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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

Before The Honorable Vince Chhabria, Judge

IN RE: ROUNDUP PRODUCTS LIABILITY LITIGATION	)	**NO. 16-md-02741 VC**

San Francisco, California
Monday, February 11, 2019

TRANSCRIPT OF PROCEEDINGS

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P R O C E E D I N G S

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THE CLERK: Calling Case number 16-MD-2741, In Re: Roundup Products Liability Litigation.

Counsel, please state your appearances for the record.

MS. WAGSTAFF: Good morning, Your Honor, Aimee Wagstaff for the Plaintiffs and with me is Jennifer Moore, Kathryn Forgie, Brian Brake, Rudie Soileau and Tesfay Tsadik.

MR. STEKLOFF: Good morning, Your Honor, Brian Stekloff on behalf of Monsanto. Along with me is Tammy Matthews Johnson, Mr. Imbroscio and Mr. Kilaru.

THE COURT: Good morning. Before we get started, I thought I might begin to provide you all with a little bit of guidance for Wednesday because there are so many issues; and there is so much for you to prepare for, I thought it would be helpful to pare it down for you if I could.

First of all, before I forget, Dr. Arbor's expert report, we think is not in the record. If you all could just get us -- just file Dr. Arbor's expert report.

On -- so in terms of what we will and won't talk about on Wednesday, on Monsanto's summary judgment motion relating to issues other than the experts, the only issue I want to hear argument about is -- is the statute of limitations issue for Mr. Gebeyehou. I won't -- I don't need to hear argument on any

of those other issues. So to the extent you have already begun preparing for that, I apologize.

With respect to the experts, I will want to hear argument on the motion to exclude all or portions of Monsanto's specific causation experts and I will give you -- I will probably put out some guidance or a tentative ruling or something like that before Wednesday on that issue. I will also want to hear argument on the motion to exclude Plaintiff's specific causation experts.

And then I think that leaves -- so that leaves the motions in limine, which I haven't begun going through yet. So I'm not sure -- I may put something out before Wednesday telling you what I want to hear argument about and what I don't on the motions in limine, and then that leaves -- I think the only other issue we would potentially discuss on Wednesday is the motion to exclude experts that are offering opinions on something other than specific causation. And on that, I'm not sure -- I'm actually -- I'm not sure yet whether I -- I want to hear argument on any of those. I may and, again, I probably will put something out on that to give you guidance before Wednesday. Is there anything I'm forgetting that we would potentially be discussing on Wednesday?

MR. STEKLOFF: I don't believe so in terms of pending motions, Your Honor.

MS. MOORE: Your Honor, I think the only other item on

the agenda would be jury instructions if we want to talk about the jury instructions for Phase One.

THE COURT: Yes, and at least we probably ought to nail down the causation instructions or instruction at least for Phase One. I assume -- I assume for Phase One it will just be the standard introductory instructions that I always give; and causation is really all we need to nail down at the -- at the front end for Phase One, right?

MS. MOORE: I think causation will help us with the verdict form too.

THE COURT: And the verdict form, yeah. Yes, we will talk about that on Wednesday as well.

MS. MOORE: Great. Thank you, Your Honor.

THE COURT: Sounds good. With that, are we ready to go with our final Daubert hearing?

MS. MATTHEWS JOHNSON: Yes, Your Honor.

THE COURT: All right. Do we have Dr. Weisenburger here?

MS. MATTHEWS JOHNSON: We are going to begin with the Cross-Examination based on Your Honor's prior instructions.

THE COURT: Right. Hello again.

THE WITNESS: Good morning.

DENNIS WEISENBURGER,

called as a witness for the Plaintiffs, having been duly sworn, testified as follows:

THE CLERK: For the record, please state your first and last name and spell both of them.

THE WITNESS: Dennis Weisenburger, D-E-N-N-I-S, W-E-I-S-E-N-B-U-R-G-E-R.

THE CLERK: Thank you.

MS. MATTHEWS JOHNSON: May we proceed, Your Honor?

THE COURT: Sure.

CROSS-EXAMINATION

BY MS. MATTHEWS JOHNSON

Q. Good morning, Dr. Weisenburger.

A. Morning.

Q. You are here this morning to offer opinions on specific causation as it relates to three Plaintiffs. Mr. Hardeman, Mr. Gebeyehou and Ms. Stevick; is that correct?

A. Yes.

Q. And that's Stevick without an S, sorry.

MS. MATTHEWS JOHNSON: I would like to move into the record your expert reports on specific causation for each of those. Just for the record, for Hardeman it is Exhibit 2100; for Mr. Gebeyehou, it is 2101 and for Ms. Stevick it is 2101.

THE COURT: Any objection?

MS. WAGSTAFF: No objection.

THE COURT: Admitted.

(Trial Exhibit 2101 received in evidence)

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BY MS. MATTHEWS JOHNSON

Q. You have a couple of binders with materials. Those expert reports are in front of you, sir, correct?

A. Thank you.

Q. In the course of putting together these reports, you reviewed medical records for each of the Plaintiffs; is that correct?

A. Yes, it is.

Q. And you spoke with each of them by telephone approximately 45 minutes to an hour; is that right?

A. Yes.

Q. Okay. And you did not conduct a physical examination of any of the Plaintiffs?

A. I did not.

Q. In the course of speaking with them for that 45 minute to an hour period, you were looking to determine the minimum amount of Roundup exposure they had?

A. I was looking to determine overall what kind of Roundup exposure they had. I was looking to clarify some points in the medical record and to go through the differential diagnosis of -- with regard to specific causation.

Q. And with regard to exposure, you were using as a benchmark particular epidemiology; and you were looking to see, fair to say, that the minimum exposure would be at least two times per year and at least a total of ten times so you would be able to

determine that the Plaintiffs' Roundup exposure was a substantial contributing factor to his or her development of NHL; is that right?

A. Well, I used those sort of as a baseline or a guideline; but I didn't use them as sort of an absolute floor number to decide whether any of them had a high exposure or not. So I used them as a guideline.

Q. Well, the guideline provided a threshold. If it surpassed that threshold, you determined that Roundup exposure was a significant contributing factor; is that right?

A. Not necessarily. So, for example, let's take Mr. Hardeman as a -- just as an example. If he had only been exposed greater than two days and two years, that would have been only four exposures. I wouldn't have considered that a high exposure, okay. So one has to look really at each of the cases and determine on the basis of what they tell you what their exposure really was; and the exposure for all three of these cases was much, much higher than those floor limits, if you will, from the epidemiology studies.

Q. Right.

A. So it wasn't an automatic decision. It wasn't if it is above this, they are in. If it is not above this, they are out. So I looked at all the parameters related to exposure.

Q. In your answer, sir, you just gave -- I don't like to do math on the fly -- you did say two days per year for four years

for a total of eight days which would be below the *Eriksson* 2008 threshold of ten lifetime days, right? That's what you just said in your answer, eight lifetime days.

A. I don't know what I said. I meant to say two years -- two days per for two years, so that is four days.

Q. That's why I said I don't do math. That is below the *Eriksson* ten days lifetime exposure, correct?

A. It is, yes.

Q. So what I was asking about was a different bit of math, which is two days per year for at least five years for a total of ten lifetime days. And my question was: If a Plaintiff exceeded that threshold, would you then determine that Roundup exposure was a substantial contributing factor in his or her development of NHL?

A. I don't know. I didn't have to make that decision. I would say probably not because that isn't very much exposure.

Q. Well, in another deposition, sir, you gave relating to a different Plaintiff -- a Ms. Adams -- you were asked about -- Adams is the lead Plaintiff, excuse me -- in this case you were asked about Ms. Gordon. That is a different case. That was a Plaintiff where you also offered an expert opinion, is that correct, about specific causation?

A. Yes.

Q. Okay. And in that instance you were asked: If you took Ms. Gordon's circumstances and said everything was the same

except that she testified and told you on the phone that she had used glyphosate two times a year for five years, ten times total, would any of your opinions be different? Do you recall that? And your answer was no.

MS. MOORE: Your Honor, can they refer to --

THE WITNESS: The reason I said --

MS. MATTHEWS JOHNSON: I'm happy to lay more foundation.

MS. MOORE: I was just going to say, if she is referring to a specific page and line number in the deposition, if she can refer that to the witness, please.

THE COURT: Yes.

MS. MATTHEWS JOHNSON: Absolutely.

BY MS. MATTHEWS JOHNSON

Q. If we can go to Exhibit 2107 and if you would please go to page 114, sir.

A. Okay. You are on what line?

Q. Making sure I'm in the right place too. Okay. Line 5. Can we bring it up? So line 5, we are beginning at line 5, page 114. Okay. I just want to take Ms. Gordon's circumstances and say everything is the same except that she testified and told you on the phone that she had used glyphosate two times a year for five years, ten times total, would any of your opinions be different?

No. You would have the same -- I'm sorry -- you would

have the exact same opinions.

Answer, yes.

Do you recall that testimony, sir?

A. I don't recall it, but I see it now, yes.

Q. Okay. And with respect to Plaintiff Hardeman, Plaintiff Gebeyehou, Plaintiff Stevick, you were looking to see if they, each of them, had two days per year, ten total lifetime days or uses of Roundup; and based on that, sir, you ruled in Roundup as a substantial contributing factor to each Plaintiffs' development of NHL; is that correct?

A. That was a long, complicated question. Can you please repeat it?

Q. Sure. I would be happy to. When you looked at the exposure for each of the Plaintiffs -- Gebeyehou, Hardeman, and Stevick -- if you saw that they had been exposed to Roundup for two days per year, and a total of ten lifetime days, you then, based on that, ruled in Roundup as a substantial contributing factor in each Plaintiffs' development of NHL; is that correct?

A. I did, but it was based on much higher exposure than those floor limits.

Q. You are saying, in fact, you thought they had more exposure. I'm asking you about your methodology of ruling in Roundup.

A. So what are you asking me?

Q. Based on the epidemiology were you were using two days per

year, ten lifetime days, as your basis for ruling in Roundup?

A. I was using it as a guideline. It wasn't a floored number, a hard number. I was using it as a guideline.

Q. That was your guideline for determining sufficient exposure, correct?

A. Not necessarily. Not necessarily. As I told you, if Mr. Hardeman only been exposed twice a year for two years -- he only had four exposures -- he would have met the criteria for one of those but not the other. I wouldn't have ruled it in. So these are --

THE COURT: Dr. Weisenburger, if I could interrupt, it does seem like you are not answering the question. I think her question is: If Mr. Hardeman were exposed twice a year for five years, would you rule -- would you rule it in? That's the question. You keep going to twice a year for two years, and you say, I wouldn't -- I would say that's not enough; but she keeps asking you -- what she is trying to get at is -- it seems like your methodology is that once somebody has been exposed twice a year for at least five years, that that you would conclude that NHL is a substantial -- excuse me -- that glyphosate is a substantial contributing factor to their NHL. That's really the question you should be answering now. Yes or no.

THE WITNESS: It is a hypothetical. I would say I would probably change my testimony and say no because I would

have to look at all the rest of the exposure that goes on. So, you know, ten times over a lifetime is not very much exposure and I would probably say no. I would probably recommend to the lawyers to settle on that case and not take it to trial because I don't think it would be a very strong case.

BY MS. MATTHEWS JOHNSON

Q. When you say ten days, two days per year, you would say that that's not sufficient? Is that -- you did mention changing your testimony. So just going back, if we could, just call up the previous testimony, and then we are going to walk through a little bit more testimony. If we can go back to where we were a moment ago, which was at Adams, page 114, are you saying here that you are changing your testimony given under oath in this case -- just for the record -- sorry, given on November 26, 2018 in the case of *Adams V Monsanto Company*?

A. Yeah, I'm changing my testimony. You know, I was taken through a whole litany of hypotheticals that were not really very relevant to the case, and this is an example of that.

Q. Okay. Let's go back one page in the same sworn testimony to see if there is any other testimony you would like to change. If we can go to page 113, line 6, please -- and we are going to call it 6 through 21, sorry. I should have -- Doctor, are you with me now? I'm on page 113, line 6 through 21.

MS. MOORE: Counsel, his answer goes up to page 114.

MS. MATTHEWS JOHNSON: I'm going to -- we will take it

one step at a time.

BY MS. MATTHEWS JOHNSON

Q. The question is: Okay. So is it -- just to push a little bit on that, is it fair to say that you would -- that your minimum exposure would be at least two times per year and at least a total of ten times for you to be able to determine that the Plaintiff's Roundup exposure was a substantial contributing factor to his or her development of NHL?

And we will do the whole answer. Well, those are the only things that I would know to really base my opinion on, so I would say, yes, that would be at least the minimum exposure to say she has a relative risk of greater than 2 for diffuse large B-cell lymphoma -- if you go to the next -- but obviously her exposure was much higher than that.

MS. MOORE: It says greater.

BY MS. MATTHEWS JOHNSON

Q. Excuse me. Much greater than that, so her risk probably was higher than that. Okay. If you believe that there is a dose response, her risk probably would have been much higher; but we don't have data on that.

And then we go onto the testimony that you gave in response to the hypothetical. And so are you here saying now that your testimony on page 114 is the testimony that you would now like to change?

A. Yes.

Q. Now, let's go to page 69 to see if you would -- if there is any testimony that you would like to change there. Same deposition. Okay. We are looking at page 69, and we are going to start at line 8. If you can call out that whole area, yes.

Absent any causative risk factors other than glyphosate, if a patient has -- I'm starting with glyphosate intentionally --

A. What line are you?

Q. I apologize. We are on page -- you can also look on your screen. I'm doing the same thing you are doing, crossing back and forth. If you go to page 69, and if you start -- it kind of starts in the middle of that line, sir, if you look at line 8. Absent any causatives risk factors other than glyphosate -- are you with me, sir?

A. Yes.

Q. Absent any causative risk factors other than glyphosate, if a patient has -- I'm starting with glyphosate intentionally -- as to any causative risk factors other than glyphosate, if a patient has sufficient exposure to glyphosate, would you say that the cause of his or her cancer in every instance is the glyphosate?

And your answer is: I would say it's more likely than not glyphosate.

Question: And if I asked you the same question about Roundup, your answer would be the same?

And your answer is yes.

A. I would stand by that.

Q. And what you are saying now is that you are changing your testimony as to what sufficient exposure to glyphosate is, sir?

MS. MOORE: Objection. Misstates his testimony.

THE COURT: Overruled. You can answer.

THE WITNESS: So a sufficient exposure to glyphosate is a subjective decision based on my expertise and the medical record and what I'm told, okay; and there is no specific floor for that.

BY MS. MATTHEWS JOHNSON

Q. And that's a --

A. So the epidemiology studies give you some parameters which -- to guide you but, in fact, the parameters are very -- they are only a couple factors, greater than two days or greater than ten days. So you have to weigh all the evidence in terms of exposure with -- in view of those.

Q. But you have testified that there is no data on the question of higher limits of exposure. Was that your testimony?

A. This isn't any data. That's right. So that's all the data you have. That's all the data we have.

Q. And --

A. So -- but it doesn't mean that is the floor that one would use to make a yes or no decision.

Q. That's what -- you are changing your testimony on the question of the hypothetical --

A. Yes.

Q. -- is that correct?

A. Because all three of these people had markedly higher exposures than these artificial floors created by the epidemiology studies, okay.

Q. When you say artificial floors, those are the floors you relied upon?

A. Yes, because this is the only data we have that we can rely on.

Q. If one hundred Plaintiffs are brought to you and they all use Roundup for at least two times per year, for at least five years, for a total of ten lifetime days and had no other causative risk factors, would you say Roundup was a substantial contributing factor in those cases?

A. I most likely would say no. It is most likely not Roundup.

Q. So under your methodology if there are no other causative risk factors and there is glyphosate exposure in keeping with the epidemiology you have cited, is glyphosate more likely than not the cause, sir, yes or no?

A. If it was only ten exposures over a lifetime, I would say probably not.

Q. What if it were two days per year, for five years for ten

lifetime days?

A. I would say probably not.

Q. With respect to each of these Plaintiffs, sir, have you testified for Mr. Hardeman in each of these cases -- I just want to establish this for the record -- Mr. Hardeman could he have been diagnosed with the same exact diffuse large B-cell lymphoma without exposure to Roundup? Could he have been diagnosed with the same cancer?

A. He could have but it is unlikely.

Q. If we can now go to Exhibit 2103, and that is your testimony in the Hardeman deposition, if we can go to page 93 of that testimony.

THE COURT: I'm sorry. I missed the exhibit number.

MS. MATTHEWS JOHNSON: Excuse me. Sorry, your Honor, it is Exhibit 2103.

THE COURT: Thank you.

THE WITNESS: What page?

BY MS. MATTHEWS JOHNSON

Q. We are now looking at lines 1 through 5 on page 93, sir. We will call out lines 1 through 5, please.

Question: And you would agree that Mr. Hardeman could have been diagnosed with the exact same diffuse large B-cell lymphoma without exposure to Roundup, true? And you said, It's possible.

A. He could have. Could have been idiopathic. It could have

been some other cause that we don't know.

Q. Just a moment ago you said it was unlikely. Now, are you sticking by that testimony?

A. Well, it is possible but unlikely.

Q. With reference to --

A. Anything is possible; right?

Q. Well, I'm asking, sir, these are all in the context of you appearing as an expert not -- you were here offering expert testimony. You are saying as an expert it is possible; is that correct?

A. It is possible but unlikely.

Q. What about Mr. Gebeyehou? Could Mr. Gebeyehou have been diagnosed with the same cancer without exposure to Roundup?

A. It is possible but unlikely.

Q. Would you agree that Ms. Stevick could have developed the exact same tumor without any exposure to Roundup?

A. Yes, it is possible but very unlikely.

Q. If we can go to Exhibit 2105, which is your testimony in the Stevick case, if we can go to page 102, if we can look at lines 15 through 18, please.

And the question asked there -- this is in the Stevick deposition -- would you agree with me, though, that Ms. Stevick could have developed the exact same tumor without any exposure to Roundup? And your answer there, sir, was yes.

A. Yes, it is possible but unlikely.

Q. In the record, sir, is your answer at line 18 yes, period?
A. Yes, but I'm modifying it to say it is possible but unlikely.
Q. Now, let's talk about some other causative -- as you call them -- causative risk factors because you do talk in your testimony about the difference between associations and what you consider to be causative risk factors; is that right?
A. Yes.
Q. So HIV -- we will start with HIV, it is a causative risk factor, correct?
A. Yes.
Q. Okay. And you have been asked this before. If you have a patient with active HIV; and their tumor doesn't have any markers for that virus or infection, and that person also has sufficient Roundup exposure, you would say in that situation more likely than not that Roundup was a substantial contributing factor; is that correct?
A. Is this a hypothetical? It is right.
Q. It is.
A. Yes. So in that situation I would say the most substantial contributing cause -- if those were the only ones that are left -- was the HIV, but I couldn't rule out that Roundup also contributed. In other words, you can have more than one contributing cause, okay.
Q. And in that hypothetical that is your answer, you can have

more than one contributing --

A. I would have to know how much exposure the person had to Roundup. Was it a substantial exposure like Mr. Hardeman had, for example, or was it ten days in a lifetime? I would have to look carefully at the exposure, and I'd have to look carefully at the degree of immunosuppression that he had with his HIV infection to know what his risk of getting lymphoma was. So it is much more complicated than just a simple hypothetical.

Q. What about a Plaintiff with active hepatitis C infection, if you had someone who had an active hepatitis C infection and sufficient exposure to Roundup, would you then still say that Roundup was a substantial contributing factor that their NHL?

A. It may well be a substantial contributing factor. There could be more than one substantial contributing factor in cases where you have two substantial contributing factors.

Q. So now, looking at hepatitis C, you agree, sir, that hepatitis C is a causative risk factor for NHL, correct?

A. Yes.

Q. And IARC has also analyzed the hepatitis C infection and classified it as a group 1 carcinogen; is that right?

A. Yes.

Q. And with respect to Mr. Hardeman, he was most likely exposed and infected with HCV in the 1960s?

A. Most likely, yes.

Q. I think you yourself noted, sir, that in 1980 when

Mr. Hardeman applied for insurance with Kaiser, he had elevated liver enzymes and was denied health insurance on that basis; isn't that correct?

A. Yes.

Q. And based on that, I think you noted, sir, that we know in 1980 that he had active hepatitis, isn't that right?

A. Most likely, yes. Most likely he had active hepatitis.

Q. Do you recall saying, quote, we know in 1980 that he had active hepatitis?

A. Well, most likely he did. I mean, we don't know for sure what was causing the elevated liver enzymes. We don't know the whole story. Most likely that's what it was, yes.

Q. Let's go to Exhibit 2103, which was your testimony in the Hardeman case. Go to page 1 -- I'm sorry, 35, excuse me. If we can just -- we are going to start at the bottom, line 20; and then we will keep rolling to the next page.

If you start at line 20, sir: We don't really know when he contracted hepatitis C. The most we know is that when he applied for medical insurance at Kaiser in 1980, he had elevated liver enzymes; and they wouldn't give him the insurance.

Go to the next page. And then we say -- looking at lines 1 through 6 -- at least we know in 1980 that he had active hepatitis. Before that we don't know. So it is likely it was in the '60s. That's when his risky behavior occurred, but we

don't really know there.

So, sir, in that testimony you were clear that we know in 1980 he had active hepatitis that was most likely contracted in the 1960s; is that right, sir?

A. Well, I would modify that a little bit. We know he had elevated liver enzymes. We don't know really know that he had hepatitis. He wasn't told he had hepatitis. I'm making the assumption that it was the hepatitis that caused the elevated liver enzymes. There are other things that can cause elevated liver enzymes. So it clearly is something else, but based on the story, it was most likely hepatitis.

Q. We know Mr. Hardeman had a chronic infection for hepatitis C for 25 to 40 years; is that right, sir?

A. That's what we are assuming. That's an assumption.

Q. We can go to page 71 of your Hardeman testimony, sir. This is Exhibit 2103. We are starting at the very bottom of that, very last line, and then we are going to the next page. So the bottom of 71 -- I will make sure you have time to get there, sir. Are you there with me?

A. Yes.

Q. We know Mr. Hardeman had a chronic infection for hepatitis C for 25 to 40 years, right? And your answer is right.

A. Should have been most likely, okay, but it probably is right.

Q. And you agree --

A. I mean, I don't try to hedge on every question that people ask me thinking about what a lawyer will ask me in a month or two. I'm trying to give a straightforward answer. I'm trying to give the best answer I can; but, you know, I'm making some assumptions here which I don't know are true.

Q. You agree, sir, that the latency period for exposure to HCV and the development of non-Hodgkin's lymphoma can range anywhere from 5 to 35 years? Do you agree with that, sir?

A. Yes.

Q. Decades?

A. Yes.

Q. And latency, sir, relates to the time it takes for cancer to develop; but is it also not an issue of when an existing cancer reaches a level at which it is detectable?

A. Well, usually latency is from the time of first exposure to when the diagnosis is made, okay.

Q. And can cancer exist and not exist at a level where it can be diagnosed so there is an issue of detectability where cancer exists?

A. Sure. There is a period of time before the diagnosis when the cancer exists when it is detectable, and then there is a period of time before that where it probably is not detectable. So there is a time before the diagnosis when it is not detectable, sure.

Q. And exists?

A. And exists, yes.

Q. You can't rule out the fact that chronic HCV infection for 25 to 40 years could cause mutations in Mr. Hardeman; is that correct?

A. It could cause mutations in Mr. Hardeman during that period of time.

Q. And, therefore, 25 to 40 years of chronic hepatitis C infection could have played a role in Mr. Hardeman's NHL?

A. It is possible but unlikely.

Q. Is it possible that the hepatitis C could very well have contributed -- could very well have contributed to Mr. Hardeman's NHL?

A. It is possible but it is very unlikely.

Q. Can we go to your testimony Exhibit 2103 in the Hardeman deposition and go to page 73.

THE COURT: 73?

MS. MATTHEWS JOHNSON: Yes, sir. Yes, Your Honor.

BY MS. MATTHEWS JOHNSON

Q. We will start -- starting at line 11, Doctor, on page 73. And you would agree that you cannot rule out the role that the 25 to 40 years of chronic hepatitis C infection played in his diffuse large B-cell lymphoma?

Your answer, it could have played a role. It could have played a role. You know, it is my position that the fact that he was treated -- he was in a sustained virologic remission for

nine or ten years could have markedly decreased the risk; but I can't be absolutely certain the hepatitis C didn't contribute to his non-Hodgkin's lymphoma. It very well could have. Is that your testimony, sir?

A. Yes.

Q. And so your testimony as of this day, that day and today, is that it could have played a role; but yet in your report you ruled out hepatitis C; is that right?

A. I did rule it out because I don't think it would meet the standard of substantial contributing cause, okay. And I can talk about why that is if you like; but I don't think it was a substantial contributing cause, and it could have played a role; but it is highly unlikely that it played a substantial role.

Q. When you were asked here under oath you cannot rule out the role, you answered, It could have played a role. Was that your testimony, sir?

A. Yes.

Q. Now, you may be aware of this; but there was an article that came up last week, sir, in testimony involving another witness and that was Exhibit 2052, which is in your binder.

THE COURT: Same binder?

MS. MATTHEWS JOHNSON: I'm not totally sure if it is in the same binder. It is in a different binder. It is Exhibit 2052.

BY MS. MATTHEWS JOHNSON

Q. The title of this article is "From Hepatitis C Virus Infection to B-cell Lymphoma." The lead author is Couronne.

A. Okay.

Q. Looking at the introduction, sir, it says persistent --

THE COURT: Do you want this admitted?

MS. MATTHEWS JOHNSON: I think Exhibit -- it's not?

THE CLERK: It has not been.

MS. MATTHEWS JOHNSON: We would like to admit that. Thank you, Your Honor.

THE COURT: Any objection?

MS. MOORE: None, Your Honor.

THE COURT: Admitted.

(Trial Exhibit 2052 received in evidence)

BY MS. MATTHEWS JOHNSON

Q. If we can look at the introduction, Persistent hepatitis C -- let me read the first sentence. Persistent hepatitis C virus infection is an etiological agent of chronic hepatitis that may evolve toward cirrhosis and hepatic carcinoma.

Then skip that next sentence. You say, This review aims to summarize evidence from epidemiological and clinical studies that have provided strong support for an etiological role of HCV in NHL development and maintenance.

And if we go to page 95 of this article, there is a section about DNA damages induction. It is the second column

towards the bottom. DNA damages induction. By activating error prone polymerases and aid, HCV is able to cause mutations in immunoglobulin heavy chain, BCL6, TP53 and beta-catenin genes of in vitro HCV infected B cell lines and HCV associated peripheral blood mononuclear cells and lymphomas and hepatocellular carcinomas. Did I read that correctly?

A. Yes.

Q. And if we go to the figure at the top of this page -- there is a lot happening here -- figure 2, and the caption of figure 2, it says: Model of Direct HCV Related B-cell Transformation Oncogenic Effects Mediated by Intracellular Viral Proteins. Did I read that correctly, sir?

A. Yes.

Q. At the top of this schematic they talk about gene mutations, p53, BCL6, CTNNB1. Do you see that, sir?

A. Yes.

Q. And they also talk about DNA repair alterations. Now, looking at the section and looking at this diagram, is this talking about the ability of HCV to induce DNA damage and HCV's action to reduce the ability of cells to repair DNA damage?

A. Yes. When the virus infects the cell, those are some of the effects on the cell.

Q. And if we go to page 96 -- and this is going to be left-hand column, the second full paragraph starting with overall -- a little higher. There you go. Perfect.

A. Okay.

Q. And it says, Overall, reduced ability of HCV infected cells to efficiently repair DNA damage coupled with the ability of HCV to induce DNA damages would introduce random rearrangements into the genome leading to predisposition to cancer. Did I read that correctly, sir?

A. Yes.

Q. Have you examined Mr. Hardeman's records to see if there was a BCL6 mutation?

A. I have. There was a BCL6 gene rearrangement.

Q. So just one little quick aside while we are here, sir, you never examined Mr. Hardeman's actual pathology slides, did you?

A. I tried, but I couldn't get the slides.

Q. So with respect to Mr. Gebeyehou and Ms. Stevick, you looked at their medical records and the slides; is that correct?

A. Yes.

Q. For Mr. Hardeman you looked at only the records and never saw his pathology slides?

A. That's correct.

Q. If we can go to his medical records, Exhibit 2108. Are you there, sir?

THE COURT: Which binder is that in?

MS. MATTHEWS JOHNSON: I'm sorry, Your Honor.

MS. MOORE: It is the same binder, Your Honor.

THE COURT: The smaller binder?

THE CLERK: Should this be published to the gallery?

MS. MATTHEWS JOHNSON: I think what we can do -- I think the call-outs we want to do are going to be okay but be mindful -- not do it.

THE CLERK: They are up right now.

MS. MATTHEWS JOHNSON: He is taking them down. Thank you. I'm not sure there is anything that is subject, but we can walk through it without being displayed if everyone can find where we are.

BY MS. MATTHEWS JOHNSON

Q. Under immunohistochemistry -- if everyone is following along because it's not on the screen for me -- it says, Collected 2/6/2015, final pathological diagnosis, right neck lymphoid, needle biopsy, morphologic and amino phenotypic findings consistent with diffuse large B-cell lymphoma. Do you see that, Doctor?

A. Yes.

Q. If you go down to result, and there is an acronym there that says FISH, F-I-S-H. It says, Positive for BCL6 rearrangement in 29 percent, 29 out of 100 cells, and a deletion of BCL2 in 32 percent of cells; is that right, sir?

A. Where are you reading?

Q. Do you see that, sir?

A. I don't.

Q. Okay. Let me go through the --

A. Could you show me on the screen?

Q. We don't want to display that. I'm going to orient you without it being on the screen.

THE CLERK: We can do it.

THE COURT: The question is whether there is anything on this page that is subject to sealing.

MS. MATTHEWS JOHNSON: Exactly. I don't think -- I actually don't think so, but I'm so concerned about not looking at every line --

BY MS. MATTHEWS JOHNSON

Q. If you look almost two-thirds of the way down, there is the word result.

A. Yes, I see it.

Q. And you see FISH. Just for the record, we are Exhibit 2108, the first page, which has a little 691 in the corner; and about two-thirds of the way down or halfway down, there is the word result. Under it, it says FISH. And there it says, Doctor, positive for BCL6 rearrangement in 29 -- 29 out of 100 cells; is that correct, sir?

A. Yes.

Q. Is that the same BCL6 that is referred to in the Couronne article?

A. Yes.

Q. Now, you have been previously asked in your theories for

Roundup causation whether you know of any translocation, mutation or deletion that Roundup causes?

A. Yes.

Q. Do you know that, sir?

A. There is no characteristic, genetic abnormality that has been attributed to Roundup. BCL6 mutation or rearrangement is a very common finding in diffuse B-cell lymphomas.

Q. The BCL6 that's referred to in his records is the same BCL6 that is referred to in the Couronne article; just the same; is that right, Doctor?

A. Yes.

MS. MATTHEWS JOHNSON: May I have just one moment? Your Honor, if we can have the Court's indulgence for just one moment.

THE COURT: Sure.

(Whereupon, a brief pause was had.)

BY MS. MATTHEWS JOHNSON

Q. One last question, Doctor, as we sit here today, it is true that you cannot cite to any peer-reviewed published article saying that it's generally accepted that exposure to formulated glyphosate causes DLBCL; is that right?

A. I don't know the answer to that question because I haven't reviewed everything that has ever been written, but it is my opinion -- based on my review of all the literature that I could find -- that glyphosate -- formulated glyphosate is a

risk factor for non-Hodgkin's lymphoma including diffuse large B-cell lymphoma.

Q. So I will go back to my question: Can you identify any peer-reviewed published article stating it is generally accepted that exposure to formulated glyphosate causes DLBCL?

A. No, but -- no, I can't; but people have not done careful reviews of this subject.

MS. MATTHEWS JOHNSON: Your Honor, I would -- just for the record, I would move to strike everything after no as non-responsive.

THE COURT: Denied.

MS. MATTHEWS JOHNSON: We would like to move into evidence Exhibit 2108.

THE COURT: Any objection?

MS. MOORE: Which one is that one?

THE COURT: It is the medical records.

MS. MOORE: That's fine, Your Honor. No objection.

THE COURT: Admitted.

(Trial Exhibit 2108 received in evidence)

MS. MATTHEWS JOHNSON: We tender the witness, Your Honor.

THE COURT: Let me ask you a couple follow-up questions, Dr. Weisenburger.

THE WITNESS: Okay.

THE COURT: First of all, just picking up pretty much

where you left off, you said -- at least I wrote this down. I think it is something along the lines of what you said -- BCL6 rearrangement is very common for NHL, and you didn't get any follow-up questions about that. I wanted to kind of get some further explanation from you about that.

THE WITNESS: Well, it's one of the most common gene rearrangements that you see in diffuse large B-cell lymphoma. Probably 30 or more percent of the cases have that specific rearrangement, so it is a common rearrangement; but it is not associated with any specific etiologic agent that we know of.

THE COURT: So is there -- is there anything out there that has looked at whether people who were infected with hep C are more like to have had BCL6 rearrangement than -- people who have NHL and were infected with hep C are more likely to have BCL6 rearrangement than people who have NHL but were not infected with hep C?

THE WITNESS: I'm not aware of any information, no, that would associate this rearrangement or mutation with hep C, no.

THE COURT: Okay. You -- I think in one of your depositions, you may have said that hep C has a roughly six to eight year latency period. Does that --

THE WITNESS: Well, from -- one of the articles I read found that, okay; but it was a limited number of cases. So I haven't found an article that gives a definitive latency period

for hepatitis C and non-Hodgkin's lymphoma; but it is probably long. I wouldn't argue with 5 to 35 years with a median of 15 years. It is something like that, 15 to 20 years probably.

THE COURT: Okay. Can you just explain again -- now that you are here on the stand -- the reasons for ruling out hep C.

THE WITNESS: Yes. So in my report I reference a number of articles that have looked at the occurrence of non-Hodgkin's lymphoma in patients with hepatitis C based on whether they were treated with antivirals and got a sustained virologic response or not, okay. And what those articles demonstrate is that if you are treated, like Mr. Hardeman was, with interferon, an antiviral therapy, and you get a sustained virologic response, you are protected from secondary effects of the virus because the virus disappears; and you no longer are at significant risk for non-Hodgkin's lymphoma, okay. So that was the major reason that I did not consider hepatitis C a major contributing -- a major contributing factor, okay.

THE COURT: What are those articles that say that if you -- if you get a sustained virological response, the risk disappears?

THE WITNESS: They are referenced in my report.

THE COURT: Can we -- can you -- can we look at them and --

THE WITNESS: Sure.

THE COURT: Can you give me a little more of a description of what each of them says? What exhibit is his report again?

MS. MATTHEWS JOHNSON: 2100.

THE COURT: I'm sorry, which one?

MS. MATTHEWS JOHNSON: 2100.

THE WITNESS: In my report it would be references 8, 9, 10, 11 and 12.

THE COURT: Hold on. First, let's go to the paragraph of your report where you talk about this.

THE WITNESS: Bottom of the third page.

THE COURT: Okay.

THE WITNESS: So if we just read that last paragraph, it makes the point.

THE COURT: Okay. Then I didn't see any articles footnoted here. So the references that support this point are listed at the end of your report?

THE WITNESS: No. They are on the fourth line where it says -- if you go to the end of the third line, it says there is no significant increase in risk of NHL for those who are cured with therapy and do not have circulating viral RNA, and it gives references 8, 9, 10, 11 and 12.

THE COURT: I see.

THE WITNESS: There are a couple other references, 5 and 16 also speak to that point -- at least seven references

that make that point, okay.

THE COURT: Okay.

THE WITNESS: So you wonder why would that be? I know you have asked some of the other experts about how is hepatitis C different than Roundup; right?

THE COURT: Right.

THE WITNESS: We are saying Roundup is genotoxic, and it causes DNA damage; and we are saying that hepatitis C is genotoxic and causes DNA damage; right?

THE COURT: Right.

THE WITNESS: So the difference is that when you treat a patient with antiviral therapy, you get rid of the virus, okay. So you get rid of the virus, but also you get rid of all the virally infected cells; and the virally infected cells are the cells that have the DNA damage. So those virally infected cells are gone, and most or all of the cells with DNA damage are gone; and that's why you get this marked benefit from the antiviral therapy and why you get the decreased risk for non-Hodgkin's lymphoma because you have not only gotten rid of the virus, which is causing the problem; but you have got rid of the cells that were infected by the virus, which would be the precursor cells for the lymphoma.

So that's how viral infections are different from things like Roundup because Roundup cells stick around. At least that's what we propose they do. They stick around. They get

additional hits, and then eventually they become lymphoma. When you treat the patients with antiviral therapy, the cells -- not only is the virus gone, but the cells are killed along with the virus.

THE COURT: And so what you are saying is it is not possible that the cell damage caused by the virus could set off a chain reaction that eventually gets you to cancer down the road?

THE WITNESS: Right, because once you treat with the antiviral therapy, you get rid of the virus; and you get rid of the damaged cells because the virus is infecting the cells. When you get rid of the virus, the cells die as well. It has been shown in many studies when you treat people with antiviral therapy, the clonal cells go away -- the cells with the genetic abnormalities go away because you have killed -- not only have you gotten rid of the virus, but you have killed the cells that are infected by the virus.

THE COURT: And with respect to Mr. Hardeman in particular, how do we know that the virus went away?

THE WITNESS: So the way we know the virus went away is because before he was treated, he had a pretty large viral load. He had a lot of viral RNA in his blood, and he had cirrhosis. After they treated him, very quickly he got a rapid response; and within 12 weeks the virus was completely gone from his blood, okay.

THE COURT: Based on what kind of testing?

THE WITNESS: It was -- it is a very sensitive test for viral RNA in the blood. It is a polymerase chain reaction test. It can detect very low levels of RNA.

THE COURT: Is that what they refer to as the ELISA test?

THE WITNESS: No. The ELISA test is for the antibodies to the virus. That is a different test. It tests whether you have antibodies to the virus. The other test, the test for viral RNA, actually tells you is there a viral RNA in is that person's serum. He had a very rapid response, and then he was tested over the next five years; and he stayed totally negative. And then when he was tested again at the time he was diagnosed with disease, he was still negative; and then they treated him with combination chemotherapy, which was very immunosuppressive, and they monitored him after his therapy; and it never reactivated.

So he never reactivated the viral infection after 2005 when he was treated with the antivirals. That's why I'm saying his risk for non-Hodgkin's lymphoma would have been markedly lower because he had this sustained viral response. The cells -- the damaged cells due to the virus were gone.

THE COURT: And the way you are talking about it now makes it sound like it is kind of a known, agreed-upon fact that once you get the virus out of the system, the damaged

cells go away; and there is no longer -- the risk factor goes away, essentially, right, a year after or two years after or something like that; but essentially after a short period of time, the risk factor goes away. Is that -- is that sort of a known fact that everybody agrees on or is there debate about that in the literature?

THE WITNESS: Well, that's what the papers that I reference say; that once you treat the patient and they get a sustained virologic response, it means they don't detect the viral RNA anymore, the risk. They no longer are at risk for non-Hodgkin's lymphoma, okay. That's what the papers I referenced say.

THE COURT: And that's the papers that you reference say. What I'm asking is: Is there anything in the literature that stands for the proposition that Hey, actually it may be that the hep C infection damages the cells in such a way that even after the infection is eradicated, the cell damage sets off a chain reaction that can lead to NHL years down the road.

THE WITNESS: I suppose theoretically that is possible if some of those virus infected cells survive. It is possible that a very small number could survive, and the immune system would hold those in check, okay. But if you look at the studies that I referenced, seven studies, none of them show that there is a persistent increase in risk after treatment. They all show that the risk goes away.

So what that tells you is that if you had a sustained virologic response to hep C, your risk for non-Hodgkin's lymphoma goes away. Your liver disease stabilizes, and you have effectively treated the hepatitis virus so it is not going to cause complications in the future.

THE COURT: Let me ask you a question that is not about hep C. I think you mentioned that obesity is a minor risk factor, a very minor risk factor for NHL; is that right?

THE WITNESS: Yes.

THE COURT: And what -- I take that to mean -- and correct me if I'm wrong -- but I take that to mean from a methodological standpoint that when you are looking at potential risk factors for NHL, you have to conduct an assessment of how major or minor they are. Is that -- do you agree with that?

THE WITNESS: Right. So the first thing you do is you make a list of all the possible known risk factors, and then you go through the medical history. You go through the medical record. You talk to the patients, and you try to see -- you know, you try to cross off the things that are not in their history; and then you are left with a few things.

So with Mr. Hardeman, we were left with Roundup with vitamin -- with hepatitis C -- he should have taken vitamin C -- with hepatitis C and hepatitis B; and he was overweight, okay. So what I did is: I said, Well, I have these four left.

So how do I decide which is the substantial contributing factor which is the most important risk factor? And it was clear from my review of the literature on hepatitis C that his risk would have decreased dramatically after he had a sustained virologic response to the antiviral therapy. He was at risk when he had the chronic active hepatitis although it is amazing he never got it -- he never got the lymphoma over that 40 years; but anyway, his risk decreased dramatically after he was treated. So I said well, that probably isn't the cause because, you know, he went for another ten years and never got lymphoma.

The same story for hepatitis B, okay. He was immune the whole time, so he wasn't at risk for any kind of hepatitis B associated lymphoma.

So that left me with Roundup and with him being overweight. And he had a very extensive exposure to Roundup over many years, okay. He used lots of Roundup for many years. So to me looking -- comparing that to his overweight, his odds ratio for diffuse large B-cell lymphoma based on the NAPP study would have been at least a two-and-a-half-fold increase. It was probably much higher because his exposure was much higher.

Whereas his risk for -- his risk from being overweight was only about 30 percent. It is a small risk. You have something that causes a big risk compared to something that causes a small risk. So I assume that the one that caused the big risk would be the most substantial contributing factor. Obesity

could have been a minor factor. I'm not entirely ruling out hepatitis C. Yes, maybe there were some cells that survived the treatment and contributed; but it wasn't the substantial contributing cause in his case.

THE COURT: And so when you are looking at Roundup exposure, one of the things you are looking at -- it sounds like, and placing great emphasis on -- is the amount of exposure over time that the patient experienced, but what about -- I mean, not all exposures are created equal, right?

And the comparison that I used in conversations with prior experts is to smoking, right? I mean, I assume that, you know, even somebody who has your view of Roundup would say, Well, sustained exposure to cigarette smoke is a lot more dangerous than sustained exposure to Roundup, right, because the science is so much stronger on the link between cigarette smoke and cancer than the link between Roundup and cancer. I mean, you would agree with that, right?

THE WITNESS: Yes.

THE COURT: Okay. So doesn't that need to be part of the specific causation analysis as well? In other words, part of it when you are looking at Roundup is how much was he exposed to it. So part of it is, I would think, in the grand scheme of things how -- you know, how -- how significant of a risk factor is this particular agent? You know, is it like, Oh, my God, we know that there is this definitive and strong

link between cigarette smoke and cancer or is it one that is -- it a link that is less clear and less developed? Even if you do reach the conclusion -- even if you do believe there is an association of -- a causal association between Roundup and NHL, wouldn't you need from a methodological standpoint to take into account the strength of that or lack of strength of that association compared to other risk factors? Does that question make sense?

THE WITNESS: Yes, it does. So I agree with you that smoking I think is a more well-defined and accepted cause of cancer than Roundup exposure. But I think there is a wealth of information on the genotoxicity of glyphosate based herbicides, the animal studies, studies in human who have had exposure and they have seen genotoxicity in living humans and then the epidemiology studies. It goes back to general causation and whether it all fits together, and it does.

Unfortunately, the epidemiology data does not give us the kind of data that you see with smoking because there are only a few studies; but what it does show is that there is a dose response; and if you have more than two days per year exposure or more than ten days total exposure, the odds ratio go up above 2, and they are statistically significant.

So, you know, when you are doing the specific causation, Roundup would be on your list, okay. And if it is the only thing on your list after you go through the process of

differential etiology and the -- and the case had extensive exposure over 25, 26 years with lots of gallons and no precautions, it is logical to come to the conclusion that more likely than not that was the cause. So that's the process I went through.

THE COURT: And that makes sense. I would think, though, that there would be some agents where you would say, Well, that's the only risk factor we have been able to identify is this -- this patient has been exposed to this particular agent over time, but I'm still not going to conclude that this particular agent caused this particular person's cancer because the evidence of the link between this agent and cancer, while there, is just too weak. It is there. There is an association, but it is not strong enough for me to just automatically conclude whenever somebody has been exposed to that agent over a sustained period of time, that that must be the cause of their cancer. Would you agree that there are scenarios like that?

THE WITNESS: Yes, there are. And so for each case, you want -- one has to weigh that; but in the end, it is more likely than not -- there being no other causes identified, it is more likely than not that it is the Roundup.

THE COURT: That it is the Roundup. But I guess what I'm trying to explore is how much of that opinion, that you just expressed, is based on a conclusion that you reached at

the general causation phase that there is actually quite a strong link between glyphosate and NHL?

THE WITNESS: Well, of course, my --

THE COURT: If I recall correctly -- and you can correct me if I'm misremembering -- I think you concluded that not only is there a link between glyphosate and NHL, but there is a very strong link between glyphosate and NHL. So I'm trying to explore now at the specific causation phase how much of your decision not to rule out Roundup or -- strike that -- how much of your decision to conclude that it is Roundup is based on your opinion that it is quite a strong link -- that there is quite a strong link between Roundup and NHL as opposed to maybe a weaker link with some other agent?

THE WITNESS: Well, I think when you do the differential etiology, whether it is a strong link or a less strong link or even a weak link, in the end when you go through your list and it is the only link left, then, you know, the conclusion is more likely than not that was the cause. You can't be a hundred percent sure; but, you know, in the end, I think that is the way physicians think, okay. I mean, you try to come to a diagnosis that is the best diagnosis; and then you say -- you know, and if you don't have a diagnosis, then you say, Well, I don't know what caused it.

THE COURT: I guess I'm having a little trouble wrapping my mind around that one because I would think that if

you -- you know, if there are -- let's say we are aware of ten things where there might be a link between, you know, exposure to that thing and a particular cancer, and we examine someone's history; and we conclude that they were only exposed to one of the things, and the one thing that they were exposed to -- the link between that thing and cancer is pretty weak. It is there. There is some evidence in the literature to suggest that there is a link, but the evidence is pretty weak.

On the other hand, we have a lot of people where we say, We don't know how their cancer was caused. I would think in a hypothetical scenario like that, you might examine that person and that person's history and say, Well, yeah, they were exposed to this one thing; but it doesn't automatically mean that we can conclude that that more likely than not caused their cancer. The only thing we can safely conclude is that we don't know what caused their cancer. We haven't identified with, you know, any certainty what caused their cancer.

THE WITNESS: Yes.

THE COURT: Is that type of analysis possible hypothetically? I'm not talking about the Roundup context now. I'm talking about hypothetically. Is that type of analysis possible in your field and within your methodology?

THE WITNESS: Yes, it is. And I think it goes back to the -- to the initial interpretation of all the general causation data; and if you believe that Roundup causes NHL --

can cause NHL, then -- and you believe that there is strong evidence, which I think there is, then you would use that to -- in your interpretation of specific causation, sure. If you didn't think Roundup caused NHL -- you didn't believe the data or you thought it was insufficient -- then you probably wouldn't even put Roundup on your list or you might put it up there but then --

THE COURT: Right. That's what I'm trying to get at. Is there a scenario where, you know, there is enough in the epidemiological and other scientific evidence to put it up there; but if you engage in this process and you rule out everything else, you would say, Yeah, you know, it is up there; but the evidence isn't strong enough for me to conclude that this person's cancer was caused by Roundup. Rather, what I'm left to conclude is that we don't know what caused this person's cancer.

I'm asking -- I know that that's not your opinion with respect to Roundup because you believe from a general causation standpoint that the evidence is strong -- but I'm asking if there is room for that in your methodology in general.

THE WITNESS: Yes, I think there would be if my opinion was that Roundup may not be a cause of non-Hodgkin's lymphoma or may be a very weak risk factor for non-Hodgkin's lymphoma.

THE COURT: Like with obesity?

THE WITNESS: Yeah, exactly.

THE COURT: If all you had was that Mr. Hardeman was overweight, and you didn't have any -- and he had never been exposed to Roundup, what would your conclusion be about Mr. Hardeman?

THE WITNESS: Would be that his obesity probably contributed to his getting NHL. I wouldn't be really sure whether it was the cause. You know, it probably contributed; but it is a weak risk factor.

THE COURT: So would you say that it is more likely than not Mr. Hardeman's NHL -- excuse me -- more likely than not Mr. Hardeman's obesity was a significant factor in causing his NHL?

THE WITNESS: Probably wouldn't because it is such a weak risk factor. Probably wouldn't.

THE COURT: And so if we didn't -- take Mr. Hardeman's case. If we didn't have any exposure to Roundup, but we had everything else with respect to Mr. Hardeman, what would your conclusion be about him?

THE WITNESS: Well, I think he would have been unlikely to have gotten non-Hodgkin's lymphoma.

THE COURT: Let's say he had.

THE WITNESS: It wouldn't have been much different than what the background --

THE COURT: There are many people who are diagnosed

with non-Hodgkin's lymphoma, and the conclusion is we don't know how they got it, right?

THE WITNESS: Yes.

THE COURT: Okay. So -- so -- is it still your testimony that somebody without the Roundup exposure could not have gotten non-Hodgkin's lymphoma and had everything else that Mr. Hardeman had?

THE WITNESS: It is possible they could get it. We wouldn't know what caused it.

THE COURT: Okay. So what I'm asking you is: Assume Mr. Hardeman has non-Hodgkin's lymphoma and has all the other factors in his medical history, except for the Roundup, what would your opinion be of Mr. Hardeman's -- of the cause of Mr. Hardeman's non-Hodgkin's lymphoma?

THE WITNESS: I wouldn't really know. You know, I would say, Well, perhaps the hepatitis C contributed; but it is unlikely that it played a substantial role. I would say that he was obese, so that could have contributed; but it probably didn't play a substantial role. So it would be a situation where we have a couple risk factors that are not very convincing, where the risk is not much increased. So in the end you would say, Well, we are not sure; just as you -- just as you described in the other scenario.

THE COURT: Okay. Should we take a little bit of a break maybe and then -- I'm happy to -- I guess you can begin

and then if you all have any cleanup that you want to do, you can do that. Why don't we take a 10-minute break. We will resume at 11:00 o'clock.

THE CLERK: Court is in recess.

(Recess taken at 10:53 a.m.)

(Proceedings resumed at 11:06 a.m.)

THE COURT: Okay. You can proceed.

MS. MOORE: Thank you, Your Honor.

REDIRECT EXAMINATION

BY MS. MOORE:

Q. Good morning, Dr. Weisenburger.

A. Good morning.

Q. The Court was asking you some questions about your methodology, and I wanted to follow-up on a few things regarding your methodology.

In general, did you apply the same methodology for all three of the plaintiffs, Mr. Hardeman, Mr. Gebeyehou, and Ms. Stevick?

A. Yes, I did.

Q. And can you just explain the process of the methodology for all three of those plaintiffs without going into particular details for each one of them?

A. Right. So the method is -- in medicine is called differential diagnosis. In legal situations it's called differential etiology. It's sort of the same method in which

you --

THE COURT: Sorry to interrupt, but isn't it the reverse? That in medicine it's called differential etiology and in the law it's called differential diagnosis?

THE WITNESS: No.

THE COURT: No? Okay. That was my impression from the previous witness, from Dr. Nabhan.

THE WITNESS: Okay.

BY MS. MOORE:

Q. In your clinical practice, if you were going to try to figure out the diagnosis for a patient, what do you call that process?

A. Differential diagnosis.

Q. Okay. And so in the legal context, when you're trying to determine the cause of NHL for these three particular plaintiffs, explain what the process is that you go through?

A. Right. So the patient has a specific disease and you're trying to understand what caused the disease.

THE COURT: I'm really sorry to interrupt, but I just -- and this is a minor point, but I think it's important for courts to describe these things correctly.

When you're trying to diagnose a particular patient, you call it -- and you're conducting that analysis, you call it differential diagnosis; but trying to diagnose a patient is different from trying to figure out what caused the patient's

disease. And so I'm asking what is the appropriate label you attach to the exercise of trying to figure out what caused a patient's disease where you already know what the disease is?

THE WITNESS: So I think the terms are interchangeable. I mean, in medicine we say differential diagnosis, but it really --

THE COURT: For that? For figuring out what caused somebody's disease?

THE WITNESS: Yeah. Also for that, yes.

THE COURT: Okay.

THE WITNESS: But you could call it differential etiology because that's actually what we're doing. We're trying to figure out, for example, what organism, what bacteria cause a pneumonia. So it's sort of differential etiology, but in medicine we call it differential diagnosis.

THE COURT: Okay.

BY MS. MOORE:

Q. And so --

THE COURT: Sorry.

MS. MOORE: That's fine, Your Honor.

Q. When determining what the cause of NHL is for these three plaintiffs, just walk the Court through what the methodology is that you used.

A. Right. So you begin with the disease. So we'll say non-Hodgkin's lymphoma. And you, you know -- in a case like

this, you look through the medical records. You read through the medical records. You read through -- if there are depositions, you read through the depositions of the physicians and other caretakers. You talk to the patient and try to elicit any additional information, and you have a list of known accepted causes of non-Hodgkin lymphoma.

And so based on what you find out from the medical records, from the physicians' records, from the depositions, from talking to the patient, you can usually exclude most of the diagnoses or etiologies on the list, and then you come down to just a few. And then you have to use your medical expertise and your knowledge of the literature and some judgment to weigh things in a way that you come up with the most likely etiology.

Q. And is that, in fact, Dr. Weisenburger, what you did in these three cases?

A. Yes, it is.

Q. Okay. So when you come up with your list of known accepted causes, is that what you've been referring to as the risk factors for non-Hodgkin's lymphoma?

A. Yes, causative risk factors.

Q. Okay. And simply because something is a risk factor, a known risk factor, does that mean it's automatically going to be the substantial factor in a particular case?

A. No.

Q. Okay. What's your process for determining whether any of

the known risk factors that you've got up on your checklist then becomes -- how do you determine what the substantial factor is in a particular case?

A. Well, that's also complex because some risk factors are strong risk factors and some are weaker risk factors; and, of course, you have to really determine whether the patient has that risk factor and has had an extensive -- as an example, if it's a chemical, have they had any extensive exposure to the chemical over many years or was it just, you know, once or twice in their lifetime.

And so you have to -- you have to decide whether the risk factor stays up on the list or it doesn't based on what the patient tells you what their exposures were.

Q. And for these three plaintiffs, did you include Roundup -- did you rule in Roundup as one of those risk factors to consider?

A. Yes.

Q. Okay. And what did you rely upon in forming your opinion that you should rule in Roundup as a risk factor for these three plaintiffs?

A. Well, it was based on my review of all the materials for general causation. I came to the conclusion that Roundup is a significant risk factor for non-Hodgkin lymphoma; and then looking at the exposure of each of the three individuals to see did they have extensive exposure, a little bit of exposure,

almost no exposure.

And then, you know, based on that, determining whether Roundup still is a substantial -- if they have a lot of exposure and you accept it as a risk factor, then you have to leave it up on the list.

Q. And you were asked several questions by Monsanto's counsel regarding the McDuffie and Eriksson studies when they talk about 2 days per year or 10 lifetime days. Do you recall those questions?

A. Yes.

Q. And can you explain to the Court how you factored in the McDuffie and Eriksson studies in forming your opinions in these three cases?

A. Well, I selected those two studies plus the NAPP study because those were the three studies that showed a dose response; in other words, that said people who have more exposure have a higher risk of disease.

So I tried to determine whether each of these three individuals would fall into the category of having a high exposure which would put them at significant risk for this disease, and they all three had exposures markedly above these so-called thresholds that are set by these three epidemiology studies.

Q. And those thresholds, so that's the dose response?

A. Yeah. It's the odds ratio for the dose response.

Q. And what does the odds ratio for the dose response in the McDuffie and Eriksson studies tell you?

A. Well, dose response is an important parameter that we evaluate in epidemiology because if a chemical has a -- shows a dose response, it's very likely an etiologic agent because it's -- you know, it's unusual that a chemical would cause a disease and not have a dose response.

So when you see a dose response, that gives you some assurance that it really is causing the disease.

Q. And what were the findings of the dose response from McDuffie and Eriksson?

A. So they were both positive.

Q. And did you rely on that in forming your opinion to rule in Roundup in these three cases?

A. Yes.

Q. Okay.

THE COURT: Could I ask one follow-up question about that? I forgot to ask you earlier.

On the issue of dose response, you mentioned that Mr. Hardeman's exposure was much greater than twice per year for five years, which is sort of this baseline. And I think you said that, therefore, his risk is probably greater than two. Do I remember that correctly?

THE WITNESS: Yes.

THE COURT: But I assume, and it's been a long time

since I've looked at the Eriksson study and the McDuffie study, but if I recall correctly, it was not the case that the people being studied that resulted in a conclusion that there was an odds ratio of 2.0, or whatever the number was, for people who had had more than twice-a-year exposure or 10-lifetime-days exposure merely had that kind of exposure.

In other words, I think that a lot of the people in the pool of people studied that resulted in the 2.0 odds ratio had the kind of exposure that Mr. Hardeman had or more.

So isn't it incorrect to say "I assume that Mr. Hardeman's risk is greater than 2.0 because his exposure was so much more than 10 lifetime days"?

THE WITNESS: Well, I'm surmising. I mean, I don't really know. Ideally you'd like to have --

THE COURT: But isn't it incorrect to surmise that? Because there are lots of people in the pool from McDuffie and Eriksson and the NAPP study --

THE WITNESS: That had high exposure, sure.

THE COURT: -- whose exposure was much higher --

THE WITNESS: Yeah.

THE COURT: -- and presumably much higher than Mr. Hardeman's as well; right?

THE WITNESS: Yes. So what you have is only two groups. You've got a group that's less than two days and greater than equal to two days, and what you'd really like to

have is four or five groups stratified to really see a dose response you, but we don't have that kind of data.

THE COURT: Other than the AHS.

THE WITNESS: Other than the AHS, yes.

THE COURT: So my question -- I want to get a -- ask you point blank. Was that statement you made earlier today incorrect, that we should assume that Mr. Hardeman's risk factor is greater than 2 because his exposure was so much higher than 10 lifetime days?

THE WITNESS: I don't know. It was a hypothetical. It was a hypothetical. It may have -- it probably was correct, but I can't prove it.

THE COURT: Well, wouldn't you -- to be able to make a statement like that, wouldn't you have to know the exposure rates of the pool that was studied in McDuffie and Eriksson?

THE WITNESS: Yes. Yes, you would. So, you know, maybe I shouldn't have made that statement; but, you know, in terms of the way chemicals -- carcinogenic chemicals work, the more exposure you have, the higher your risk.

And they had only two categories so you've got sort of a low risk and a high risk group, but you don't have a real high risk group because the real high risk group is in your other group.

So it would be nice to have more data to see that, but we only have what we have.

THE COURT: Okay. Thank you.

BY MS. MOORE:

Q. And, Dr. Weisenburger, is it a fair statement to say that Mr. Hardeman's exposure exceeded the categories in both the McDuffie and the Eriksson studies.

A. Yes.

Q. You testified earlier that you can -- you ruled out all the known possible risk factors for NHL for Mr. Hardeman with the exception of -- that left you with obesity, hepatitis B, hepatitis C, and Roundup; is that correct?

A. Yes.

Q. Okay. And did you do the same analysis for Mr. Gebeyehou?

A. Yes.

Q. And what were you left with when you went through -- based on your medical review of the records, your interview with him, and your review of the literature, what were you left with?

A. I was left with Roundup and with hepatitis B.

Q. And you testified earlier about how you eliminated hepatitis B from the differential for Mr. Hardeman. Is the same true for Mr. Gebeyehou?

A. Yes.

Q. And why is that, Dr. Weisenburger?

A. Well, again, because the literature on the subject shows that if your immune -- if you have natural immunity to hepatitis B or you're immunized against hepatitis B, you have

no increased risk for non-Hodgkin lymphoma.

So it's just like hepatitis C. It's only those who have chronic active infection that are at increased risk for non-Hodgkin lymphoma.

Q. And given that, were you able to form an opinion in Mr. Gebeyehou's case as to whether -- as to what the cause of his NHL was?

A. Yes. I thought it was more likely than not the Roundup.

Q. And in Mr. Hardeman's case, based on your review and determination that he was immune to hepatitis B at least since 2005, were you able to form an opinion as to ruling out hepatitis B as a substantial factor?

A. Yes.

Q. And what was your opinion?

A. Well, my opinion was that it wasn't a substantial contributing factor, that it could have contributed but I didn't think it was a substantial contribution. It was more like obesity or even less than obesity in terms of the way I weighed it.

Q. And so for Mr. Hardeman, after your review of his records, your interview with him, your review of the literature, were you able to form an opinion to a reasonable degree of medical probability as to what the substantial factor in causing his NHL is?

THE COURT: You don't need to go through and repeat

everything he's already said in his report.

MS. MOORE: I've got, like, two more questions, Your Honor. Thank you.

THE WITNESS: Yes, I believe it was Roundup.

BY MS. MOORE:

Q. Okay. And for Ms. Stevick, were you able to form an opinion within a reasonable degree of medical probability as to what the substantial factor was in causing her NHL?

A. Yes. I also felt it was Roundup. There weren't any other etiologic factors that I could identify in her history.

MS. MOORE: Thank you, Dr. Weisenburger.

Thank you, Your Honor.

THE COURT: Anything further from the defendants?

MS. MATTHEWS JOHNSON: Just very briefly, Your Honor.

RECROSS-EXAMINATION

BY MS. MATTHEWS JOHNSON:

Q. Hi, Dr. Weisenburger.

A. Hi.

Q. Can we go to Exhibit 2107, it's your Adams deposition, at page 112?

(Pause in proceedings.)

MS. MATTHEWS JOHNSON: All right. We'll move on from that.

Q. I want to ask you a couple questions on the hepatitis C subject first.

A. Okay.

Q. So when Mr. Hardeman was diagnosed in February of 2015 and treatment was initiated, he was not just given chemotherapy, was he? He was also given medication to make sure that his hepatitis C infection would not flare up; was he not?

MS. MOORE: Objection. I think you meant to say "NHL."

MS. MATTHEWS JOHNSON: Oh, I'm sorry. I'm sorry. Yes, his NHL diagnosis.

Q. When he began treatment --

THE COURT: Why don't you restate the question.

MS. MATTHEWS JOHNSON: I will, Your Honor.

MS. MOORE: I'm sorry, Your Honor. I just --

MS. MATTHEWS JOHNSON: No, no, no. I think that's good. Thank you.

Q. When Mr. Hardeman was diagnosed with NHL in February of 2015, they did not just initiate treatment for his chemotherapy. They also initiated a prophylactic treatment to ensure that his hepatitis C infection would not flare up, did they not?

A. Well, that's not correct. So at the time they diagnosed him, they looked in his blood and they found that he didn't have any evidence of hepatitis C infection and they found that he didn't have any evidence of hepatitis B infection. Okay? So the prophylactic treatment was given for hepatitis B and not

for hepatitis C. It may have helped with the hepatitis C, but it was given mainly for hepatitis B.

Q. Okay. So when you say there's a prophylactic treatment, you are talking about one or two viruses that you were saying were eliminated but a prophylactic treatment was administered?

A. It was administered empirically because we know that some patients with hepatitis B and some patients with hepatitis C have a latent infection; that is, you don't completely get rid of the virus. The virus lives in the body at a very low level it's and is kept in check by the immune system.

And so whenever they give chemotherapy and patients have a history of hepatitis B, they don't want that virus to flare up when the immune system is knocked down so they give the -- they give the antiviral therapy empirically just to prevent that from happening in case it might.

Q. So going back to our point about how cancer can exist below a detectable level, there are viruses that can live in the body below a detectable level.

THE COURT: Was that a question?

MS. MATTHEWS JOHNSON: Yes.

Q. Is that correct?

A. That is correct.

Q. Now, there was some discussion about hepatitis C and the efficacy of Interferon as it relates to regression; is that right, sir?

You were testifying about how the treatment of hepatitis C with Interferon is something that was seen to be effective in the regression of low-grade lymphomas; is that right?

A. Well, I didn't say that, but that's true.

Q. Right. They're low-grade lymphomas.

A. Yes.

Q. So if you have an intermediate or if you have a high-level, Interferon is not going to do it?

A. Usually people don't do it. It does sometimes work, but people don't usually do it, at least in our country.

Q. Right. The treatment modality is still chemotherapy?

A. Yes.

Q. And in looking at how HCV, the mechanisms by which it can cause NHL, if we can go back to the Couronne article, which is Exhibit 2052, in our earlier conversation we were talking about Figure 2, which relates to the potential for the ability of HCV to directly cause mutations and to prevent DNA repair; is that right, Doctor?

A. Yes.

Q. But now I want to look at Figure 1. So if we could have *Daubert* Exhibit 2052, Figure 1. If we can call out Figure 1.

And here we're talking about HCV-related B-cell transformation through the continuous external stimulation of lymphocytes receptors by viral antigens and cytokines; is that correct, Doctor?

A. Yes.

Q. So with reference to the efficacy of Interferon, are we talking about here uncontrolled cell growth, which could lead to spontaneous mutations for which Interferon has been deemed to be effective? Is this model of uncontrolled cell growth triggered by HCV?

A. So there are two models in this paper, two major models. One is the one we talked about earlier where the virus actually infects the cell, gets inside the cell and takes over the workings of the cell.

And in the first one, the one you just pointed me to, Figure 1, they think that the virus attaches to the cell but doesn't actually infect the cell. Okay? So it attaches to the cell by these external receptors, either the CD81 or the BCR immunoglobulin intercepter, and stimulates the cell to proliferate and, as a result of that, you can also have some genetic abnormalities that occur.

This model that you're talking about in Figure 1, they believe really applies to the low-grade B-cell lymphomas and not diffuse large B-cell lymphoma.

Q. This --

A. The second model we discussed earlier is the model that they really think is the model that is applicable to diffuse large B-cell lymphoma.

Q. Okay. And when you talk about the low-grade lymphomas,

again we're going back to the low-grade lymphomas for which Interferon treatment has been deemed to be effective; right, Doctor?

A. Yes.

Q. Okay. So treatment with Interferon to reduce the viral load, decrease the amount of virus that can attach to these cells and cause uncontrolled cell growth; is that right, sir?

A. Right.

Q. Okay. Figure 2, if we can go to Figure 2 where we were before, and we can call this out.

And, again, this is, just to be clear, model of direct HCV-related B-cell transformation oncogenic effects mediated by intracellular viral proteins; is that correct?

A. Yes.

Q. And when we talk about the gene mutations caused by HCV and we're talking about the ability of the HCV to keep the cells from repairing DNA damage, those are actual mutations; correct?

A. Mutations is one of the forms of genetic damage, yes. So there are breaks. There are deletions. There are translocations. There are all kinds of genetic abnormalities. Mutations is one -- just one type.

Q. And I think in your testimony in the Hardeman deposition you said 25 to 40 years of chronic HCV infection could cause mutations and those mutations would continue.

A. Well, they could continue, exactly; but if you use this model -- the model in Figure 2, as I explained earlier, if you treat the viral infection, the virus goes away and the cells that are infected with the virus die because they're infected with the virus. So when you get in there and kill the virus, you kill the cell.

So those cells don't persist. Okay? Or if they do persist, they're at very, very low levels as a form of latent infection that is kept in check by the immune system. Okay?

Q. But latent infection --

A. That's why I didn't entirely rule out hepatitis C because you could have a latent infection and you could have some of these virally infected cells still persisting, hiding, afraid to come out because the immune system is waiting for them.

Q. So we know a latent infection can maintain, we know mutations can maintain that came from a chronic 25 -- multidecade period of HCV infection?

A. It's possible at a very low level. Okay? At a very low level. We don't have any evidence of that in Mr. Hardeman because he never had any evidence of infection after he was treated. But hypothetically, theoretically, yes, there could have been some small few latent virally infected cells hiding in his system.

Q. Right. And empirically as well, which is why doctors go forward on the understanding that these things could still

exist and adjust their treatment modalities accordingly?

A. Yes.

Q. Okay. If we could go to Exhibit 2070, please, which is the Mahale article. This should already be in evidence.

And you were asked about this at your deposition, I think. Do you recall, Doctor, the Mahale article?

And if we could go to page 7 of this article, and if we could go down to the third full paragraph on that page, the last sentence or maybe the last few sentences, "We observed" after Footnote 25. "We observed."

Okay. Now, this is a 2018 article; is that correct?

A. Yes.

Q. And it says (reading):

"We observed that AVT with SVR led to a moderate reduction in risk of B-cell NHLs when compared to untreated patients."

And then they have a sentence about HIV, and then the last sentence (reading):

"However, this risk reduction was not observed when AVT was started two or more years after the HCV index date."

Did I read that correctly?

A. Yes.

Q. And there's been a determination of -- wait. Hold on. Strike that.

MS. MATTHEWS JOHNSON: May I have just one moment, Your Honor?

THE COURT: Sure.

(Pause in proceedings.)

BY MS. MATTHEWS JOHNSON:

Q. And, Doctor, you first considered Mahale, which is a 2018 article, at your deposition? You had not included this in your report; is that correct?

A. That's correct.

MS. MATTHEWS JOHNSON: We have no further questions, Your Honor.

MS. MOORE: Your Honor, just a couple follow-up questions.

THE COURT: Sure.

MS. MOORE: Thank you, Your Honor.

FURTHER REDIRECT EXAMINATION

BY MS. MOORE:

Q. Dr. Weisenburger, just to follow on the line of questioning about hepatitis C, do we know -- do you have an opinion as to what percentage of people with active hepatitis C infection actually develop non-Hodgkin's lymphoma?

A. Yes. It's a very low percentage. It's about one tenth of 1 percent. So it's not a very strong risk factor either.

Q. And there were several questions about the cell mutations, the damage to the cells caused by hepatitis C, and you were

asked some hypothetical questions and then questions about Mr. Hardeman, and I just want to make sure we're clear.

With respect to Mr. Hardeman, what is your opinion as to what happened following the hepatitis C treatment he received in 2005 and 2006 to those cells, the damaged cells?

A. Well, based on the references that I used in my report and my knowledge of this disease and actually this nice paper that we've been discussing, it was my opinion that when he was treated, his risk for non-Hodgkin's lymphoma markedly decreased -- okay? -- to the point where these studies that were done couldn't detect an increased risk. Okay?

So I didn't feel that hepatitis C really met the criteria for a strong risk factor in Mr. Hardeman even though he had it for a long time. You know, he had it for many years. He was markedly responsive to treatment; and once you respond to treatment, your risk for hepatitis C related sequelae go down dramatically.

Q. And how do we know if the treatment he received for hepatitis C actually killed off the sells that may have been damaged by the virus for Mr. Hardeman?

A. Well, because the cells are infected. So when you attack the virus, you're attacking the cell that the virus is in and it kills the cell; or in the first model that we talked about in Figure 1, if you take away the stimulus to tell the cells to proliferate, they stop proliferating and they die off. Okay?

Q. And after the treatment Mr. Hardeman received in 2005 and 2006 which would have killed off the damaged cells, has there ever been any evidence since then that he had active hepatitis C?

A. No.

Q. And did you factor that into your decision in determining that hepatitis C was not a substantial factor in causing NHL for Mr. Hardeman?

A. Yes, I did.

Q. And, Dr. Weisenburger, in forming your case-specific opinions in these three cases, did you rely upon the publications that you've either authored or co-authored regarding NHL?

A. One or two, but for the most part I was relying on research done by others.

Q. Approximately how many peer-reviewed publications have you authored or co-authored about causes of NHL?

A. About 50 or so.

MS. MOORE: Thank you.

Nothing further, Your Honor. Thank you.

MS. MATTHEWS JOHNSON: Just one question.

THE COURT: Sure.

FURTHER RECROSS-EXAMINATION

BY MS. MATTHEWS JOHNSON:

Q. Just to be clear, sir, Mr. Hardeman's NHL was a

high-grade. It was not a low-grade lymphoma; correct?

A. That's correct.

MS. MATTHEWS JOHNSON: Thank you.

THE COURT: Okay. Congratulations.

THE WITNESS: Thank you.

THE COURT: You may step down.

(Witness excused.)

THE COURT: Okay. Is there anything else that anybody needs to discuss today, or should we just plan on seeing each other again on Wednesday morning?

MS. MOORE: Your Honor, we don't have anything further. I think it can wait until the pretrial conference on Wednesday. I think Mr. Stekloff had a couple matters.

THE COURT: Sure.

MR. STEKLOFF: Yeah, just a couple questions for guidance, Your Honor. A couple questions in preparing for the trial preservation deposition of Dr. Portier.

In trial do you allow recross of expert witnesses?

THE COURT: I think that I always have.

MR. STEKLOFF: Okay.

THE COURT: And I think it would be appropriate in this case.

MR. STEKLOFF: Thank you.

Also, if we want to -- I mean, I understand there might be debates later about whether something was proper impeachment,

but if we wanted to impeach an expert -- and this is true, I guess, not only in Dr. Portier's testimony but at trial -- can we use video on occasion, or are we stuck with the transcript?

THE COURT: Certainly -- I mean, I'm thinking about, you know, this came up in the last civil trial that I did, and I believe that I ruled that video could not be used but it was more based on, you know, the specifics of that case.

I have not developed a general rule about that one way or the other. I would think that there would need to be -- you know, now that I think about it, I think I have on a number of occasions allowed video to be used.

You're talking about for expert witnesses or witnesses in general?

MR. STEKLOFF: I think we're focused on expert witnesses. And to be clear, I don't think every time we impeach a witness, we would use video; but there might be some occasions where a witness in the video, either through his or her facial reactions or pauses, the impeachment would come across differently than it might if you just look at it on paper. And so I think we're just trying to test whether in limited instances that we think might be appropriate we could use video for impeachment.

THE COURT: Yeah, I don't have a problem with that.

MS. MOORE: Our only concern there, Your Honor, would just be the time constraints that you've put on. We just don't

want that to interfere.

THE COURT: Yeah. But, of course, if they are --

MS. MOORE: That's them.

THE COURT: It's their time. It's their clock.

MS. MOORE: Fair enough.

MR. STEKLOFF: That actually -- so I only have two more brief things, Your Honor.

I just wanted to flag for Your Honor, I don't know how to deal with this -- I think you might hear more from them about it on Wednesday -- they designated for Phase I 36 hours of deposition testimony so we are now going through the process of countering and objecting to that. That seems like a poor use of resources given that they are limited to 32 hours.

I guess maybe we're just flagging it for you, but I think that we are concerned about the amount of resources we are putting in to marking up transcripts of 36 hours of testimony given I don't think that there will be 36 hours of deposition designations.

THE COURT: It's kind of the opposite of just dumping a ton of documents on them and making them spend all their resources sifting through the documents. I'm sure that's never happened in this case.

MS. MOORE: We've never experienced that, Your Honor.

Your Honor, there's 67 witnesses disclosed or listed between the two parties and so, you know, given the bifurcation

issue and the fact there's 67 witnesses, I think there's 34 or so depositions, we did our best to narrow it down. And I appreciate them counting up the hours. I hadn't done that yet, but we'll get there.

I did -- since you mentioned the 32 hours last week, we went back and in the *Johnson* case there were over 50 hours -- it might have been close to 55; I'm not exactly sure on that -- of trial time that was logged for that case. The plaintiff in that case did have more hours allocated because we have the burden of proof. So we wanted to bring that to Your Honor's attention, and we can talk about it more on Wednesday.

THE COURT: How many total hours of trial time?

MS. MOORE: It was over 50.

THE COURT: Over 50 total hours of trial time?

MS. MOORE: No. Over 50 for the plaintiff. For the plaintiff, Your Honor. I apologize. Over 50 for the plaintiff.

Since that time, we've taken multiple depositions in the litigation, four of which were just last month. I think there's eight or nine scheduled for this month before trial. So some of those designations are part of that. So there's even more evidence --

THE COURT: More to the fact that you took more depositions doesn't mean you need more time.

MS. MOORE: Well, that's a fair point, Your Honor. I

mean, there's a witness they identified that for the first time we just got the custodial file last week on their list. We don't know if they're going to call her or not.

So I'm just saying that right now with 32 hours, that is basically hands -- you know, tying our hands behind our back, and so we would ask the Court to reconsider that to give us more time so we can present our evidence and make sure we meet the burden of proof.

THE COURT: Well, we can talk about that more at the pretrial conference, but I will tell that you that so far I've not seen anything to suggest that it should be expanded.

And, in fact, what I think you're going to find is that, you know, there are a number of expert witnesses who are either not going to testify at all per my rulings or their testimony is going to be much shorter than what is contemplated by their reports, and so that should provide some assistance to both sides.

MS. MOORE: I understand, Your Honor. I just wanted to put that on the record. Thank you, Your Honor.

THE COURT: And, as I said, as is always the case, if I do conclude along the way that I've squeezed you unnecessarily, we can do something about it and we don't have to wait until the end of trial to do something about it either. And part of it depends on, you know, whether people are using their time efficiently.

MS. MOORE: And I appreciate that, Your Honor, and we have every intention of using our time efficiently. I mean, we want to make sure that we are mindful of the jury sitting here for a long time too, but I just want the Court to be aware with that number of witnesses and then what happened in the Johnson case, we just wanted to bring that to your attention. Especially when we talked about it last week, you know, 10 to 12 hours for Dr. Portier in Australia, I mean, that's a third of the hours allocated to us. So I just want to bring that to your attention. We can talk more about it on Wednesday.

THE COURT: It sounds like you're going to need to chop that testimony.

MS. MOORE: And that includes the defense. I apologize, Your Honor.

MR. STEKLOFF: And we're chopping our cross already. We've mapped it out and are confident we can fit our case in the 32 hours.

THE COURT: And, you know, part of it here is that we are -- there's an obligation on both sides to -- you know, obviously you need to be able to put enough evidence in front of the jury to allow the jury to make an informed decision, but you also have an obligation to these members of the community who are giving up a month and maybe more of their lives to present the evidence efficiently. And that, of course, is always something we have to think about in these cases, both

civil and criminal, in my opinion.

So the other issue that I guess we may need to talk about with respect to time is are there going to be time limits for the different phases, or is that just going to be left up to each side? And I don't know if you want to talk about that now or on Wednesday or neither.

MS. MOORE: If we could -- I'm sorry, Your Honor.

If we could talk about it on Wednesday because that's part of -- you know, when we do the deposition designations, some people are going to be played in both phases and so, you know, we're trying to be as efficient as we can but we also have to meet our burden. And so if we could talk about that on Wednesday just to give some more guidance, that would be great.

And then we can also meet and confer with the defense to see if there's some witnesses they're not going to call. That might help us too and, likewise, we can do the same.

THE COURT: Okay. So what are the things we need to talk about on Wednesday? One is the nonexpert-related summary judgment motion -- the summary judgment motion relating to the statute of limitations.

MS. MOORE: Yes.

THE COURT: How do you pronounce the plaintiff's name?

MR. TSADIK: Gebeyehou.

THE COURT: Gebeyehou?

MR. TSADIK: Yes.

THE COURT: Okay. That's what I thought.

Anyone is free to argue that issue, whether it's you-all or -- is it Mr. Tsadik?

MR. TSADIK: Yes.

THE COURT: Whoever wants to argue that issue is free to argue that issue, both of you. So we have that issue.

We have the plaintiffs', in no particular order, the plaintiffs' specific causation experts, Monsanto's specific causation experts, the other experts, which again I may or may not want argument on and I'll try to get some guidance out to you in advance.

MS. MOORE: That would be great. Thank you, Your Honor.

THE COURT: The *motions in limine*.

MS. MOORE: And, Your Honor, there are maybe two to four that we've agreed to, might be three to four. So we can probably move through some of those. The case-specific ones we can move through pretty quickly I think.

THE COURT: Sorry? What?

MS. MOORE: The case specific ones we can probably move through pretty quickly on Wednesday because that's where we have a couple stipulations. Collateral source has been stipulated to, and then smoking has been stipulated to to leave out references to smoking history.

THE COURT: Okay. So can you do me a favor? I

haven't read the *motions in limine* yet and that's next on my list of things to do, but could you file a letter by the end of the day updating us on whether you have any agreements that are not reflected in the papers you've already filed?

MR. STEKLOFF: I think that they're reflected already in the papers. I mean, I'm happy to file a letter, but nothing has happened since the filings on the 31st.

MS. MOORE: That's correct, Your Honor; but if you want it in one place, that wouldn't take much time.

THE COURT: That's fine then.

MS. MOORE: Okay.

THE COURT: That's fine.

So *motions in limine*, jury instructions, verdict form for Phase I obviously.

Is there anything else we are going to need to be talking about on Wednesday?

MS. MOORE: We talked about perhaps going over some of the exhibit objections and categories, and we did talk -- we had a meet-and-confer about whether to come up with some categories. So we'll get that nailed down before Wednesday so we can present Your Honor with some categories for discussion on Wednesday.

THE COURT: Okay. And, you know, it might be helpful if you could just -- without any argument or anything, if you could just file a letter, you know, tomorrow or something,

maybe tomorrow by noon, saying, you know, here are the categories of -- you know, here are the categories of exhibits we'd like to discuss or, you know, the categories of issues we'd like to discuss relating to the exhibits.

MS. MOORE: Sure. For example, one is peer-reviewed literature. I mean, there's some peer-reviewed literature on the exhibit list so we just want to know -- we want guidance from Your Honor as to that being an exhibit at trial.

THE COURT: Okay.

MS. MOORE: So can it just be as brief as that?

THE COURT: Yes.

MS. MOORE: Okay.

THE COURT: Please, only -- absolutely as brief as that --

MS. MOORE: Wonderful.

THE COURT: -- just to get me to start thinking about it.

MR. STEKLOFF: I suspect we may agree on that one. For example, all these articles, they can be shown to the jury but then they may not be sent back -- admitted for purposes of being sent back to the jury during their deliberations because that's my reading of the learned treatise rule.

THE COURT: Why don't you file a joint letter on that by noon tomorrow, again without any argument but just identifying the issues that you -- that are presented by the

exhibits or --

MS. MOORE: That's fine.

THE COURT: -- groups of exhibits that you'd like me -- you know, pick like your five most important, or something along those lines.

MS. MOORE: Okay. Thank you, Your Honor.

THE COURT: Okay. Anything else?

MR. STEKLOFF: Just briefly. One question, Your Honor.

Well, can we confirm what time we start on Wednesday? Are we doing all of this at 1:30? I think there have been differing -- or are we starting in the morning? I'm just --

THE COURT: Oh. I thought we were planning on starting in the morning, and then I was assuming we might need to take a lunch break and then resume in the afternoon. And I don't -- you know, I don't know what we'll take up first. Probably maybe we'll take up the statute of limitations first and then do, you know, the -- maybe in roughly the order that I just listed them, but I don't think it particularly matters.

MR. STEKLOFF: And then just one last issue, Your Honor.

As you know --

THE COURT: So we'll start at -- shall we start at 9:30? Is that what we have listed now?

THE CLERK: We have argument starting at 9:30 and

pretrial and *motions in limine* at 1:30.

THE COURT: Yeah. So basically get here at 9:30 and we'll figure it out from there how to proceed.

MS. MOORE: Perfect. Thank you.

MR. STEKLOFF: And the last issue --

THE COURT: Be ready to discuss everything in the morning and if we can discuss everything in the morning, wonderful.

MR. STEKLOFF: We agree.

So, as you know, many of the documents have confidential --

THE COURT: Oh. I apologize. I just want to say this while -- before I forget it. Sorry to interrupt you.

MR. STEKLOFF: Yeah.

THE COURT: Remember that the jurors are coming on Wednesday to fill out the questionnaires as well. So everybody -- you should avoid any discussion of the case in the hallways or the elevator or -- I mean, I know you would anyway but hallways, elevator, cafeteria. Just everybody should avoid discussing the case at all for fear of being overheard by a prospective juror.

MS. MOORE: Thank you.

THE COURT: Go ahead.

MR. STEKLOFF: Many of the documents have subject to protective order confidentiality designations on them. A lot

of them are the internal company documents that have been produced. We have asked the plaintiffs to remove those markers, those stamps that say "Subject to Protective Order" or "Confidential" for trial purposes, which is pretty easy to redact. They have stated that they will not do so.

My concern is that that is trying, whether explicitly or not, to suggest to the jury --

THE COURT: To suggest that Monsanto is trying to keep it hidden or something?

MR. STEKLOFF: Yes. And so I think we're asking Your Honor to order them to remove those designations for trial.

THE COURT: Yes. I certainly think they should be removed.

MS. MOORE: Your Honor, that's how they produced the documents to us so --

THE COURT: Of course.

MS. MOORE: I'm sorry?

THE COURT: Of course that's how they produced to documents to you.

MS. MOORE: Going back to the documents, how many documents were produced.

And those documents have been used in depositions with the confidential stamp at the bottom. So we've both designated multiple depositions to play at trial and, of course, the

exhibits with those depositions we would move for entry into evidence as an exhibit, and so they've already been used and referenced in those depositions with that confidential stamp at the bottom. So that's why we object to that.

THE COURT: So what? So what? What does that have to do with what the jury needs to see or not see?

MS. MOORE: Well, it was their choice, Your Honor, to put the confidential designation on there.

THE COURT: Okay. Anything else?

MS. MOORE: The only thing I would add, Your Honor, is if your ruling is to remove the confidential designation, that that burden be placed on Monsanto because they are the ones that put it on there and we're talking, you know, many, many documents. And so if they want confidentiality removed --

THE COURT: Well, but you're the one who needs to make the decision about what exhibits you're going to use at trial; right? And I assume that's not narrowed down in a particularly meaningful way by now but during the course of trial, it's going to be narrowed down.

MS. MOORE: Sure.

THE COURT: And before you use a document, you need to -- you know, whether it's the night before a witness comes on or, you know, a couple days before a witness comes on, you're going to narrow down the number of documents that you might use with that witness; and when you do that, you can

remove --

MS. MOORE: Okay.

THE COURT: -- the designation of confidential.

MR. TSADIK: Thank you, Your Honor.

MR. STEKLOFF: Thank you, Your Honor.

THE COURT: Thank you.

THE CLERK: So --

THE COURT: Oh, wait. Hold on.

THE CLERK: Hold on.

To be clear, they're supposed to be providing me an original copy of all of the exhibits they're going to be using ahead of time. So does that mean that they're going to be coming through and replacing everything the day before then? I'm going to be getting new copies of things or should they be doing this now?

THE COURT: Well, the problem is that right now -- they're at a stage in their trial preparations right now where they have a thousand possible documents that they're going to use and they'll only end up using 50 of them. I'm making up the numbers.

MS. MOORE: Right, but less.

THE COURT: It's more like 20,000 and a hundred -- right? -- or 10,000 and 200. So it doesn't make sense to make them go through and remove the confidentiality designations now unless that's easy -- unless that's somehow mechanically easy

to do, and I assume that it's not.

MS. MOORE: I wouldn't say it would be, Your Honor. I think my staff would appreciate not having to do that at this juncture.

I mean, we'll get Ms. Mellen copies of exhibits that are redacted as soon as we can. I think we've agreed to exchange them 48 -- there's sufficient time between when the witness will be on the stand and when those exhibits would be ready.

THE COURT: And so -- but we'll figure this out offline and we'll figure out a way mechanically to make it work for the process of admitting the exhibits as well.

MS. MOORE: Okay. All right. Thank you, Your Honor.

THE COURT: Thanks.

MR. STEKLOFF: I'll just say, Your Honor, that we have already produced images of all of our exhibits and some of them have the stamp and we -- on the exhibits that we've produced to the plaintiffs so that they have notice of all of the exhibits. We have removed the stamp on our end. I wasn't involved in the mechanics to tell you how complicated that was --

THE COURT: Right.

MR. STEKLOFF: -- but we have done that.

THE COURT: But one question is since the documents did come from Monsanto, I mean, maybe it would be easier mechanically, from an IT standpoint, for Monsanto to remove the stamps and resubmit them to the plaintiffs. I don't know the

answer to that and I don't want to spend any more time on it, but I will order you-all, both sides, to spend some time figuring out mechanically what's the easiest way to do that.

MS. MOORE: Okay. Thank you, Your Honor.

THE COURT: Thank you.

ALL: Thank you, Your Honor.

(Proceedings adjourned at 11:57 a.m.)

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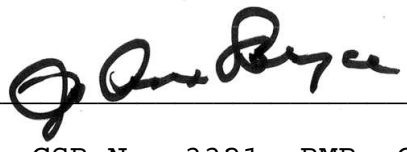
CERTIFICATE OF REPORTERS

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

DATE: Monday, February 11, 2019



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