and-a-half-thousand or not?

4                   **THE COURT:** Well, I thought he came to an  
5 opinion based on his report.

6                   **MR. MILLER:** Yes. His report is  
7 14-and-a-half-thousand a month for the life expectancy,  
8 and he does the forensic economic calculation.

9                   **THE COURT:** He can testify to whatever he's  
10 developed based on his opinion, which could be based on  
11 that or could be based on the drug price, which is  
12 hearsay.

13                   But he can base it on hearsay, and then they  
14 can argue that it's not reasonable or it is reasonable,  
15 and the jury should consider it or not consider it.

16                   **MR. ISMAIL:** In terms of guidance for cross,  
17 Your Honor, so we don't run afoul of where the line --  
18 thank you.

19                   In terms of how and why she has not paid  
20 anything thus far for the medicine, is that part of the  
21 examination, or just that she hasn't paid?

22                   **THE COURT:** Well, I think that -- I think that  
23 the evidence of charity can come in. I mean, that's --  
24 because I think that's the variable that actually  
25 makes -- kind of puts us in the category of, there are

1 all these variables, but if she has to pay, this is what  
2 we have to consider.

3 **MR. MILLER:** I understand that.

4 **THE COURT:** Because I think she's testified to  
5 that. I can't recall exactly now what she testified to  
6 during the course of her examination and what she  
7 testified in the 402. I think she referenced getting  
8 assistance from the drug company.

9 **MR. BRADY:** She did. The only thing I'm  
10 concerned about is Counsel making any reference in  
11 either her examination or Mr. Mills' examination and  
12 insinuating that Medicare is paying the other part of  
13 this.

14 **THE COURT:** I don't think that was his  
15 question. I don't think that was it.

16 **MR. ISMAIL:** They have put three times into  
17 the record, the question of insurance. The document  
18 upon which they're relying, on its face, does not apply  
19 to people with insurance, such as the plaintiff here.

20 If Your Honor is ordering us that we can't --

21 **THE COURT:** No. I don't want questions about  
22 her Medicare status.

23 You can certainly ask him, I guess: If there  
24 are any other contributions, you know, would your  
25 opinion change? I guess that would be the only other --



1           **MR. ISMAIL:** Okay. And just, for what it's  
2 worth, it's not a charity that's like a community-based  
3 charity. How they're describing it does seem to be -- I  
4 think should probably conform to what the facts actually  
5 are, which is that the manufacturer is picking up a  
6 portion and discounting the price, is the fact. Not  
7 that it's like a crowd-funded charity.

8           **THE COURT:** I understand that. You know, I  
9 picked my brain about what was precisely said about  
10 that. You would have to look back in the transcript.  
11 Whatever is in the record as to that can be argued.

12           **MR. MILLER:** I understand, Your Honor. Thank  
13 you.

14           **MR. WISNER:** Unrelated to this issue. There  
15 is one other exhibit I did want to move into evidence,  
16 but I haven't got agreement from the defendants yet, and  
17 I don't think I will before we rest.

18           So I just want to reserve the right. I just  
19 want to make sure that we're okay that we can  
20 potentially move it into evidence, or portions of it,  
21 after we rest today.

22           **THE COURT:** I thought we talked about the  
23 summary of the IARC Monograph.

24           **MR. WISNER:** We're trying to decide what  
25 pages; we haven't met and conferred.

1 I just want to make sure.

2 **MR. MILLER:** I think Your Honor said it was in  
3 parts, but you weren't going to allow the whole  
4 91 pages.

5 **THE COURT:** You guys may have said you'll meet  
6 and confer.

7 **MR. WISNER:** Exactly.

8 **THE COURT:** I know I talked a little about it.

9 **MR. MILLER:** You did.

10 **MR. WISNER:** Do you agree you won't object  
11 after we close?

12 **MR. ISMAIL:** I do agree we will not object.

13 **THE COURT:** Are you going to bring Mr. Mills?

14 **MR. WISNER:** Yeah. We're going to call  
15 Mr. Mills, get him out of here.

16 **THE COURT:** So are you going to rest today?

17 **MR. WISNER:** Yes. So we anticipate Mills  
18 being 10 to 15 minutes on direct; and cross, about 5.  
19 And then we have 1 hour and 8 minutes of video.

20 **MR. BRADY:** Your Honor, on Thursday, we had  
21 some tentative arrangement to talk jury instructions  
22 with the Court.

23 I've got a 10:00 settlement conference with  
24 Judge Lee downstairs. Can we do it at 1:00 or 1:30 on  
25 the jury instructions?

1                   **THE COURT:** What's your role in the jury  
2 instructions?

3                   **MR. WISNER:** He's going to be arguing it for  
4 us.

5                   **THE COURT:** You're going to be arguing the  
6 jury instructions?

7                   **MR. BRADY:** Yes, Your Honor.

8                   **THE COURT:** Okay.

9                   **MR. BRADY:** If it works with the Court's  
10 calendar.

11                   **MR. EVANS:** So we definitely need do it at  
12 10:00, Your Honor.

13                   **THE COURT:** I think if Counsel had asked me --

14                   **MR. BRADY:** I'm sorry about that, Your Honor.  
15 I apologize. I'm sorry.

16                   **THE COURT:** Let's see. Well, 1:00 would be  
17 fine. That gives us the afternoon, versus a full day.

18                   **MR. WISNER:** I don't imagine it will take --

19                   **THE COURT:** I'm sorry. What do you have in  
20 front of Judge Lee?

21                   **MR. BRADY:** A settlement conference, but it's  
22 going to be a quick one.

23                   **THE COURT:** At what time?

24                   **MR. BRADY:** 10:00.

25                   **THE COURT:** Why don't we say you'll come here

1 at 11:00.

2 **MR. BRADY:** That's fine. I can get somebody  
3 else to come with me to the settlement conference.

4 **THE COURT:** We're going to start on the  
5 conversation, the defendants haven't put in any  
6 evidence.

7 We can start the conversation, but I'm not  
8 going to rule on anything. Thursday may be the chance  
9 to find out where the trouble spots are going to be. I  
10 think, probably, you might wind up taking a day before  
11 closing and jury instructions to actually finalize  
12 everything.

13 But I'm fine with starting the conversation,  
14 but sooner rather than later.

15 **MR. BRADY:** So 11:00 on Thursday?

16 **THE COURT:** 11:00 on Thursday.

17 **MR. BRADY:** Thank you, Your Honor.

18 **THE COURT:** I am also going to review -- thank  
19 you for the jury instructions in Johnson and in Harding,  
20 because that will help give us some guidance in terms of  
21 which -- I don't necessarily have to agree.

22 **MR. BRADY:** I don't think you do at all,  
23 Your Honor.

24 (The following proceedings were heard in the  
25 presence of the jury:)

1                   **THE COURT:** Mr. Miller?

2                   **MR. MILLER:** Thank you, Your Honor.

3                   Very quick witness, but we're now calling  
4 James Mills, economist.

5                                   **JAMES MILLS,**

6 called as a witness for the Plaintiffs, having been duly  
7 sworn, testified as follows:

8                   **THE CLERK:** Would you please state and spell  
9 your name for the record.

10                   **THE WITNESS:** James Mills, M-I-L-L-S.

11                                   **DIRECT EXAMINATION**

12 **BY MR. MILLER:**

13                   **Q.** Good afternoon.

14                   **A.** Good afternoon, sir.

15                   **Q.** You and I haven't met before, but my law firm  
16 contacted you and asked you to do some things regarding  
17 this case, didn't we?

18                   **A.** Yes.

19                   **Q.** What is your profession, Mr. Mills?

20                   **A.** I'm what's called a forensic economist.

21                   **Q.** And explain to us what that is, real quick.

22                   **A.** Sure. Forensic economics is the application  
23 of standard methods of accounting, finance, and economic  
24 analysis in order to estimate damages in a case like  
25 this one.

1           Q.    And have you qualified as an expert in a court  
2 of law as a forensic economist?

3           A.    I have, yes.

4           Q.    How many states?

5           A.    Let's see, five states, and about 15 counties  
6 in California.

7           Q.    About how many times have you qualified as an  
8 expert witness?

9           A.    Over 50.

10          Q.    And you're available to testify for either  
11 plaintiffs' lawyers or defense lawyers?

12          A.    Correct.

13          Q.    But most of the time, you're called by  
14 plaintiffs' lawyers?

15          A.    True.

16          Q.    Okay. And you charge for your time?

17          A.    That's right.

18          Q.    And how much per hour do you charge for your  
19 time?

20          A.    The company I work for charges \$650 an hour  
21 for our services.

22          Q.    And we asked you to calculate the future  
23 expense of Mrs. Pilliod's Revlimid medication that she  
24 takes.

25                    Is that the task that we asked you to take on?

1           **A.**    Yes.

2           **Q.**    Okay.

3                   **MR. MILLER:**  Well, first, I would like to  
4           qualify Mr. Mills as a forensic economist.

5                   **MR. ISMAIL:**  No questions on qualification.

6                   **THE COURT:**  Okay.

7           **BY MR. MILLER:**

8                   **Q.**    Now, in calculating her future cost, the  
9           future expense of the Revlimid, how did you do it?

10                   Explain to us how it worked.

11                   **A.**    Sure.  So there are basically four factors  
12           that I'm looking at.

13                   One is the price of the medication from  
14           Dr. Nabhan's report.

15                   The next is her statistical life expectancy,  
16           for how long we're going to make this calculation.

17                   Then we have to account for two factors for  
18           present value.  The one is future growth, what is  
19           inflation likely to be.

20                   And then finally, we have to account for the  
21           fact that money set aside today can earn interest, so  
22           you don't have to set aside as much.

23                   So you put all those factors together to  
24           calculate the present value of the medication.

25                   **Q.**    I don't want to get too deep into the economic

1 weeds, but do you use something like the U.S. Treasury's  
2 zero-coupon STRIPS.

3 I don't know what that is; explain it to me.

4 **A.** Sure. Basically, they're government bonds.  
5 If you think about it, someone can invest money in  
6 government bonds, and there's a percentage they will  
7 earn on that money.

8 So that's what we assume. Money today can be  
9 set aside to grow each year over the damages period.

10 **Q.** And you used the National Vital Statistics  
11 Reports for expected life tables?

12 **A.** Yes.

13 **Q.** And that's from the National Center for Health  
14 Statistics?

15 **A.** Right. That's part of the Center for Disease  
16 Control.

17 **Q.** And lastly, price changes are based upon the  
18 Bureau of Labor Statistics?

19 **A.** Yes.

20 **Q.** And Council of Economic Advisors.

21 What is that all about?

22 **A.** Well, we want to see what inflation has been  
23 historically. We don't know how prices are going to  
24 change in the future, so we look at what they've been,  
25 on average, in the past.



1           The Bureau of Labor Statistics reports changes  
2 in what we call inflation, right? How much more  
3 expensive is milk and butter and that sort of thing each  
4 year?

5           So we get inflation statistics from that  
6 source.

7           **Q.** Just real quick, if you can explain to us what  
8 present value means, where we have to come up with a  
9 number now.

10          **A.** Sure. So present value, what it really means  
11 is, how much money do we need to set aside right now,  
12 today, in order to cover, in this case, the price of  
13 medication over the rest of Mrs. Pilliod's life  
14 expectancy?

15                 And we have to account for future inflation,  
16 how much are the prices expected to increase? And we  
17 have to account for interest. We put money aside, it  
18 can earn money.

19                 So as a simple example, I have an older  
20 brother, and let's say I borrowed money from him. And  
21 in one year, I owed him \$110. And let's say that I  
22 could find a bank today that paid 10 percent interest.

23                         Yeah, it doesn't exist.

24                         But I could put \$100 in the bank today. In  
25 one year, I would have \$110, and I could take it out and

1 pay him.

2 Or I could just give him \$100 today. He could  
3 put it in the bank, and in one year he would have \$110.

4 So in that example, \$100 today is the present  
5 value of \$110 in one year.

6 Q. Did you reduce the number -- the calculated  
7 future cost of Revlimid to a present value?

8 A. I did, yes.

9 Q. Okay. And did you rely on medical assumptions  
10 from Dr. Nabhan and from Alberta Pilliod in reaching  
11 your conclusion?

12 A. Yes. Primarily from Dr. Nabhan's report.

13 Q. Okay. So tell us what your opinions are and  
14 how you arrived at them.

15 A. Sure. So based on Dr. Nabhan's report, the  
16 price for Revlimid is -- effectively, it's \$20,338.69  
17 for 28 capsules, all right?

18 That works out to be about \$726.38 per  
19 capsule, okay?

20 From his report, basically, the dosage is one  
21 pill every day for three weeks, and then off for a week.  
22 So every 28 days, you take 28 pills, which works out --

23 Q. Over 28 days, how many pills?

24 A. Thank you.

25 Every 28 days, 21 pills. Excuse me.

1           **Q.**    Okay.

2           **A.**    So that works out to roughly 200 -- just shy  
3 of 274 pills per year.  So if we look at that per-pill  
4 cost of \$726.38, it works out to \$198,912 a year.

5                    So we take that number.  We assume it  
6 increases every year by average medical inflation.  
7 Historically, it's been 5.3 percent.

8                    And then, again, we don't have to have all  
9 that money, because we know we can set less aside today.  
10 So we reduce it back to present value based on current  
11 treasury yields, and then we end up with the present  
12 value.

13           **Q.**    How did you calculate life expectancy?  You  
14 used those statistics, how many years?

15           **A.**    So based on the life expectancy tables --  
16 which take into account somebody's age, gender, and  
17 race -- and based on Mrs. Pilliod's current age of 75,  
18 her statistical life expectancy is to age -- just shy of  
19 88.  It's 87.8.  So about 12.3 -- 12.7 additional years,  
20 excuse me.

21           **Q.**    So you multiple that out, then you reduce it  
22 to present value.

23                    What's the ultimate number for the future cost  
24 of Revlimid in current dollars?

25           **A.**    Total present value over the rest of her

1 lifetime is \$2,957,710.

2 Q. 2 million -- I don't know --

3 A. I'll say it again: 2,957,710.

4 Q. That's the present value?

5 A. Correct.

6 MR. MILLER: Thank you. There may be some  
7 questions from Monsanto's attorney.

8 CROSS-EXAMINATION

9 BY MR. ISMAIL:

10 Q. Hi, Mr. Mills.

11 A. Good afternoon.

12 Q. Some questions for you, sir.

13 With respect to the scope of your opinions  
14 here, you're not offering any opinions with respect to  
15 any medical expenses that Mr. Pilliod has going forward,  
16 correct?

17 A. Correct.

18 Q. Nor Mrs. Pilliod beyond the Revlimid, correct?

19 A. Correct.

20 Q. So with respect to the medicine itself, you  
21 have no information about that drug in particular, true?

22 A. Right. Other than the price, correct.

23 Q. Which I'll get to in a minute.

24 But in terms of the -- do you know who  
25 prescribes it for Mrs. Pilliod?

1           **A.**    No.

2           **Q.**    Now, you've never spoken with Mrs. Pilliod,  
3 correct?

4           **A.**    I have not.

5           **Q.**    Nor have you spoken with her treating  
6 physicians, obviously, who prescribed the medicine for  
7 her?

8           **A.**    That's correct.

9           **Q.**    And you don't know when Mrs. Pilliod was  
10 prescribed the medicine initially, correct?

11          **A.**    Well, I do know that, according to  
12 Dr. Nabhan's report, I think it was initially April of  
13 2017.

14          **Q.**    So just by reference to Dr. Nabhan's report is  
15 how you got the information that you just testified to,  
16 correct?

17          **A.**    Exactly.

18          **Q.**    And you have not seen any prescription records  
19 for Mrs. Pilliod for that medicine, true?

20          **A.**    True.

21          **Q.**    And you've not seen any records that show how  
22 much that medicine has actually cost Mrs. Pilliod,  
23 correct?

24          **A.**    That's correct.

25          **Q.**    And fair to say, sir, that you have no idea

1       how much Revlimid has actually cost Mrs. Pilliod  
2       historically, correct?

3             **A.**    That's true, yes.

4             **Q.**    And you have no independent basis to talk with  
5       this jury about what it's going to cost her going  
6       forward, true, in her particular case?

7             **A.**    True.  I only know the price.

8             **Q.**    And when you say "the price," what you're  
9       talking about is a price that Dr. Nabhan found on the  
10      internet, correct?

11            **A.**    That's correct.

12            **Q.**    And so the price of the medicine is not the  
13      same thing as the cost to the patient, correct?

14            **A.**    Sometimes that's true, yes.

15            **Q.**    And in Mrs. Pilliod's case, have you seen any  
16      record evidence that the jury has heard from that the  
17      cost historically to her has been zero?

18            **A.**    Again, I haven't seen any documents as to her  
19      actual costs.

20            **Q.**    And so going forward -- have you seen -- has  
21      anyone advised you that her prescribing physician,  
22      Dr. Rubenstein, said that Revlimid could cost less than  
23      the amount that Dr. Nabhan testified to?

24            **A.**    I've not seen that, no.

25            **Q.**    And so to the extent that's information this

1 jury has heard about this medicine, your calculation  
2 would not reflect what her actual physician has said  
3 about the cost of the medicine, correct?

4 A. Correct. I haven't seen that information.

5 Q. In terms of the assumptions you made about the  
6 cost of the medicine going forward, you had an escalator  
7 in the price of the medicine, right?

8 A. Right.

9 Q. There are many factors that can influence  
10 pharmaceutical drug pricing, correct?

11 A. Sure.

12 Q. One of which would be whether there's patent  
13 protection for the medicine and if there's a generic  
14 available?

15 A. Right.

16 Q. And currently, you understand that this is a  
17 branded drug, Revlimid?

18 A. That's my understanding.

19 Q. And you have not investigated as to when, in  
20 fact, there will be generic competition for that drug  
21 that would lower the price, correct?

22 A. Right, yep.

23 Q. And so to the extent that there is generic  
24 competition, you would expect -- just based on  
25 information that you may have picked up elsewhere --

1 that the price of the medication would actually be lower  
2 than what you assumed in your calculations, true?

3 A. With that, I would have to say not  
4 necessarily.

5 Q. It could be yes, could be no; you don't know?

6 A. Right. But also sitting here today, we also  
7 know that that's not the case.

8 Q. So currently, we say it's a branded drug. But  
9 going forward, in the future -- so, for example, you  
10 have no idea when Revlimid is going off-patent and  
11 generic competition will be introduced for the drug?

12 A. True.

13 Q. To the extent that will occur during the time  
14 frame during which you made your calculations, that  
15 could affect the reasonableness of the assumptions you  
16 made in this case, correct?

17 A. No.

18 Q. Say that again?

19 A. No.

20 Q. So let me try this a different way.

21 To the extent that there's generic  
22 introduction of the medicine, that could result in a  
23 lower price going forward for the individual in further  
24 years, correct?

25 A. If that happens, that's possible, yeah.



1           **Q.**    That's what I'm getting towards.

2                        So today, you're making the assumption that  
3   the price of the medicine is going to go up year after  
4   year after year for the next 13 years, correct?

5           **A.**    Correct, yes.

6           **Q.**    That's all I'm getting to.

7                        Let me just check and make sure I have no  
8   further questions for you, sir.

9                        That's all I have.   Thank you very much,  
10   Mr. Mills.

11                      **MR. MILLER:**   Thank you for your time,  
12   Mr. Mills.

13                      **THE COURT:**   Okay.   You are excused.

14                      **THE WITNESS:**   Thank you, Your Honor.

15                      **THE COURT:**   Okay, Mr. Wisner.

16                      **MR. WISNER:**   Our next witness will be a  
17   Monsanto employee, Samuel Murphey.

18                      It was a deposition taken on January 22nd,  
19   2019.   The total run time was 31 minutes, of which the  
20   plaintiffs' portion is 28 minutes, the defendant's is  
21   2 1/2 minutes.

22                      Two important points about this, Your Honor.

23                      One of the cameras in the deposition video  
24   says 2018, and the other one says 2019.   That was just a  
25   mistake.   It's 2019.   It wasn't a magical depo.

1                   And the other issue, Your Honor, Mr. Murphey  
2 was a corporate representative for Monsanto for this  
3 deposition, which will be illustrated in the depo.

4                   (Video excerpts from the deposition testimony  
5 of Samuel Murphey played in open court; not reported  
6 herein.)

7                   **MR. WISNER:** That concludes it.

8                   **THE COURT:** You have one more?

9                   **MR. WISNER:** We have one more that's  
10 38 minutes. We can take a short break now, or just run  
11 through it.

12                   **THE COURT:** I think we can keep going.

13                   **MR. WISNER:** The next witness we're going to  
14 call, Your Honor, by video deposition, is James Guard.  
15 It was taken in St. Louis, Missouri, on September 14th,  
16 2018. The total run time is 37 1/2 minutes. The  
17 plaintiffs' portion is 29 minutes, and the defendant's  
18 portion is 8 1/2 minutes. This also, like the previous  
19 one, was a representative deposition.

20                   (Video excerpts from the deposition testimony  
21 of James Guard played in open court; not reported  
22 herein.)

23                   **MR. WISNER:** There's a short Monsanto portion.  
24 It's about 8 minutes.

25                   **THE COURT:** Okay.

1 (Video excerpts from the deposition testimony  
2 of James Guard resumes playing in open court; not  
3 reported herein.)

4 **MR. WISNER:** Your Honor, we just have a couple  
5 of stipulations to read, and I think we'll be ready to  
6 finish our case.

7 **THE COURT:** Okay.

8 **MR. WISNER:** The first is a stipulation  
9 regarding past economic damages.

10 "Number 1: Alva Pilliod's past medical  
11 expenses for care and treatment for  
12 non-Hodgkin's lymphoma, \$47,296.01.

13 "2: Alberta Pilliod's past medical expenses  
14 for care and treatment for non-Hodgkin's  
15 lymphoma, \$201,166.76.

16 "3: These expenses were reasonable and  
17 necessary for treatment of their non-Hodgkin's  
18 lymphoma."

19 Next stipulation is regarding ability to pay.

20 "Number 1: In 2018, Monsanto's net worth was  
21 \$7.8 billion" --

22 **MR. EVANS:** Objection, Your Honor.

23 **THE COURT:** Hold on a second.

24 Is there an objection?

25 **MR. EVANS:** Can you take that down?

1           **MR. WISNER:** Sure.

2           **MR. EVANS:** Can we approach?

3           (Sidebar discussion not reported.)

4           **MR. WISNER:** Stipulation:

5           "Number 1: In 2018, Monsanto's net worth was  
6           \$7.8 billion.

7           "Number 2: In 2017, Monsanto's net sales of  
8           agricultural chemicals totaled \$3.7 billion,  
9           with a gross profit of \$892 million. In 2017,  
10          Monsanto spent \$1.6 billion on research and  
11          development."

12          And with that, Your Honor, thank you so much  
13          for your time. The plaintiffs rest.

14          **THE COURT:** Ladies and gentlemen, we're going  
15          to be finished for the day, and we're actually finished  
16          for the week.

17          Plaintiffs have completed their case.  
18          Defendants will begin presenting their case on Monday,  
19          so we will not be in session. I'm going to work with  
20          the lawyers on a couple of other things so we keep the  
21          case moving and get the case to the jury as originally  
22          promised.

23          So you will not be here tomorrow, Wednesday,  
24          and you also will not be here Thursday. I will see you  
25          on Monday. Next week, you will only be here Monday,

1 Tuesday, and Wednesday. So Thursday, you will not be in  
2 session that day either, so just to remind you about  
3 that.

4 So it's very critical not talk about anything  
5 you've heard so far. I know I say this every day, but  
6 it's particularly important to not feel that any part of  
7 it is complete until it's all complete.

8 You have to listen to both sides. You have to  
9 listen to Plaintiffs' evidence and listen to Defendants'  
10 evidence. And then once I give you jury instructions,  
11 which I provide for your consideration for all of the  
12 evidence, you'll be able to have a context and a  
13 framework for considering all the evidence.

14 And I say all that just because it's very easy  
15 to slip into, okay, what does this look like? Don't do  
16 that. Go out and be happy that you're not here  
17 tomorrow. Forget you're jurors. Come back on Monday,  
18 ready to hear the remainder of the case.

19 I appreciate your time so far, as do the  
20 parties and all of the lawyers. You've been very  
21 patient. You've been very attentive, and we're going to  
22 continue with the case on Monday, okay?

23 So thank you very much, and have a good, long  
24 weekend.

25 (The following proceedings were heard out of

1 the presence of the jury:)

2 **MR. EVANS:** I just want to put that sidebar on  
3 the record, please.

4 **THE COURT:** Okay. You can do that.

5 **MR. EVANS:** I objected to what Mr. Wisner  
6 showed to the jury. He captioned it as a stipulation.  
7 And on the title of the -- what he flashed up, it was  
8 titled "Ability to Pay," and then he had numbers put up  
9 in red font.

10 Again, that was not shown to me. I agreed to  
11 the numbers, that's completely true. I told him  
12 yesterday that I wanted the Court to read those numbers  
13 as a stipulation of the parties; it's not the same as a  
14 request for admission, which he can do whenever he  
15 wants, and he's done that.

16 But it's very clear that when I objected, and  
17 we had a sidebar, he went back and immediately put up a  
18 different demonstrative, which had a title stipulation  
19 with the red taken off, in literally one second.

20 So the concept that this wasn't, you know -- I  
21 just think it's completely improper to put that up and  
22 say it's a stipulation to ability to pay, when he knows  
23 very well that's not what was agreed to, and it's  
24 improper and prejudicial.

25 **THE COURT:** Mr. Wisner, would you like to

1 respond?

2 **MR. WISNER:** Yes.

3 Once again, Mr. Evans likes to pontificate  
4 about my thought process. The simple fact is, in our  
5 email exchanges about this very stipulation, he referred  
6 to it as ability to pay; not me. So that word actually  
7 comes from him; not me. And I can show the Court the  
8 emails. I was looking for them on my phone. I don't  
9 think we need it.

10 The second is the purpose of the stipulation  
11 and showing it to the jury is so they can write it down  
12 and hear what it says.

13 They had no objection to the way we presented  
14 the stipulation immediately prior about the past medical  
15 expenses. And suddenly, when I put this up, there was a  
16 fight.

17 So I think it's a disingenuous objection. It  
18 is part of the obstructionist efforts that they have  
19 used throughout this litigation to object whenever they  
20 feel free to. And I oppose it, and I think we came to  
21 an agreement that if I changed the color and took off  
22 "ability to pay," we could read it.

23 And so I believe the issue was resolved  
24 through agreement at sidebar.

25 **THE COURT:** Okay.

1 Yes, Mr. Ismail?

2 **MR. ISMAIL:** No, Your Honor.

3 **THE COURT:** So having registered your  
4 objection on the record, I don't think there's any undue  
5 prejudice.

6 I think, going forward, I'll read the  
7 stipulations. Occasionally, the parties read the  
8 stipulations. But please, before -- I'm going to have  
9 to see it, so I'll know there was an agreement. I  
10 didn't realize that there wasn't agreement, so I was  
11 unclear exactly what the problem was. But now that I  
12 understand it, I think it's probably better that I will  
13 either read the stipulation, or at least be aware  
14 before, so that if there's a problem, we can iron it out  
15 before we start the process.

16 **MR. WISNER:** Thank you for reminding me,  
17 Your Honor.

18 Actually, yesterday, I told Mr. Evans, we are  
19 going to read it; if you have an issue, raise it with  
20 the Court. I then repeated this again to Mr. Ismail  
21 earlier today. And I said, if you have a problem, raise  
22 it with the Court.

23 So since they hadn't raised it with the Court  
24 despite multiple meetings, I assumed there was no issue.  
25 I clearly misunderstood their lack of action again.



1                   **THE COURT:** I don't want to start throwing  
2 flames.

3                   **MR. MILLER:** Thursday at 11:00 a.m.,  
4 Your Honor?

5                   **THE COURT:** Yes.

6                   **MR. BROWN:** We have a motion under  
7 CCP Section 581c. We intend to file a written motion  
8 tomorrow. It seems to me that it would be most  
9 efficient to argue the motion in total probably on  
10 Thursday, but we're reserving our right to do that.

11                   **THE COURT:** Okay.

12                   **MR. BROWN:** If that is satisfactory with the  
13 Court.

14                   **THE COURT:** You certainly have a right to file  
15 the motion. And so why don't you serve your papers.  
16 Sometimes they're oral, sometimes they're written, but I  
17 assume you want a record.

18                   **MR. BROWN:** We absolutely do. We're prepared  
19 to briefly argue the motion right now, if the Court  
20 would like for us to do that. But I thought it would be  
21 more efficient to --

22                   **THE COURT:** I would rather wait until you file  
23 whatever you're going to file. Give the plaintiffs an  
24 opportunity to prepare a response, either orally or  
25 written, so that we can kind of have some order on the

1 record as to what's occurring, everyone has notice of  
2 what the arguments are.

3 So why don't we plan on that. And we'll be  
4 here Thursday, and I'll reserve some time Thursday,  
5 probably towards the end of the day, to give everybody  
6 enough time to craft their arguments.

7 **MR. BROWN:** Very good, Your Honor.

8 **MR. ISMAIL:** Just one housekeeping thing.  
9 There's going to be some exhibit admissions that were  
10 referred to or published in the plaintiffs'  
11 case-in-chief that have not been yet tendered to the  
12 Court. The plaintiffs have formally rested.

13 Mr. Wisner and I have talked. There's no  
14 objection to formally moving those exhibits into  
15 evidence during our case-in-chief, even though they were  
16 admitted -- I'm sorry -- referred to with prior  
17 witnesses. And the same with respect to the IARC  
18 Monograph, that Mr. Wisner says we have that  
19 understanding.

20 I just wanted the record to reflect that.

21 **MR. WISNER:** We don't object to the timing of  
22 the presenting. We might object to an exhibit, but  
23 we'll see when they present it to us.

24 **THE COURT:** That's fine.

25 And I'm going to file the orders on the

1 documents I sort of alluded to having something put  
2 together. But I wanted it to be in the record in a more  
3 orderly way, including the first order I did orally.

4 But just to keep track of things, I'll file  
5 the complete written order so we know what way we're  
6 going, including your denial of the motion for  
7 consideration, your denial for Dr. Levine, which I  
8 heard. So I'll have a sort of series of orders in the  
9 record so everyone will be clear on what's been ruled on  
10 and hasn't been ruled on.

11 I don't think there's anything else  
12 outstanding. If you can think of something I haven't  
13 either ruled on or filed a written order on, let me know  
14 so we can make sure our record stays clean, okay?

15 See you Thursday at 11:00.

16 (Proceedings adjourned at 4:10 p.m.)

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We, Kelly L. Shainline and Lori Stokes, Court Reporters at the Superior Court of California, County of Alameda, do hereby certify:

That we were present at the time of the above proceedings;

That we took down in machine shorthand notes all proceedings had and testimony given;

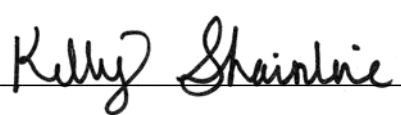
That we thereafter transcribed said shorthand notes with the aid of a computer;

That the above and foregoing is a full, true, and correct transcription of said shorthand notes, and a full, true and correct transcript of all proceedings had and testimony taken;

That we are not a party to the action or related to a party or counsel;

That we have no financial or other interest in the outcome of the action.

Dated: April 23, 2019



Kelly L. Shainline  
CSR No. 13476, CRR



Lori Stokes  
CSR No. 12732, RPR