SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF SAN FRANCISCO

DEWAYNE JOHNSON,

Plaintiff,

vs. Case No. CGC-16-550128

MONSANTO COMPANY, et al.,

Defendants.

_____/

Proceedings held on Friday, July 20, 2018, Volume 13, Afternoon Session, before the Honorable Suzanne R. Bolanos, at 1:03 p.m.

REPORTED BY:

LESLIE ROCKWOOD ROSAS, RPR, CSR 3462

Job No. 2965317B

Pages 2878 - 3069

APPEARANCES:

FOR THE PLAINTIFF:

R. BRENT WISNER, ESQ.
PEDRAM ESFANDIARY, ESQ.
BAUM, HEDLUND, ARISTEI, GOLDMAN PC
12100 Wilshire Boulevard, Suite 950
Los Angeles, California 90025
310-207-3233

DAVID DICKENS, ESQ.
THE MILLER FIRM, LLC
108 Railroad Avenue
Orange, Virginia 22960
540-672-4224

FOR THE DEFENDANT:

SANDRA A. EDWARDS, ESQ.
FARELLA BRAUN + MARTEL LLP
235 Montgomery Street
San Francisco, California 94104
415-954-4400

APPEARANCES (Continued):

FOR THE DEFENDANT:

GEORGE C. LOMBARDI, ESQ.
JAMES M. HILMERT, ESQ.
WINSTON & STRAWN LLP
35 West Wacker Drive
Chicago, Illinois 60601
312-558-5969

KIRBY T. GRIFFIS, ESQ.
HOLLINGSWORTH LLP
1350 I Street, N.W.
Washington, D.C. 20005
202-898-5800

INDEX OF PROCEEDINGS

WITNESS	DIRECT	CROSS	REDIRECT	RECROSS	VIDEO
CHADI NABHAN	2882	2888	3016	3038	
			3049		

EXHIBITS ADMITTED

(None.)

Friday, July 20, 2018

1:03 p.m.

Volume 13

Afternoon Session

San Francisco, California

Department 504

Judge Suzanne Ramos Bolanos

PROCEEDINGS

13:03:38

THE COURT: Welcome back, Ladies and Gentlemen, Counsel.

Dr. Nabhan remains under oath, and, Mr. Dickens, you have five minutes.

13:03:51 MR. DICKENS: Thank you, your Honor.

DIRECT EXAMINATION (Continued)

BY MR. DICKENS:

Q. I hope you had a nice lunch, Doctor.

13:03:59 A. I did. Thank you.

Q. I want to head back to where we left off, and specifically Plaintiff's Exhibit 1039.

I'll just ask you some more questions with respect to your chart, and specifically, I want to bring

13:04:17 up the September 17th, 2015, record, and it says, "Large

cell transformation diagnosed by Dr. Ofodile"; is that correct?

A. Yes.

Q. What's the significance of a large cell transformation? What does that mean?

A. So oftentimes, as we described earlier, patients with the disease undergo multiple biopsies, and if the clinical course doesn't always fit with what you think is going on and you suspect that maybe the behavior of the disease is a little bit different, you biopsy looking for what we call large cell transformation, which means what you see under the microscope, more than 25 percent of these cells that are large in size and appearance, and it implies a shift in the prognosis to a more aggressive type of progress. Right?

Remember we talked -- this is more of a (inaudible) disease, that some patients live for ten-years-plus, but when you see a large cell transformation, it tells you that the progress has taken a turn to the worse. That's really the significance of this situation.

Q. Okay. And actually, when it transformed, at that point in time, he was still spraying, was he not?

A. That's what it looks like from looking at the records.

Q. And you say it carries a worse prognosis. What's the expected prognosis of someone who has large cell transformation?

A. I'm going to always say that it is impossible for any physician to tell you with accuracy, you know, how long a patient has to live. We always talk by medians and averages.

So the average is two years usually from this type, in general, when you look at the literature. But that means it's an average. Some patients actually, unfortunately, die less than two years from transformation, and others live longer than two years. And I was very pleased to see that Mr. Johnson actually exceeded the expectations, and clearly he has survived beyond two years from the large cell transformation.

Q. Okay. Now, at the time from diagnosis until September 17th, 2015, did Mr. Johnson have open wounds on his body?

A. Yeah, I mean, it's -- again, some notes would have pictures and photos of the patient, and sometimes they always -- don't always have that. But there were some areas where there are some open wounds and skin lesions that were getting worse, and that's usually why these dermatologists or oncologists do rebiopsy and say, "This is just not fitting. We expect somebody to respond

longer. We extend the response to actually be more profound."

But -- yeah. I mean, that's usually why a rebiopsy is done. When you are seeing something that is
13:07:12 not fitting with what you expect, you go back and say, "Well, let me see if there's a change in what we are seeing." And you don't have to biopsy, by the way, every single lesion. They biopsied a couple of them. One of them had large cell transformation. You don't go and
13:07:27 poke the patient in every single area when you have 80 percent of the skin is going -- to see if every single one has large cell transformation. One is enough.

Q. Based on your review of the literature and the medical records, is the fact that he actually had open
13:07:42 sores or open wounds on him, does that increase the amount of exposure he would have to anything, but Roundup specifically?

A. It can. Common sense, right.

Q. Has Mr. Johnson ever received chemotherapy?

13:07:56 A. He did. He actually received chemotherapy in 2016 with a drug called BV, as you see in the bullet point second before last, September 2016 to May 2017, and he had several dose reductions. He missed a couple of appointments because of side effects, and then
13:08:18 subsequently, he stopped treatment for several reasons.

One of them was financial. And subsequent to that, he was started on additional chemotherapy in November of 2018, as you see.

Q. Doctor, have you reviewed a recent or the most recent scan of Mr. Johnson?

13:08:32

A. He had a PET scan done in June 2018. A PET scan lights up in the areas where there's actual disease, especially if it's getting worse, and when you look at the PET scan from last month, it is much more than the one before, showing progressive disease and showing the disease has taken a turn for the worse.

13:08:52

Q. Okay. And in your binder, Exhibit 1019, is that the latest scan for Mr. Johnson?

A. Yes.

MR. DICKENS: Permission to publish Exhibit 1019, your Honor?

13:09:05

THE COURT: Any objection?

MR. LOMBARDI: No objection.

THE COURT: Very well. You can proceed.

Q. BY MR. DICKENS: Doctor, based on this scan, it's from June of 2018, what is Mr. Johnson's prognosis?

13:09:12

A. You know, I'll always say I don't think any physician should ever play God. I mean, we just don't know, but clearly the prognosis is bad. He has a disease that is progressing rapidly. The PET scan is showing

13:09:32

this. He has received two lines of chemotherapy, and he's not responding very well, and when he's responding, it's not lasting long.

So I, unfortunately, don't believe he has longer than December 2019, if I have to guess, and I would caution every physician to never try to guess this. I don't think we should play God.

Q. Is it more likely than not that Mr. Johnson will not make it passed 2019, based on what you've seen?

A. More like than not --

Q. And, Doctor, to a reasonable --

A. -- and I hope I'm proven wrong.

Q. Of course.

And to a reasonable degree of medical probability, is it true that but-for Mr. Johnson's exposure to Roundup, he would not have developed non-Hodgkin's lymphoma?

A. Absolutely.

MR. DICKENS: No further questions. I'll pass the witness.

THE COURT: Thank you.

MR. LOMBARDI: Your Honor, I have some binders, if I may.

THE COURT: Very well.

CROSS-EXAMINATION

BY MR. LOMBARDI:

Q. Hi, Doctor.

A. Hello.

13:11:06 Q. Just going to get everything distributed here first, Doctor.

MR. LOMBARDI: May I please the Court?

THE COURT: You may proceed, Mr. Lombardi.

MR. LOMBARDI: Good afternoon, Ladies and Gentlemen.

Q. Good afternoon, Doctor. My name is George Lombardi. We haven't met.

A. We have not.

Q. Nice to meet you.

13:11:38 A. Nice to meet you as well.

Q. Doctor, as I understand your career background, you started off working -- and I don't want to understate it, but just as a general matter -- doing a lot of clinical work.

13:11:51 A. I have.

Q. Yeah. And that was -- you told us about -- and I'm not going to get all the names right, but at a variety of hospitals and medical schools over the course of, say, the late '90s to just a few years ago; is that

13:12:05 right?

A. That is correct.

Q. Okay. And a lot of that was for treatment of people with non-Hodgkin's lymphoma, that was one of your -- your areas of specialty; is that right?

13:12:14 A. It was my major area.

Q. Okay. And then in recent years, your career took a little bit of a turn, in terms of what you're doing; is that right?

A. By design, yes.

13:12:29 Q. Right. You had planned on it, hadn't you, because you went back and got an MBA degree; right?

A. Well, I didn't really plan it. It's something that happens. As you go through your clinical career, you see certain things that make you decide what you can

13:12:42 do to impact patients at a larger scale, and as I said before, nothing really replaces one-on-one interaction between a physician and a patient, but sometimes you can impact care delivery differently by looking at larger populations and so forth.

13:12:58 And to do this, I believe in this health care environment being armed with a business degree, as well as understanding the business and economics, is essential. So it was an organic growth in my career professionally and personally, and that's why I decided

13:13:16 to go back to graduate school.

Q. It was -- you wanted to better understand the business, economics and accounting associated with medicine; right?

A. Absolutely.

13:13:23 Q. And -- so what you did was you went -- was it the University of Chicago?

A. No. I went the Loyola University Quinlan School of business.

Q. Obviously, that was in Chicago?

13:13:33 A. In Chicago.

Q. And you got a master's of business administration at that time?

A. Correct.

Q. And you are now an executive at -- and tell me

13:13:42 if I've got the name -- Cardinal Health. I know that sometimes there are official names. Is Cardinal Health the right terminology?

A. Yes. In one of the divisions within Cardinal Health. In my capacity, as I described, I do a lot of

13:13:55 health economics research, patients-reported outcomes, focusing on oncology between manufacturers and providers.

Q. And Cardinal Health is a huge company; right?

A. It is.

Q. And your division is a huge division, isn't it?

13:14:08 A. Yes.

Q. And is it -- was it -- is it 11 billion -- or $11 billion division; is that right?

A. You're talking gross revenue?

Q. Yeah.

13:14:17 A. Yes. That's actually significantly less than Monsanto.

Q. Thank you for that, Doctor. I hadn't actually asked you that.

But you don't dispute that Cardinal Health is a

13:14:29 Fortune 15 company?

A. Yes, it's Fortune 14 last classification.

Q. And what you do now, Doctor, is you work on the operating committee of Cardinal Health; is that right?

A. So, again, there are --

13:14:43 Q. Can you answer that question "yes" or "no," Doctor?

A. I can't, because there are various divisions, and I work in Cardinal Health specialty solutions, which is a division of Cardinal Health, and I'm not on the

13:14:57 operating committee of Cardinal Health, the larger enterprise. No, that's inaccurate.

Q. Are you on the operating committee of the speciality solutions division?

A. Correct.

13:15:06 Q. Thank you, Doctor.

And you report directly to the president?

A. Of the speciality solutions, yes.

Q. You work on business strategies?

A. I do work on business strategies.

13:15:13 Q. You work with the sales force?

A. Absolutely.

Q. You work on acquisitions?

MR. DICKENS: Objection, your Honor, relevance.

THE COURT: Overruled.

13:15:23 Q. BY MR. LOMBARDI: You work on acquisitions?

A. No. I get -- my opinion is usually asked as to whether a particular acquisition is important that is aligned with the business strategy and what the goals and what could help our stakeholders.

13:15:35 Q. You work on product offerings?

A. Yes.

Q. You -- you've got your -- your picture's on the website; right?

A. I hope so. I hope so.

13:15:43 Q. Yeah, it's there. And you -- it says, "Ask me about" -- you make new payment models; right?

A. Yes.

Q. And strategies to improve operations and enhance efficiency in cancer care?

13:15:55 A. Absolutely.

Q. And so that's what you're doing today; right?

A. That's what I do today.

Q. And 80 percent of your time is spent on administrative stuff?

13:16:04 A. Well, it depends, really, how you define administrative stuff. I don't have -- I don't see patients in clinic today. So, I mean, 100 percent of my work is administration research.

Q. Okay. So that was what I was getting to. You

13:16:18 don't see patients anymore; is that right?

A. I don't see patients in the clinic at the present time, no.

Q. And you haven't seen patients since you started at Cardinal Health?

13:16:27 A. That is correct. And that's actually by design. I --

Q. Thank you, sir. You answered my question. I just asked you whether you see patients anymore.

A. Is it okay if you don't interrupt me, please?

13:16:38 Q. Sir, you need to answer my questions, not go beyond my questions.

A. But I prefer not to be interrupted.

THE COURT: Dr. Nabhan, we have rules here in the courtroom, so if you could please listen to

13:16:52 Mr. Lombardi's questions and then answer his questions

directly, and then other issues may be revisited when Mr. Dickens resumes his examination.

THE WITNESS: Sure, your Honor.

Q. BY MR. LOMBARDI: Doctor, you don't see patients currently; is that right?

13:17:05

A. Correct.

Q. You formerly had privileges at hospitals where you could see patients; right?

A. Correct.

13:17:11

Q. You don't -- you don't have those privileges anymore; is that right?

A. I resigned.

Q. Right. Fair enough.

And you haven't had those privileges since approximately the time you joined Cardinal Health; is that right?

13:17:19

A. Correct.

Q. And that was approximately summer of 2016?

A. September 1st, 2016.

13:17:30

Q. Thank you, sir.

Now, sir, your publications that you've done don't address whether particular substances cause cancer; correct?

A. Correct.

13:17:44

Q. Before your work with respect to glyphosate --

and we'll talk about that a lot, Doctor. But before that, you were not retained to provide any expert opinion about the cause of someone's cancer; is that correct?

A. Could you repeat the question, please?

13:18:00 Q. Yes, I can.

Before your work on glyphosate -- so putting this case aside --

A. Sure.

Q. -- you have not been retained to provide any

13:18:09 expert opinion about the cause of someone's cancer?

A. No.

Q. That's correct; right?

A. Correct.

Q. You have not done original research on mycosis

13:18:21 fungoides; is that right?

A. That is correct.

Q. Okay. You have never before used what's called the Bradford-Hill criteria to determine whether a substance causes a disease; is that correct?

13:18:30 MR. DICKENS: Objection, your Honor, foundation.

THE COURT: Overruled.

He may answer, if he knows what the Bradford-Hill criteria are.

THE WITNESS: I do, and I did not use it

13:18:40 previously.

Q. BY MR. LOMBARDI: Okay. Thank you, Doctor.

And, Doctor, you just -- so the jury understands, you were first approached to work on this glyphosate issue -- and just help me if I've got this
13:18:54 wrong -- but I think it was the spring of 2016; is that right?

A. That's correct.

Q. And a law firm approached you and asked you if you would be interested. That's how it started, at
13:19:04 least; is that right?

A. Not interested. They asked me to review the evidence and see if this is something that I would be interested in testifying about.

Q. Yes. And then you did review evidence, I think,
13:19:13 for a few months; is that right?

A. It took me about two to three months.

Q. And then you said you'd be interested after you had a chance to review the evidence?

A. That's correct.

13:19:23 Q. Okay. And the evidence that you reviewed included the IARC Monograph, which you talked about today; is that right?

A. That is right.

Q. And is it fair to say that most of the evidence
13:19:34 you reviewed was the IARC Monograph and most of it was

stuff that was -- I'll stop saying "stuff" -- the IARC Monograph and articles and studies that were referenced in the Monograph?

A. Yeah. And I went back to the original articles that were actually referenced in the IARC Monograph to look at them.

Q. Okay.

A. As well as looking at the IARC analysis. So that was a good foundation to start with and to end with.

Q. You had not seen the IARC Monograph that's at issue here, that you talked about today, before you were approached by the attorneys; is that right?

A. Yes, I was not looking at the correlation between glyphosate and lymphoma prior to that.

Q. The first time you saw the IARC Monograph was sometime in the spring or summer of 2016?

A. In the spring of 2016.

Q. Okay. And, sir, you had no opinion on whether glyphosate caused non-Hodgkin's lymphoma before being retained by plaintiff's lawyers in this glyphosate matter; is that right?

A. Before reviewing the actual evidence, I had no opinion after. Reviewing the evidence, I formed an opinion.

Q. Exactly. But that was after you had been

approached by the plaintiff's lawyers?

A. Correct.

Q. Thank you.

Now, Doctor, you first came to the conclusion that glyphosate causes NHL after being retained by the plaintiff's attorneys; correct?

13:20:53

A. Yes, after reviewing the evidence and after being retained. I said that.

Q. All right. Thank you. If I repeated myself, I apologize, Doctor. I can't promise I won't do it again.

13:21:09

You have no opinion about whether glyphosate causes other types of cancer at this time; is that right?

A. I do not.

Q. And there's something, like, mid-70,000 cases of non-Hodgkin's lymphoma a year? Does that sound about right to you?

13:21:26

A. About 75,000 new cases each year.

Q. And you agree that non-Hodgkin's lymphoma has, for a long time, been associated with farming?

A. Yes.

13:21:37

Q. Long before glyphosate was even on the market; right?

A. There -- farming and agriculture has been an increased risk of developing non-Hodgkin's lymphoma.

Q. Yeah. But before glyphosate was even on the

13:21:45

market, that was the case; isn't that right?

A. I actually don't know if it was -- there's data before glyphosate was on the market. I think glyphosate -- correct me if I'm wrong -- 1974, '76. So I don't -- I don't -- I don't believe that we knew before 1976 that farming and agriculture, as an occupation, was an increased risk of non-Hodgkin's lymphoma. Not to my knowledge.

13:22:01

Q. Okay. And you testified that there's an ever growing number of subtypes of non-Hodgkin's lymphoma; is that right?

13:22:13

A. Absolutely.

Q. And one of them is the one that's at issue here, mycosis fungoides; is that right?

A. Cutaneous T-cell non-Hodgkin's lymphoma, yes.

13:22:23

Q. Okay. And you don't have -- and you explained why. You don't have data to show that glyphosate is causally associated with every subtype of non-Hodgkin's lymphoma; correct?

A. I think I explained the rationale and the reason why this is not practical.

13:22:34

Q. Okay. You did. Understood.

You have no opinion, then, because of those reasons that you've articulated for us, that glyphosate causes any particular subtype of non-Hodgkin's lymphoma;

13:22:48

is that right?

A. I believe it's a substantial risk factor to causing non-Hodgkin's lymphoma in general, which would affect any of the subtypes that are listed on the table that I showed.

Q. Okay. But it may be the case that glyphosate is causally associated with every single type or not associated with every single type. We just don't know right now; is that right?

13:23:11 A. What we know, it's associated with non-Hodgkin's lymphoma, as I said. The classification of non-Hodgkin's lymphoma continues to change. But as a disease, it's a large umbrella. It's like breast cancer or prostate cancer. So we know the association between glyphosate and non-Hodgkin's lymphoma.

In a few years, if this classification I showed today changes again, it's hard for me to go and say, "Well, it doesn't cause the new classifications that were added." Because they existed. We just now knew that they -- we knew how to diagnose them.

All of these classifications change just by virtue of us being able to diagnose better. That's really what. They obviously were there 20 years ago. We didn't discover them. We just were able to diagnose them better.

Q. Well, for instance, is my understanding correct, mycosis fungoides has been observed for over 100 years?

A. Oh, yeah.

Q. Going way back -- was it -- it's the late 1800s, I think.

13:24:09

A. Late 1800s was when it was first described. I don't remember the actual year. It was described a long time ago.

Q. Way before glyphosate was around; correct?

13:24:16

A. Absolutely.

Q. Okay. So, sir, there are lots of patients that you have seen with mycosis fungoides over the years for whom you have no idea what caused it; correct?

A. Correct.

13:24:27

Q. Now, you testified today that you reviewed the materials we talked about, IARC and some more, and came to your conclusions about glyphosate causing non-Hodgkin's lymphoma; is that right?

A. Yes.

13:24:43

Q. So what we have here, I think, for your opinion -- tell me if I'm accurately characterizing this -- is basically two things: We have what we could call a general causation opinion, and then a more specific causation opinion. Is that -- is that fair?

13:24:56

A. I think it's fair.

Q. And you need -- in order to establish specific causation -- when we talk about specific causation, we're talking about Mr. Johnson in particular; right?

A. I understand that.

13:25:06 Q. Okay. Well, that's how you use the term; correct?

A. Sure.

Q. Okay. And so in order to establish the specific causation case about Mr. Johnson, you first have to

13:25:17 establish the general causation case; is that right?

A. I think it makes sense, yeah.

Q. And the general causation case, what we're talking about there, is you have to establish that glyphosate actually causes non-Hodgkin's lymphoma or can

13:25:30 cause non-Hodgkin's lymphoma --

A. I would say "can cause" is more accurate --

Q. Okay.

A. -- because obviously it doesn't cause every non-Hodgkin's lymphoma. But it certainly could be a

13:25:40 substantial contributing factor to non-Hodgkin's lymphoma.

Q. Okay. So -- so the general matter is first you establish -- or the way you went about it this morning was first you talked about why you believe that

13:25:50 glyphosate can cause non-Hodgkin's lymphoma, and then you

turned to: Having established that, we're going to see whether it causes Mr. Johnson's mycosis fungoides. That's the basic structure of your testimony?

A. Correct.

13:26:04 Q. Okay. All right. So let's talk about what you looked at. And you selected for us -- and I'm not meaning to misrepresent anything you did, Doctor. You selected a few studies for us, not everything you looked at; is that right?

13:26:26 A. Yes. And I obviously did state that I looked at many of the positive and negative studies, because there were some positive and some negative.

Q. Right. And so I'm not meaning to misrepresent that, but I am going to focus on the ones you selected, 13:26:39 because those are the ones you selected to talk about.

You feel that those were ones worth highlighting for the jury; is that right?

A. I think they're worth highlighting, yes.

Q. And the ones that you thought were worth 13:26:50 highlighting in particular were epidemiology studies; is that right?

A. Yes.

Q. And you are not an epidemiologist?

A. I am not.

13:26:59 Q. You've never done an epidemiology study?

A. No. I collaborated with epidemiologists, because I think it's part of the things I've done when I was in research.

Q. Yeah. And I don't mean to imply -- you've certainly read epidemiology?

13:27:12

A. Right.

Q. Yeah. But you haven't actually done studies yourself. That's my only point.

A. No, I have not led epidemiologic studies myself.

13:27:20

Q. Because you know a few things about epidemiology?

A. Well, I -- for me, it's important to take the epidemiology literature and apply it to patients in clinical context, because -- because ultimately you're

13:27:31

sitting with the patient and having to make the decision.

So, yes, I can read the epidemiology literature and figure out: How do I interpret this in clinical context?

Q. Okay. And -- and in that context, you've gotten

13:27:41

familiar with some epidemiological terms and techniques and so forth; is that right?

A. I'm still not an epidemiologist, though.

Q. Understood.

But you talked about epidemiology this morning;

13:27:51

right?

A. Right, I understand.

Q. Okay. And so, Doctor, one thing -- you talked a lot about statistical significance this morning; right?

A. Yes.

13:27:57 Q. But you didn't talk about something called adjustment, did you?

A. We did not, no.

Q. Okay. And I'm going to read you something. I want to know if you agree with this. Okay?

13:28:08 A. Sure.

Q. "Exposure to numerous pesticides poses problems of interpreting risk associated with a particular chemical. And multiple comparisons increase the chances of false positive findings."

13:28:24 Do you agree with that?

A. Sometimes that's correct.

Q. Okay. And so you know, from reading the epidemiological literature that's at issue in this case, that there's an issue related to multiple pesticide

13:28:37 exposure; right?

A. Some patients are exposed to multiple pesticides, others are not.

Q. Yeah. And the studies have to deal with the problem that there's exposure to multiple pesticides;

13:28:47 right?

A. Yes.

Q. And, actually, let me read you one more thing and see if you agree with this one.

"Interpretation of epidemiological results
13:29:00 regarding individual pesticides is fraught with difficulties."

Do you agree with that?

A. It's very difficult, correct.

Q. And that's a problem with these epidemiological
13:29:09 studies; right?

A. And I think when I first started this morning, I said there's absolutely no perfect epidemiologic study and every epidemiologist would agree with me. There is no perfect epidemiological study.

13:29:24 Q. Fair enough.

But you didn't talk about adjustment this morning.

A. When I said there is nothing perfect, part of the reason is this.

Q. Okay.

A. I mean, the point is that there is no perfect epidemiologic study, because you're dealing with populations. And you can't really control for every single factor.

13:29:38 And what you're highlighting is obviously

accurate. This is one of the reasons why there's no perfect epidemiological study.

Q. And one of the reasons, it's -- you agree it's fraught with difficulty?

13:29:47 A. I said -- again, I said there's no perfect epidemiologic study.

Q. But do you agree that dealing with multiple pesticide exposures in epidemiological studies is fraught with difficulty?

13:29:59 A. It's not just the pesticides; right? I mean, there are other --

Q. Can you just focus on this question?

A. I do.

Q. Is it fraud with difficulty?

13:30:08 A. What is fraught? What is the meaning of "fraught"?

Q. Okay.

A. It is difficult. I understand. What's -- I mean, you're focusing --

13:30:13 Q. Does it create lots of difficulties?

A. Of course.

Q. Okay. Thank you.

And so is one of the difficulties, "The problem of interpreting risk of individual factors in the

13:30:27 multiple exposure setting of modern agriculture, as well

as the chance occurrence of finding positive associations with multiple comparisons"? Do you agree with that?

A. I didn't catch every word, but it seems, like, logical. Yes, I agree with that.

13:30:42 Q. Okay. And so there are problems with epidemiological literature that if you're going to understand what it actually tells you, you need to take into account; right?

A. Yes. And some of these problems are impossible

13:30:54 to reconcile.

Q. Okay.

A. That's why there's no perfect study.

Q. Okay. And you understand that -- you understand the word "adjustment" in the context of epidemiology;

13:31:07 right?

A. Yes.

Q. And so just as an example, and not meaning to get into a lot of detail, Doctor, but adjustment for other pesticides means that you're trying to tease out

13:31:17 the actual effect of a particular pesticide from the entire group; is that right?

A. And I think the key thing in what you said is you try.

Q. Okay. Fair enough.

13:31:27 A. Yes.

Q. And so when you have a whole group of pesticides -- and there are lots of pesticides that are carcinogens; right?

A. Again, I only -- I did not review all the pesticides, but you're correct. There are lots of pesticides that could cause cancer, yes.

Q. Now, isn't that important to understand when you're interpreting studies that involve multiple pesticides?

A. Yes. And I did say there are a lot of pesticides that could cause cancer, but I think the -- I did not look whether all of them necessarily cause non-Hodgkin's lymphoma. I think that's really the difference, because not every cancer is non-Hodgkin's lymphoma.

Q. If you can't -- if you don't know whether other pesticides are causing cancer, you can't really tease out the effect of any individual pesticide, can you, Doctor?

A. I said non-Hodgkin's lymphoma. So I think, again, what we're talking here is that you have to look at whether there's evidence that all of these pesticides that you are mentioning cause non-Hodgkin's lymphoma. Again, we just said every cancer is different.

Q. Okay. And, Doctor, adjusted data, data that adjusts for other pesticides, is more valuable than

unadjusted data, isn't it?

A. If you are able to adjust appropriately, it's always excellent to do, but, again, you just can't do that in every single study.

13:32:47 Q. Understood. Understood. But it's more valuable than unadjusted data?

A. It is more valuable if you can do, but I hope that, at least, we can both agree that this is not something you can do in every single study. You'd like

13:33:00 to do it if you can, but as you just said, it's not always easy to do.

Q. It's a weakness of a study if it doesn't adjust; correct?

A. Well, not necessarily. I mean, again, you would

13:33:11 like to do the adjustment. There are some studies where you simply cannot do the adjustment by the way the study is designed, so, again, it's -- there is no perfect epidemiologic study. If you show me any epidemiologic study, I will show you the weaknesses and the strengths

13:33:26 of such study, and I think we both agree on that. So, yes, if you can adjust, I think you should and you should try, but there scenarios -- there are designs of the study that preclude you from doing such adjustment.

Q. Isn't it true that you believe that you always

13:33:40 want to try to control for other pesticide exposures,

because you want to eliminate contamination if you can?

A. You want to try to control if you are able to, yes.

Q. And what you mean by "contamination" is you contaminate the results of your study if you have other pesticides in there, for instance, with glyphosate?

13:33:53

A. Yes.

Q. Now, let's talk about the studies that you chose to look at, Doctor. I think it was -- McDuffie was one of them; is that right?

13:34:12

A. One of them was McDuffie, yes.

Q. And another was Eriksson?

A. Yes.

Q. And another was -- was it De Roos 2003?

13:34:21

A. Yes.

Q. Because there are multiple De Rooses. We've been referring in this case --

A. There's one in 2005.

Q. Okay. But you were referring this morning to the one that was 2003?

13:34:31

A. Correct.

Q. So, Doctor, McDuffie -- you put up results for McDuffie -- and maybe we can just pull that up.

MR. LOMBARDI: You have a problem if I show him McDuffie?

13:34:47

MR. DICKENS: No objection.

MR. LOMBARDI: Okay. Let's pull up DX 2779, please.

THE WITNESS: Is this going to be in my binder?

13:34:55 Q. BY MR. LOMBARDI: I think it's going to be in the really big one, Doctor.

A. Which number, Counsel?

Q. I'm sorry. 2779.

A. Yep. I see it.

13:35:24 Q. And you said -- I think you said that this one -- what did you say the effect was that was shown in the McDuffie article?

A. It's more -- the odds ratio was more than 2.

Q. Is more than 2, did you say?

13:35:37 A. The odds ratio, yes.

Q. Okay. And the odds ratio -- when you did that, you were looking at the IARC table, I think; is that right? When you -- when you testified about that?

A. The -- the table that was shown to me by counsel

13:35:52 was the IARC table, yes.

Q. Okay. And do you agree -- one thing you did note that there's a comment section in the IARC table, and it says that one of the limitations of this study is they have no quantitative exposure data.

13:36:06 Did you remember that?

A. I do.

Q. And it had relatively low participation?

A. I think they were referring to the controls, which is not unusual. Oftentimes, you have more cases that respond to the questionnaires than controls.

Q. But IARC noted that as a limitation of the study; correct?

A. To IARC's credit, they did limit -- they did actually mention the limitations and the strengths of each study, and that's to their credit.

Q. Okay. And, Doctor, this McDuffie study, it does not adjust for -- let me just say this: There's no control for other pesticides in this study; is that right?

A. Not that I'm aware of.

Q. Okay.

A. It looked at herbicides in general, and then after that, they looked at glyphosate, and you can see that on Table 8. Where you have more than two days of exposure, the odds ratio is 2.12.

Q. Let me just find my place here, Doctor. One second.

A. Sure.

Q. Before we get there, let me just stop. Let's look at this first page for just a second.

MR. LOMBARDI: So the jury can see, we'll go down a little bit. Right there.

Q. That first line, Doctor, and it's up on --

Are you looking at something there?

13:37:34 A. No. Go ahead.

Q. Is that notes, just so we know?

A. This is just some -- a couple of things that I wrote here, as well as the binder that was given to me earlier on, which is making it very awkward for me to

13:37:50 look at.

Q. Okay. All right. Understood. And if you need to look at your notes, just tell me.

A. Sure.

Q. "NHL has been epidemiologically associated with

13:37:59 farming."

Do you see that?

A. I do.

Q. That's what we talked about earlier?

A. Yes.

13:38:03 Q. "With certain farm practices."

See that?

A. Yes.

Q. "With pesticide exposure"?

A. Yes.

13:38:07 Q. "And with certain other occupations."

Do you see that?

A. I do.

Q. Okay. And so that confirms what you were telling me about this association with non-Hodgkin's lymphoma that goes back quite a ways; right?

13:38:18

A. Yes.

Q. All right. Now, you looked at a particular table in here for a result, but I think you said, if I have this right, that the results that you cited to were not adjusted for other pesticides; is that right?

13:38:30

A. I'm not aware they were able to adjust. That's correct.

Q. Okay. Thank you. All right. The next one you talked about -- so that would mean with McDuffie, they couldn't eliminate the contamination you were talking about that you would try to eliminate with adjustment; right?

13:38:41

A. May I provide a comment on that? Is it okay if I answer that? This is not a yes-or-no question. Am I allowed to answer this?

13:38:55

THE COURT: Well, did you have -- were you asking him a question?

MR. LOMBARDI: I was. I thought I was.

THE WITNESS: No, you did, but I just need to explain, as a clinician, what this means to me. I just

13:39:06

ask your permission.

THE COURT: You may answer.

THE WITNESS: Thanks, your Honor. So that is correct. You know, so, when they -- when there are other pesticides they were unable to adjust for, that's absolutely correct. However, from the clinical perspective usually, usually, if you have so many other pesticides that are contaminating particular results, we should not see statistical significance or increased odds ratio for one particular chemical or one particular compound. And this is not necessarily what was observed here.

It is true you'd like to do the adjustment, but despite the presence of these other pesticides that you just mentioned, despite all of this, there was still identification that glyphosate did increase the risk and double the risk. But you'd like to do the adjustment, as you said.

Q. BY MR. LOMBARDI: Actually, when you don't adjust, you get lots of pesticides that show positive results, positive associations?

A. You could, yes.

Q. And what adjustment does is it eliminates the ones that shouldn't be -- that shouldn't show positive results in the true world; right?

A. If you're able to do it -- as I said, you always should try to do it. Sometimes there are limits to what you can do with these studies.

Q. Okay. Let's look at Eriksson, which is the second one, and it should be in that same binder, Doctor, 2505.

13:40:19

A. Okay.

Q. And you -- again, you pointed to results in Eriksson that were unadjusted; right?

A. Yes.

13:40:39

Q. And actually, with this study, you know that the authors thought adjustment was necessary?

A. Every author in every epidemiologic study would agree with that, that they would like to do -- I think if any author tells you adjustment is not necessary, they'd be wrong.

13:40:56

Q. Okay.

A. So this is not something that is surprising.

Q. But this is a little different, right, because the authors in Eriksson said so on the face of the article, didn't they?

13:41:05

A. What I'm saying is where there is --

Q. Did they say it on the face of the article?

A. I'll have to look. Can you point --

Q. Do you remember --

13:41:14

MR. DICKENS: Objection, your Honor. Argumentative.

THE WITNESS: I don't remember. I'm saying every article should say exactly the same. Whether they say -- I'm actually telling you you're correct. Every article should say the same --

Q. BY MR. LOMBARDI: Okay.

A. -- but you can't do it.

The reality is you can't do it.

Q. Okay. Well, do you know -- did -- you reported results from Eriksson that were not adjusted; right?

A. I did put that in my report, yes.

Q. Did you know that there are results in Eriksson that are adjusted?

A. I'll have to look at this. I believe there was a little bit between the glyphosate and the -- one of the other compounds, the MCPA.

Q. Let me help you, Doctor.

A. The MCPA on Table 10, I don't know.

Q. Let's go to 2505, page 4.

A. Okay.

MR. LOMBARDI: And can I publish that, please?

MR. DICKENS: No objection.

Q. BY MR. LOMBARDI: And we'll go over to page -- let's go to the first page. The jury has just heard

names of articles. Let's just show them what this -- this talks about "Pesticide Exposure as a Risk Factor for non-Hodgkin Lymphoma Including Histopathological Subgroup Analysis"; right, Doctor?

13:42:24 A. Yes.

Q. So this is referring to a study that's dealing with lots of different pesticides, right, not just glyphosate?

A. Correct.

13:42:34 Q. All right. Let's go to page 4.

A. Okay.

Q. And let's look right -- it's the top of the second column there. "Multi-variate analysis," you know what that means; right?

13:42:47 A. Yes.

Q. A multi-variate analysis is an analysis that adjusts; right?

A. Yes.

Q. It takes into account that there are multiple

13:42:56 variables; right?

A. Yes.

Q. And then it adjusts for those multiple variables?

A. Yes.

13:43:01 Q. Now, here's what the authors of Eriksson say.

"Since mixed exposure to several pesticides was more a rule than a exception" --

Do you see that?

A. I do.

13:43:11 Q. What they're saying is that most of the participants, or the people, studied in this article were exposed to multiple pesticides; right?

A. Yes.

Q. And because that was the case, they go on to say, "And all single agents were analyzed without adjusting for other exposure."

Do you see that?

A. I do.

Q. So they're saying, "We did some analysis without adjusting for other exposures"; right?

A. Yes.

Q. And that's the analysis you referred to this morning?

A. Yes.

13:43:42 Q. And then they go on to say, "A multi-variate analysis was made to elucidate the relative importance of different pesticides."

Do you see that?

A. I do.

13:43:52 Q. So if you want to see the relative importance of

glyphosate or something else, you'd look at the multi-variate analysis?

A. You do look at the multi-variate analysis, and you have to take this in a clinical context, though.

13:44:10 Q. Sir, we're talking about the epidemiology; right?

A. Yes.

Q. And this is what the study says. You don't have a problem with reading what the authors of the study say?

13:44:18 A. No. I concur with what they say.

Q. And, actually, Doctor, you didn't tell the jury this morning, but when you do the multi-variate analysis, you get no statistically significant result for glyphosate; isn't that right?

13:44:32 A. In this paper, that is correct.

Q. Okay. It's one of the papers you chose --

A. Yes.

Q. -- to talk to the jury about?

A. Yes.

13:44:39 Q. And let's go and look at page 6 of the study. All right. And if you look right there -- just to preview what we're getting to, Doctor, do you see the reference to MCPA?

A. I do.

13:45:06 Q. I think you were referring to that earlier. Can

you identify that for the jury?

A. Yes.

Q. Tell the jury what that is, please.

A. It's another form of pesticide.

13:45:15 Q. Okay. And so what it says -- so what the authors of the Eriksson article say is, "Glyphosate has succeeded MCPA as one of the most used herbicides in agriculture."

Do you see that?

13:45:26 A. Yes.

Q. "And many individuals that used MCPA earlier are also now exposed to glyphosate"?

A. Yes.

Q. That's a classic problem of confounding, isn't

13:45:36 it?

A. And that probably explains why the multi-variate analysis was negative.

Q. And that's the kind of contamination that you're saying adjustment is designed to avoid; isn't that right?

13:45:48 A. Yes, but that also -- the same exact problem where the multi-variate analysis may not be able to adjust for. That's exactly -- what you highlighted is exactly the problem why the multi-variate analysis would be negative. Because you have two compounds, you're

13:46:04 trying to adjust for them. But in order to adjust, you

need to make sure that the use is not changing for these compounds. So you have two that are just the uses being mixed with each other. That is exactly the difficulty in making the analysis.

13:46:20 Q. And they say it's because when you put it all together, you get effects for everything. "This probably explains why the multi-variate analysis does not show any significant" -- and "OR" is a odds ratio; right?

A. Yes. It's an odds ratio.

13:46:34 Q. For these compounds?

A. Well, exactly -- it literally illustrates what I was trying to say. It is why the multi-variate analysis is not significant. Because to do this, you need to make sure that the use of these compounds does not change over

13:46:49 time. So how would you adjust for these compounds if the use of one is going down and the use of the other is going up? That's the difficulty of making these adjustments. That's exactly the explanation why the multi-variate analysis is negative, and that's why you

13:47:07 can't ignore the univariate analysis.

Q. Well, these authors thought it was important to do the adjustment, Doctor.

A. And I commend them for doing it.

Q. If they're doing the adjustment, then maybe we

13:47:20 ought to look at the adjusted results; right?

A. I'm telling you why the adjustment showed negativity. They actually explained to you why.

Q. But, Doctor, adjustments -- if you don't do the adjustments, they can contaminate the data, can't they?

13:47:30 A. But read the last two lines.

Q. Doctor, can not doing the adjustment result in contamination of the data?

A. And doing the adjustment could also get conclusion of negative results because of the situation, so that's correct.

13:47:43

Q. Does not doing the adjustment contaminate the results? Can you answer that question, Doctor?

A. Yes. Not doing the adjustment could be a problem. But when you do it and you have a problem like this, that's why it's negative. I think it's very important to look at the entire paragraph and read it entirely.

13:47:54

Q. And I did read that to you; right?

A. But you also have to explain --

13:48:02 Q. You didn't talk about the fact that Eriksson did do an adjustment, this morning; right?

MR. DICKENS: Objection. Argumentative.

THE COURT: Overruled.

THE WITNESS: I wasn't asked.

13:48:16 MR. DICKENS: That is true.

Q. BY MR. LOMBARDI: The last one was De Roos 2003; is that right?

A. Yes.

Q. Let's pull that one up. That One, Doctor, should be in your binder as 2193. Let me know when you have it.

A. I have it.

MR. LOMBARDI: Permission to publish, your Honor?

MR. DICKENS: No objection.

THE COURT: Any objection?

MR. DICKENS: No objection.

Q. BY MR. LOMBARDI: We'll put it up on the screen, Doctor, just as we have before.

A. Sure.

Q. So here's 2193. Let's look again. Here's "Integrative Assessment of Multiple Pesticides as Risk Factors for Non-Hodgkin's Lymphoma Among Men"; right?

A. Yes.

Q. So this is, again, a study that's looking at multiple pesticides; right?

A. Yes.

Q. And just -- I don't think we've actually talked about this with the jury. It's probably obvious to them at this point, but when we say it's the De Roos article,

the convention in science is to take the first listed author and refer to the article by that person's name; is that right?

A. Yes.

13:49:18 Q. That's why we call it De Roos 2003, because it was actually published in 2003?

A. Correct.

Q. And that download at the top has nothing to do with --

13:49:28 A. Correct.

Q. -- with when it was actually published; right, Doctor?

A. Correct.

Q. Okay. On "Background" here it says, "An

13:49:34 increased rate of non-Hodgkin's lymphoma has been repeatedly observed among farmers, but identification of specific exposures that explain this observation has proven difficult."

A. I couldn't agree with this background more.

13:49:50 Q. Okay. Good. So, again, we're talking about the fact that we have this association between non-Hodgkin's lymphoma and farming?

A. Yes.

Q. And so what De Roos was trying to do, she

13:50:02 was trying -- and when I say "De Roos," I mean De Roos

and co-authors.

You understand that; right, Doctor?

A. Of course. Yeah.

Q. And what De Roos was trying to do was wrestle with that problem of dealing with multiple pesticides; isn't that right?

A. Every epidemiologist would have the same problem.

Q. Okay. And so one of the things that De Roos did, if we go to the first paragraph there -- one moment, Doctor, just --

A. No problem.

Q. -- making sure I have the right reference here so I don't refer you to the wrong place.

A. Sure.

Q. So she recognizes -- or the authors recognize that farmers are exposed to multiple pesticides; correct?

A. Yes.

Q. And one of the techniques that she uses -- here we go -- we'll just read a little bit about what she's talking about doing. "In principle, multiple pesticide exposures should be modelled simultaneously to account for their probable correlation; however, modelling multiple pesticides can lead to imprecise estimates, particularly where exposures are infrequent."

Do you see that?

A. I do.

Q. And then she says, "In addition, some estimates are expected to be very inaccurate, either due to chance or systematic error (such as recall bias)."

13:51:29

Do you see that?

A. I do.

Q. Recall bias is a particular kind of problem that we see with case-control studies; is that right?

A. Yes.

13:51:40

Q. And De Roos is a case-control study?

A. I think every single one that we reviewed so far is a case control.

Q. Thank you.

Eriksson and McDuffie are also case-control studies?

13:51:47

A. Correct.

Q. And so she talks about something called a "hierarchical regression model."

Do you see that?

13:51:56

A. We usually use logistic regression. I'm not really sure what the -- hierarchical regression model must be a very statistical model that clinicians really don't pay attention to. We pay attention to logistic regression.

13:52:13

Q. Okay. Well, she thought that she was doing something that moved things forward to come up with a more precise estimate; isn't that right?

MR. DICKENS: Objection. Speculation.

13:52:23 THE COURT: You may answer.

THE WITNESS: I'm not really sure why this was done. In fact, pretty much every study that I know about uses logistic regression and multi-variate analysis. This is one of the hierarchical regression models. I'm 13:52:35 not really convinced that they have any clinical application. I think it's just a mathematical formula of looking at things. I don't know the clinical significance of this or whether I would agree with the results that come from this model.

13:52:47 Q. BY MR. LOMBARDI: Okay.

A. I agree with the logistic regression.

Q. So you cited De Roos 2003; right?

A. Yes.

Q. You're really only citing to part of De Roos 13:52:59 2003; right?

A. I'm aware she did the hierarchal regression models. What I'm trying to say is, from a clinical significance, the logistic regression is what we look at and pay attention to. Ultimately, again, what -- the 13:53:12 goal of all these studies -- I hope we agree -- is to

look whether any of this is an association with a disease that affects patients. So logistic regression is what we normally do. Why didn't the other studies do the hierarchical regression models and so forth? Again, I'm just telling you what we usually pay attention to, from a clinical perspective.

13:53:28

Q. And so, Doctor, one the things that's important to keep in mind when you're looking at an epidemiological study is proxy respondents; right?

13:53:41

A. Yes.

Q. And that's because in some studies, you have -- you're asking questions of, say, a farmer -- the farmer who's actually out working with the pesticides; right?

A. Yes.

13:53:53

Q. That would not be a proxy; right?

A. Correct.

Q. And sometimes, you know, maybe the farmer's passed away, unavailable for some other reason, then you ask a proxy for that farmer -- questions about the farmer's exposure; is that right?

13:54:07

A. Correct.

Q. And proxy could be -- you know, it could be a son or daughter?

A. Next of kin.

13:54:16

Q. It could be a spouse. It could be -- it's just

somebody else; right?

A. Usually next of kin --

Q. Right.

A. -- generally.

13:54:21 Q. And when you have proxies, you worry about the quality of the information from the proxy. You always worry about quality of information, but proxies create issues about the quality of the information that you're getting; right?

13:54:37 A. You do. There's actually literature out there, and there's data out there that -- collecting many of these epidemiologic studies. There's lots of concordance between patients and their proxies. Some of these authors that are listed on this paper have published in 13:54:50 terms of concordance between proxies and actual patients, so I'm not -- I mean, you always worry about data. As you said, that's obviously inherent, but there's actually good literature out there that data collected from proxies and next of kin is as accurate and as concordant 13:55:09 with data collected from patients.

Q. But one of the things -- it gets more specific, the concerns with proxies, doesn't it, than just that; isn't that right?

A. I'm not sure what you mean.

13:55:17 Q. Well, one of the concerns is that you want to

have the same number of proxies in the case category as you have in the control category; right?

A. I think as long as you have the data that's collected from the -- collected from the cases and the controls, whether it's from patients or from proxies, accurate in concordance -- and concordant, I don't think necessarily you have to absolutely have the same proxy in both arms. I don't think that, sir.

Q. If there's a gap -- I mean, it's not just a little ways off, but if there's a gap, that creates an issue for an epidemiologist, at least; right?

A. I mean, epidemiologists would look at the data in totality. They would say we have -- let's say we have 100 cases, you know, 20 of them are proxies, 80 of them are cases, and we have the controls, and they look at proxies and controls, but I think they look at the totality. I'm not sure they really worry necessarily how many proxies. Because as I told you, there's good evidence out there -- actually, good agreement out there that data collected from proxies is pretty accurate for these studies.

Q. Okay. We'll be talking about that more as the case goes on.

A. Sure.

Q. But that's your understanding of the situation

with proxies; right?

A. Yes.

Q. Okay. Thank you. So let's look at -- I think this is where you got your double-the-risk number was

13:56:34 Table 3; is that right, Doctor?

A. Let me just see. Which table you asked me to look at?

Q. Table 3. I'm just looking for the table from which you got the result that you can state to the jury. I think it's Table 3.

A. It's Table 3. You're correct.

Q. Let's start by looking at the whole thing, and then we'll zoom in. Doctor, you see at the top, "Table 3...Estimates for Use of Specific Pesticides and NHL

13:57:16 Incidence, Adjusting for Use of Other Pesticides."

Do you see that?

A. I do.

Q. And then there's a whole long list of pesticides that were considered in this particular study; right?

13:57:25 A. Correct.

Q. And glyphosate is down towards the bottom. It's actually under a category called "Herbicides"; is that right?

A. Yes.

13:57:33 Q. And your understanding is that glyphosate is

more properly called an herbicide; is that right?

A. Yes.

Q. Let's just highlight that going across just so that everybody can see it. What you're referring to, the 13:57:45 column -- this column that I'm indicating that has the 2.1 in it, Doctor, that's the logistical regression column; right?

A. That's the logistic regression, and that's the one we pay attention to. Probably every clinician, 13:57:59 that's what they pay attention to.

Q. Okay. You polled them?

A. I can guarantee you this is the case.

Q. Okay. Thank you, Doctor. And then 2.1 is the risk estimate that you put out there; right?

13:58:10 A. That is correct.

Q. And it's just over 1, so it's statistically significant, that logistic analysis; right?

A. Yes.

Q. And then she did this column. The last column 13:58:24 is the hierarchical regression column; right?

A. Yes.

Q. And that says 1.6, and that's not statistically significant; right?

A. Yes.

13:58:33 Q. Okay. Now, let's see what De Roos and her

co-authors said as they went back through the paper. Let's go to page 8. And, Doctor, I'm looking -- can you see the red dot on the screen? It doesn't show up on your screen.

13:58:58 A. Yes. I can see it.

Q. Okay. Where it says "third"?

A. Yes.

Q. This is where they're going through, kind of, the pros and cons of the study.

13:59:05 Do you see that?

A. Yes.

Q. All right. And it says, "Third, although some of the positive results could be due to chance, the hierarchical regression analysis placed some restriction

13:59:16 on the" various of -- excuse me. I'll say that again -- "on the variance of estimates, theoretically decreasing the chances of obtaining false positive results."

Do you see that?

A. Yes.

13:59:30 Q. So the idea of the hierarchical analysis at least was to decrease false positives; right?

A. Yes.

Q. And that's a good goal; right?

A. Yes. If you can, although the hierarchical, as

13:59:42 it was done, was looking actually on the incidence of all

cancers, not necessarily --

Q. I'm going to read the next sentence. "On the other hand, it is possible that the assumptions for the hierarchical regression are too restrictive and that this has increased the number of false negatives."

13:59:57

So she says there are pros and cons to the hierarchical?

A. Yeah. I mean, again, as I told you, we use the logical regression.

Q. Okay. So let's go to the next paragraph -- next column, I'm sorry. I'll give you a spot there, Doctor.

14:00:08

A. Yeah.

Q. She goes on to say -- she's talking about this problem of dealing with multiple exposures to pesticides; right?

14:00:22

A. Yes.

Q. Okay. And she says, "If simultaneous analysis of multiple exposures is to become standard, statistical techniques to impute values for subjects with 'don't know' or missing responses should be further developed in order to prevent biased results."

14:00:33

Do you see that?

A. I do see that.

Q. That's one of the things she says that needs to be done going forward; right?

14:00:44

A. That's the opinion of the authors, yes.

Q. Okay. And then we go down to the very last paragraph -- I'll show you another spot there. And here what she's saying is that what we really need to do is start to study individual chemicals; right? This very last paragraph of the article, Doctor?

A. Okay.

Q. And the last sentence even.

Do you see that?

A. I see that, yeah.

Q. And she said what we really need to do here is get away from this multiple exposure analysis and start focusing on individual chemicals; right?

A. Yes, which is impossible to do.

Q. But that's what -- she says, "A chemical specific approach to evaluating pesticides as risk factors for NHL should facilitate interpretation of epidemiological studies for regulatory purposes."

Do you see that?

A. Fifteen years later, still couldn't be done.

Q. Okay.

A. Yes, I see that.

Q. Okay. But that's what she's saying should happen; right?

A. I understand that.

Q. She's an epidemiologist?

A. I would agree with what she said. I think everybody would like to see that done. It's just not doable.

14:01:53 Q. And she did the work; right?

A. Yes.

Q. She put her name out there on an article and put it in the peer-reviewed literature?

A. Yes.

14:02:00 Q. And that's what she said; right?

A. Yes.

Q. And actually, that's exactly what she did, isn't it?

A. What do you mean, that's exactly what she did?

14:02:09 Q. She looked at chemical specific analysis; right?

A. No. She looked at several -- many pesticides, and she did a couple of regression analyses to try to understand the association between these pesticides and non-Hodgkin's lymphoma. That's what she did. In fact, 14:02:27 if what she did was conclusive, then this is not how you end the paper. You say, "Okay. We've solved the problem."

Q. I didn't ask you a clear question, so it's my fault, Doctor.

14:02:40 After this paper, what Dr. De Roos did was

undertake a chemical specific approach; right?

A. Which one are you referring to?

Q. Well, you know what Dr. De Roos did after this paper, don't you?

14:02:50 A. I want to make sure we're talking about the same paper. Which paper are you talking -- discussing, the De Roos 2005?

Q. Yes.

A. Yes.

14:02:57 Q. Okay. So she did a chemical specific approach in 2005; right?

A. Well, she reported on the preliminary report of the Agricultural Health Study, which started in the mid-90s. It didn't start in 2005, so she didn't

14:03:12 undertake this in 2003 after these results. It was already ongoing. The other study was already ongoing, so you can't say that because of 2003 she undertook a new effort. That effort was already undergoing since 1993.

Q. But she took the data that had been gathered

14:03:36 from the Agricultural Health Study and did an article that focused on glyphosate specifically; right?

A. She wrote preliminary data in 2005, reported on the Agricultural Health Study. What I'm trying to say is the 2005 article had nothing to do with the fact that

14:03:51 this was her conclusion in 2003, because this was already

an ongoing effort from 1993 to 1997. So it's inaccurate to say that this is what she reported in '05.

Q. Whatever the case may be, the next article she wrote was chemical specific; right?

14:04:08 A. Yes, but we just have to make sure we're accurate.

Q. All right. So you're familiar with that 2005 article, aren't you?

A. I am.

14:04:17 Q. De Roos 2005? Same De Roos?

A. Yes.

Q. Different kind of study; right?

A. Yes.

Q. This De Roos -- this De Roos 2003, that's

14:04:26 case-control?

A. Yes.

Q. And the other ones you talked about were case-control studies; right?

A. The --

14:04:32 Q. I'm sorry. That wasn't clear. It's my fault.

The McDuffie and Ericksson --

A. They were case-control.

Q. -- were case-control?

I apologize for the question.

14:04:43 And De Roos 2005, though, is what's caused

called a cohort study; correct?

A. Correct.

Q. And you consider cohort studies the gold standard for epidemiology; right?

14:04:53 A. We would like to do more cohort studies if we're able to, as long as we can overcome some of the limitations of the cohort studies. There are limitations of cohort studies and limitations of case control, just different kind of limitations.

14:05:08 Q. Sure. Sure. You consider -- if you can do a cohort study, you consider it the gold standard for epidemiology?

A. But there are limitations to it, yes. I would like to do it. It is very appropriate. It's the right

14:05:19 thing to do, but we need to agree that there are different kinds of limitations to cohort studies.

Q. And you know, Doctor, as you sit here today, that when Dr. De Roos published her article in 2005, she was reporting on a cohort study?

14:05:34 A. She was.

Q. And was talking specifically about glyphosate?

A. Yes.

Q. And you've seen that study?

A. I have.

14:05:41 Q. Can you turn to 2191 in your book?

A. I have it right here.

Q. And is that -- have I got the right article, Doctor? Because sometimes I'm wrong.

A. Yes. Yes, you did.

14:05:56 MR. LOMBARDI: Can I publish, please?

MR. DICKENS: No objection.

THE COURT: Very well. You may proceed.

Q. BY MR. LOMBARDI: Let's put 2191, and let's just show everybody -- the title here is a little different

14:06:08 than the ones we saw before; right?

A. Yes.

Q. Here it's, "Cancer Incidents Among Glyphosate-Exposed Pesticide Applicators in the Agricultural Health Study"; right?

14:06:18 A. Yes.

Q. So it's looking specifically at cancer incidents with glyphosate -- glyphosate use; right?

A. Yes.

Q. And I'm not going to go into detail here,

14:06:26 Doctor, but you know the result of this study; right?

A. Yes, although the details are important to interpret. And you went through the details of every other study. It's only fair to go through the details of this one.

14:06:36 Q. Let me just show you what it says. "Glyphosate

exposure was not associated with cancer incidents overall or with most of the other cancer subtypes we studied"; correct?

A. Yes.

14:06:50 Q. And then De Roos -- this was actually a study -- I don't know whether you'd call it preliminary or early study -- from the Agricultural Health Study; right?

A. There was a preliminary report, yes --

Q. And then the next one that came out was 2018 --

14:07:08 related to glyphosate was in 2018, and that was in the Journal of the National Cancer Institute?

A. Correct.

Q. And De Roos, again, was on that study; right?

A. She was.

14:07:18 Q. And that, again, because it's still the Agricultural Health Study, it was a cohort study; correct?

A. Yes. It was a cohort study --

Q. And --

14:07:26 A. -- with many flaws.

Q. And it had a similar title. It was focused -- that article was focused on glyphosate exposure; right?

A. It was.

Q. Okay. Thank you.

14:07:39 A. So are we not going to discuss the limitations

of this one?

Q. If we have time, we may, Doctor. I have limited time.

A. For the jury, you just discussed the limitations of other studies, and this study that has many limitations, I think it's only fair to discuss that.

Q. We've heard a lot about the Journal of NCI, Doctor, so I'm going to move to other topics that you talked -- you didn't even raise the Journal of NCI this morning; right?

A. I'm sorry, what do you mean by raise the journal --

Q. You didn't talk about it yourself?

A. It wasn't relevant.

Q. So you didn't talk about it?

A. No.

Q. So I'm now going to talk about things you talked about. Is that okay?

A. That's fine. I'm just saying there are limitations to this study.

Q. Doctor, you know Dr. Neugut; right?

A. I've never met him, no.

Q. You know who he is?

A. I know. I read his depositions.

Q. He's an epidemiologist?

A. Yes, he is.

Q. He talked about the Journal of NCI study a long time here.

A. As long as people heard the pluses and negatives, I'm fine.

Q. All right. So, Doctor, what we've been talking about really was about the general causation part of your analysis; right?

A. Uh-huh, yes.

Q. Okay. Thank you.

And I want to shift now to the specific causation which means -- we're talking about Mr. Johnson; right?

A. Sure.

Q. So Mr. Johnson -- you became involved in Mr. Johnson's case after you had moved to Cardinal Health; is that right?

A. Yes.

Q. All right. You made clear you weren't there to treat Mr. Johnson; right?

A. I was not.

Q. You were not his treating physician?

A. I'm not.

Q. You met him once. I assume you met -- you saw him today?

A. I saw him today.

Q. But other than today, that was the only time that you'd actually seen him; is that right?

A. Correct.

14:09:39 Q. And what happened was -- this was in the fall -- was it the fall of 2016 that you met with Mr. Johnson?

A. October '17.

Q. '17. Sorry. Thank you for the correction.

And at that time, Mr. Johnson was sick; is that

14:09:53 right?

A. Yes.

Q. And he had been diagnosed with mycosis fungoides by that time; is that right?

A. Yes.

14:09:58 Q. And you didn't think he was in very good shape at that time; is that right?

A. I thought he was in better shape than I actually assumed he would be, looking at the records.

Q. And you'd looked at the records before he got

14:10:12 there?

A. Yes.

Q. And so what you did -- was this is when you were at Cardinal Health?

A. I'm still at Cardinal Health.

14:10:18 Q. Okay just making sure. You weren't at the

University of Chicago hospital?

A. No. I was not.

Q. You had been at Cardinal Health for over a year or something; is that right?

14:10:26 A. Correct.

Q. He came to visit you -- he flew out all the way from Chicago to here; is that right?

A. Yes.

Q. And what time of year was it?

14:10:35 A. October '17. I don't remember --

Q. And did he come see you at your office at Cardinal Health?

A. Yes.

Q. And business office; right?

14:10:45 A. Yes.

Q. And you met with him for maybe an hour?

A. Something like that. Between an hour to an hour and a half.

Q. And of that hour, you spent 10 to 12 minutes

14:10:59 examining him?

A. Yes.

Q. And the rest of the time you were talking to him; is that right?

A. Getting history and talking to him about the

14:11:06 disease and the treatment.

Q. And I think it's obvious, but just so we're clear on the record, when you say "getting history," that's something all good doctors do, they talk to the patient to understand their past and understand as much as they can about the patient so they'll have a better idea of the patient's circumstances; is that right?

14:11:20

A. Sure.

Q. Okay. All right so you examined him for 10 to 12 minutes, talked about his history for 45 minutes or so. You didn't do any tests; right?

14:11:32

A. No. Again, I'm not his treating physician.

Q. And I assume you were able to confirm in that time that you believed he had mycosis fungoides?

A. I knew that before I met him, based on the records.

14:11:47

Q. Okay. You'd seen his records before that time?

A. Yes.

Q. Okay. Got it. And you -- the exam that you had with him, the actual physical exam, that did not reveal to you the cause of his disease; right?

14:12:02

A. No, it doesn't. The physical exam is very unlikely to reveal the cause of disease.

Q. And you saw -- in the time that you were practicing medicine, you saw something around a thousand non-Hodgkin's lymphoma patients over your 20 years of

14:12:19

practicing?

A. I've seen a lot, yes.

Q. And I think you said you had -- I know this is an estimate, Doctor, but I think you said 5 to 10 mycosis fungoides patients a year, something like that.

14:12:27

A. Something like that, yeah.

Q. A reflection of it being a rare --

A. It's one of the rarest lymphomas, yes.

Q. And your physical examination didn't reveal the mechanism by which glyphosate caused, in your opinion, his non-Hodgkin's lymphoma; right?

14:12:38

A. Physical exams are not designed to do so.

Q. Okay. And they didn't in this case?

A. In any case. They're just not designed to do so.

14:12:52

Q. Okay. There was nothing different about his symptoms than those of any of the other mycosis fungoides patients that you would see; right?

A. No. He was having similar problems related to the disease as well as the treatment of the disease. He was having some side effects with neuropathy and tingling and numbness of the fingers and toes from the chemotherapy he was receiving.

14:13:03

Q. And so, Doctor, you went through some medical records for us this morning. Obviously, you remember

14:13:22

that; right?

A. Yes.

Q. And let's put up Plaintiffs' Exhibit 1039.

I assume there's no objection?

14:13:35 MR. WISNER: No objection.

THE COURT: Very well. You may proceed.

MR. LOMBARDI: Your Honor, for my timing purposes, will the break will earlier today because we came back earlier or should --

14:13:44 THE COURT: I was thinking of 2:45 as a break time.

MR. LOMBARDI: Thank you. Just wanted to know what you were thinking. Thank you.

Q. I think you'll recognize this when it comes on

14:13:55 the screen, Doctor. This is what you had up periodically during your examination; right?

A. Sure.

Q. And this is I'm just shorthanding this. This is basically notes you made based on a combination of

14:14:07 things, your interview with Doctor -- with Mr. Johnson, your review of all the medical records, some deposition, things like that; right?

A. I tried to put everything on one page. Obviously, there are a lot of notes I made, but this is

14:14:23 as abbreviated as I can get.

Q. Thank you, and I think we all appreciate that. Just so the jury has some indication, there are thousands of pages of medical records for Mr. Johnson?

A. That I looked at, yes.

14:14:35 Q. Maybe something like 15,000, something like that?

A. Right. I don't remember.

Q. Doctor, you said, number one -- not number one but on June 11th, 2012, began job as full-time integrated

14:14:47 pest manager.

Do you see that?

A. I do.

Q. All right. So Mr. Johnson begins spraying -- mixing and spraying Ranger Pro Roundup 20 to 40 teams a

14:14:59 year. The way this actually broke out was he refers to something he called the spraying season; right?

A. Yes.

Q. And the spraying season was basically the summer months; right?

14:15:09 A. Yes.

Q. So that would be roughly June, July, and August; right?

A. That's what he told me, yes.

Q. And then what he did was he sprayed 4 to 5

14:15:18 times -- 3 to 4 times a week, I think it was? 3 to 4

times a week during that time?

A. About maybe 4 days a week. There are sometimes he would -- he said he would spray over the weekend, but for the most part, he would spray for 4 days. Each day
14:15:31 is about -- between -- depending on the day, average about 3 to 4 hours.

Q. And when he sprayed, he did 2 to 4 hours or so?

A. Yeah. I think they averaged about 3 to 4.

Q. Fair enough. And then when you get to September
14:15:44 to May, he's not spraying?

A. Not to my knowledge. His main spraying was the summer season: June, July, and August.

Q. And then he starts spraying again and then stops again in September, starts again back in June.

14:16:00 A. That's my understanding. I wasn't able to see that he would continue to spray beyond September.

Q. Okay. All right. So, Doctor, you looked at a lot of records here, and you don't have anything between June of 2012 and May, early June 2014; is that right?

14:16:18 A. Not on this sheet. I do have one in between. He had a car accident sometime in September 2013. He had a nest wasp injury, broken finger one time, but I just -- again, it's impossible to put everything on one page, so I tried to put things that I believe are relevant from
14:16:41 employment to when the rash started to when he was

diagnosed, et cetera.

Q. Okay. And you said that he had a -- the car accident was roughly?

A. September 26, 2013.

14:16:53 Q. Well, that's not roughly. That's very good, Doctor. So at that time he was examined by doctors; right?

A. In the emergency room, yeah.

Q. And they actually felt his lymph nodes; right?

14:17:04 A. Yes.

Q. And his lymph nodes were actually enlarged, weren't they?

A. I didn't actually confirm that. There was a note that suggested maybe a couple of lymph nodes were a

14:17:19 little bit enlarged, but then subsequent notes with many other physicians that he actually saw after that never confirmed that. So I'm not really sure or certain whether these lymph nodes were anything reactive, inflammatory, but I wasn't able to see that in any

14:17:35 particular note.

Q. Okay. But it was there back in September of 2013; right?

A. Like I said, I saw one mention of it. I did not see it again in any other physical exam, so that's why I

14:17:45 didn't think it was significant.

Q. Okay. Lymph nodes do have to do with lymphoma; right?

A. They could also happen of a sore throat.

Q. But my question was: Lymph nodes have something to do with lymphoma; right?

14:17:58

A. Correct, but not every enlarged lymph node is lymphoma.

Q. So let's talk about 2013. There was more going on in the fall of 2013 wasn't there, Doctor?

14:18:14

A. As I told you, there were the car accident. There was -- I could -- I have a couple of notes into what happened if you want me to pull that. Is that okay?

Q. If it's about the car accident, we don't need to go into the car accident.

14:18:31

A. I can check if there are other things I wrote --

Q. Sure. Sure. Check what you need to check.

A. I think in February of 2013, he had a broken finger. On September 18, '13, he had stepped on a nest wasp and was seen by Dr. Chanson. We just talked

14:18:52

September 26 '13, he had motor vehicle accident, was in the emergency room. December 2013, he had back pain while lifting. He was seen by Dr. Chanson from Kaiser, and when she examined him, she mentioned no skin abnormalities on exam in December '13. So these are the

14:19:13

notes I wrote into the fall of 2013.

Q. Okay. Well, we know from the records that you saw that Mr. Johnson had a full body rash in the fall of 2013, don't we?

A. No, we don't.

14:19:27 Q. Okay. Well, let's look at -- and these are just the medical records.

I have different numbers than you did, Counsel, so -- it's in our book, it's Defendant's Exhibit 2294.

A. What line?

14:19:40 Q. It should be in there at 2294, Doctor?

THE COURT: Are you asking to publish these, Counsel?

MR. LOMBARDI: I will be as soon as counsel gets there, I'll give him a chance to look.

14:19:54 THE WITNESS: I'm there.

Q. BY MR. LOMBARDI: And do you recognize 2294 as being medical records from one of Mr. Johnson's providers; right?

A. Yes, Dr. Garrison (phonetic).

14:20:09 Q. And let's look at page 123, Doctor.

THE COURT: Is there any objection on the publication?

MR. DICKENS: Just a moment, your Honor.

THE WITNESS: 123, I'm sorry?

14:20:19 Q. BY MR. LOMBARDI: Page 123, Doctor.

A. Okay.

MR. LOMBARDI: Permission to publish, your Honor?

THE COURT: All right. No objection?

14:20:30 MR. DICKENS: No objection.

THE COURT: All right. You may proceed. Is it 123 --

MR. LOMBARDI: It's the Bates Number, the very last number at the bottom of the --

14:20:40 Do you have that, Doctor?

THE WITNESS: 123?

Q. BY MR. LOMBARDI: Yes. At the very bottom of the page, because there's a variety of numbers there.

A. I see that.

14:20:47 Q. So if would you look at the top, you can see this is the Permanente Medical Group.

Do you see that?

A. Yes, I do.

Q. All right. And you can see this is in October

14:21:01 of 2014.

Do you see that?

A. Yes, I do.

Q. And so the provider is -- I'm -- if you know the pronunciation tell me, Doctor, I'm going to say Ofodile?

14:21:16 A. Ofodile.

Q. Ofodile?

A. Right.

Q. You know that to be one of Mr. Johnson's doctors; is that right?

14:21:23 A. I think she was the dermatologist who just initially diagnosed him in late '14, and she recommended the light therapy.

Q. Okay. So let's go down the page here and let's look at the HPI Inventional History.

14:21:40 Do you see that?

A. I do.

Q. All right. And it says under that, "Dwayne A. Johnson." And you understand that's Mr. Johnson? He goes by Lee, but that's his full name?

14:21:53 A. Yes.

Q. "Dwayne A. Johnson is a 42-year-old male with a one-year history of progressive papulosquamous eruption."

Do you see that?

A. I do.

14:22:04 Q. One year would be -- this is October of 2014. One year would take us back to October of 2013; correct?

A. Correct.

Q. All right. And it goes on to say -- this October of 2014. This says, "The eruption was initially

14:22:19 biopsied by Solano Dermatology in Vallejo and transferred

to UCSF. Subsequently, six additional biopsies were performed and consistent with epidermotropic" --

Did I say that right, Doctor?

A. Yes.

14:22:34 Q. -- "T-cell lymphoma"; right?

A. Yes.

Q. And that's his diagnosis as of that point in time?

A. And his diagnosis -- like we talked earlier, 14:22:44 this is not necessarily mycosis fungoides, but they thought, initially, it was this type of T-cell lymphoma, but he had mycosis fungoides from the get go.

Q. Okay.

A. It's not unusual to take few weeks just to 14:22:58 confirm the diagnosis.

Q. Okay. So this is his medical history and you saw this in there, it shows that he had this eruption, it's called, going back to the fall of 2013; correct?

A. Based on this note, but I wasn't able to 14:23:13 corroborate that because there were other notes that -- you know, in December of '13 he was seen by other physicians who never mentioned there was a rash. When I talked to the patient, when I asked him these questions, he would tell you that he started feeling this rash in 14:23:30 the spring of 2014, so it's not clear to me how much of

this was just history taken from the patient himself and he just couldn't remember. Did he really refer to the one year, if this is from the patient, that this is the school year versus calendar year? I don't know. But at least in my review, the best of my ability, I found the first mention of a possible rash is in the spring of 2014.

14:23:45

Q. Let's see if we can't corroborate it. Let's go to another exhibit. Let's go to Defendant's Exhibit 2285. Doctor, you should have that there as well.

14:24:02

A. 2285?

Q. Yes, 2285. Tell me when you've got that, and we'll move from there.

A. I got that.

14:24:15

Q. Okay. And I'm going to go to page 89, and, again, that's the number at the very bottom, Doctor.

A. I'm at 89.

MR. LOMBARDI: Permission to publish, your Honor?

14:24:37

THE COURT: Any objection?

MR. DICKENS: No objection.

THE COURT: Very well.

Q. BY MR. LOMBARDI: Let's -- we'll put that on the screen. We're going to start with the big picture first.

14:24:42

This was at Stanford; right?

A. Yes.

Q. And Stanford is obviously, generally, an excellent place for medicine; right?

14:24:53 A. Second to University of Chicago.

Q. You're still loyal?

A. Absolutely. I have all the T-shirts.

Q. Where fun goes to die, Doctor.

Doctor, Stanford is particularly known in this

14:25:09 area?

A. Yes.

Q. Mycosis fungoides; right?

A. Yes.

Q. And so there is no good news about Mr. Johnson's

14:25:18 situation, but at least he's -- he's had access to truly excellent doctors including those at Stanford; right?

A. I believe so, yes.

Q. And the doctors at Stanford, do you know them personally?

14:25:28 A. I don't know them personally. Obviously, I've seen them at conferences, interacted professionally, but not on a personal level.

Q. One was Dr. Hoppe? Is that how you would pronounce it?

14:25:39 A. Yes. He's a radiation oncologist.

Q. Okay. H-O-P-P-E?

A. Correct.

Q. And he focuses on mycosis fungoides?

A. He's a radiation oncologist with interest in mycosis fungoides, correct.

14:25:51

Q. And the other doctor he saw there was Dr. Kim?

A. She's a dermatologist, yes.

Q. And she is also an expert in mycosis fungoides?

A. Correct.

14:26:00

Q. She is a published author on mycosis fungoides?

A. Absolutely.

Q. And she is known not just in California, she's known nationally for her work on mycosis fungoides?

A. She is.

14:26:14

Q. Internationally?

A. Yes, she is.

Q. So this is a true expert?

A. She is an expert, yes.

Q. And so is Dr. Hoppe; right?

14:26:22

A. Yes.

Q. So this is filed in 2015, but let's look at the chronological history of the present illness. Go down the page, please. Let's just blow up that part.

Do you see that, Doctor?

14:26:42

A. Yes, I do.

Q. And it says -- this is, again, talking about -- this is the kind of information -- this is similar to the information that you were gathering from Mr. Johnson when he was in Chicago; right? The doctor doesn't just
14:26:55 examine you but asks for information; right?

A. Well, I mean, yes. I mean, that's really the hope. There are some times when there are certain one thing that just gets into medical records, it continues to be copied and pasted in the entire medical records
14:27:10 forever. There are -- if you sometimes put somebody, by mistake, is a smoker, there's about 200 progress notes after that that the patient is smoker. But whether this was just basically from the previous records and whether the history was taken from the get go, I don't know. I
14:27:29 wasn't there.

Q. Okay. But it's in the records; right?

A. Yes.

Q. And you relied on the records?

A. Yes.

14:27:33 Q. What this one says, "In late 2013, Mr. Johnson originally noted the appearance of multiple non-puritic" --

Did I say that right?

A. Yes.

14:27:43 Q. -- "papulosquamous and papulonodular eruptions

on his right thigh."

Do you see that?

A. I do.

Q. "He was initially evaluated by a local
14:27:54 dermatologist and was subsequently referred to UCSF";
correct?

A. Yes.

Q. "Per reports, skin biopsies were performed in
early 2014 and they were interpreted as epidermotropic
14:28:09 T-cell lymphoma"; correct?

A. I think we can agree that they went done in
early 2014; right? I mean, the biopsy was done in
July 2014.

Q. I'm talking about in late 2013, he noted the
14:28:21 appearance of those eruptions on his right thigh.

Do you see that?

A. But would you agree with me that early 2014 is
inaccurate?

Q. I'm actually asking a specific question, Doctor.
14:28:31 Do you agree that this is another instance where
the medical records show that Mr. Johnson noted the
appearance of multiple eruptions on his right thigh in
2013?

A. I agree that this is what's stated. But when
14:28:47 they actually have a mistake in when the biopsies were

done in early 2014, it made me question the accuracy of this record.

Q. Is that why you didn't put it up this morning?

A. No. That's not the reason.

14:29:01 Q. Okay. Now, let's go to another, Doctor. Let's go to Defendant's Exhibit 2297.

A. I'm here.

Q. All right. And this is -- I think you have to turn the page, Doctor. This says "UCSF." Do you see

14:29:28 that?

A. Which page?

Q. I'm sorry, if you turn to the next page. I'm just trying to get you oriented.

A. I see that, yeah.

14:29:34 Q. Just so we know, this is UCSF medical records?

A. I see that, yes.

Q. So we've looked at Stanford, we've looked at Permanente, and now we're looking at UCSF; right?

A. Yes.

14:29:43 Q. And if you look at --

Well, permission to publish, your Honor?

THE COURT: Any objection?

MR. DICKENS: No objection.

THE COURT: Very well.

14:29:55 Q. BY MR. LOMBARDI: And this was -- I'm on the

numbered page 3, the very last number. Do you have that, Doctor?

A. Yeah.

Q. So this is talking to -- the author of this note is Roberto Rafael Ricardo-Gonzalez, M.D.?

14:30:06 Do you see that?

A. I see that, yes.

Q. And it says the editor is Laura Beth Pincus. The original note was by Laura Beth Pincus. You recognize Laura Beth Pincus as one of the doctors who was caring for Mr. Johnson; correct?

14:30:23 A. Yes. She saw him in the second opinion.

Q. Okay. She actually provided a T-cell lymphoma diagnosis for him; is that right?

14:30:33 A. Yes.

Q. I think that you said that was August of 2014?

A. Yes. I mean, they thought initially, as we just talked about, the epidermotropic T-cell lymphoma, but it obviously ended up to being the cutaneous T-cell lymphoma, the mycosis fungoides.

14:30:47 Q. This was one dated September 2014, but I think the -- when it says "Encounter Date," that's when the actual examination took place; right?

A. Yes. Generally, yes.

14:31:01 Q. So I hadn't seen encounter date before, Doctor,

but that's what that means; is that right?

A. I believe so, yes.

Q. Let's go down to the history of the present illness. "Dewayne Johnson is a 40-year-old male with HPI as follows."

14:31:14

Do you understand the abbreviation?

A. I do.

Q. What is it?

A. The HPI?

Q. Yes.

A. History of present illness.

Q. Thank you.

And then he says -- it says, "42-year-old male, new patient, referred by Dr. Fawn McCloud" -- I'm going to say John "Gese" --

14:31:30

A. Sure.

Q. -- "for evaluation of diffused papulosquamous rash concerning for cutaneous lymphoma."

Do you see that?

14:31:40

A. I do see that.

Q. And then we get to what Mr. Johnson said, "Reports that he thinks he first noticed a skin rash on the some areas of the chest, trunk and face around the fall of 2013."

14:31:54

Do you see that?

A. I do.

Q. "He initially thought it might have been due to a change in detergent, but changing detergents to sensitive hypoallergenic choice did not have a significant effect. Reports that at the time he tried aloe vera and some other moisturizing-type creams and, perhaps, over-the-counter hydrocortisone without significant change."

Do you see that?

14:32:21 A. I do.

Q. And then it says, "The rash continued to wax and wane over the next few months, after the fall of 2013."

Do you see that?

A. Yes, I do.

14:32:32 Q. Okay. Now, Doctor, one of the other things that you made reference to -- if we could go back to Plaintiff's Exhibit 1039. This was your -- I'm going to call it a timeline, Doctor. Is that fair enough?

A. Sure, sure.

14:32:45 Q. We'll put that back up on the screen.

(Interruption in proceedings.)

Q. BY MR. LOMBARDI: So, Doctor, here we are. And you talk about accidental spills. And in a conversation with Mr. Johnson, you heard about one -- I think you

14:33:32 heard about two significant spills; is that right?

A. Yes.

Q. And did you find reference to both of those in the -- in the medical records?

A. I did. I just couldn't -- the dates were a little bit conflicting. It wasn't really clear to me when each one exactly happened.

Q. Okay.

A. You know, I struggled in being 100 percent sure of the dates.

Q. Okay. Understood. And I appreciate the clarification.

So let's look -- I'm going to show you one I think you'll recognize.

Doctor, if you could look at -- well, let me step back, just so that -- I'm not sure the jury has heard all the detail of this, but there was one that involved -- was at a place called Mary Farmar. Do you remember that?

A. Yes.

Q. And that's a school in the district where Mr. Johnson worked; is that right?

A. Yes. That's the one where he had the -- I think the hose broke from the actual motor and had a lot of spill that came on his skin as well as the truck that he was in. So that was the Mary Farmar incident.

Q. Okay. All right. And then there was a second one where he was wearing a backpack; right?

A. Right.

Q. Okay. So that gives us some way of distinguishing it.

14:34:42

So let's go to exhibit -- and I hope I wrote this down right, because my writing's bad. Doctor, 2294.

A. Yep, I'm here.

Q. Okay. 2294. And let's go to page 57.

14:35:08

A. Okay.

Q. And do you have that? I actually think you saw this one this morning, didn't you?

A. I think I did.

MR. LOMBARDI: Okay. Well, I'll ask to publish

14:35:20

it, your Honor.

THE COURT: Any objection?

MR. DICKENS: No objection.

MR. LOMBARDI: Okay. Let's put this up on the screen, 2294, 57.

14:35:27

And just to orient everybody, this is, again, at the Permanente Medical Group.

Q. Do you see that?

A. Yes.

Q. And it's -- the provider, the doctor, was

14:35:37

Carrie Chanson; is that right?

A. Yes.

Q. All right. And if we go down --

A. I think that's the Workers' Comp. When you have incidents, that's who you see.

14:35:48 Q. Okay. And that's probably -- is that your understanding, this incident happened, and Mr. Johnson went to the doctors that are provided through Workers' Comp?

A. Yes.

14:35:56 Q. And this is the record of that; is that right?

A. Correct.

Q. All right. And so this was -- this says --

A. It seems that they thought -- the injury date, though, it says, "April." I think the encounter file, if

14:36:08 you look, it's July 23rd, of '14. But at least they're reporting that the injury was April 2014, as you see.

Q. Yes. Yeah. Okay.

And that's about when he placed -- when Mr. Johnson placed the Mary Farmar situation; right?

14:36:25 A. I -- I honestly don't remember those dates, but I -- if you show me, I'm pretty sure that's correct. I told you the dates exactly I struggle with.

Q. That's okay. Understood.

But anyhow, he said -- he's clearly describing

14:36:37 an accident; right?

A. Yes.

Q. Okay. So, "He has used the pesticide Ranger Pro for two years at work on" -- "date of jury"; is that right, Doctor?

14:36:48 A. Yes.

Q. "A small amount of pesticide got onto the left side of his face. He did not develop any skin irritation at that time. Patient states that he developed a skin rash to his whole body, sparing the face."

14:37:02 Do you see that?

A. Yes.

Q. And that means -- you understand that to mean his rash was everywhere except where he was exposed; is that right?

14:37:10 A. Yeah.

Q. When it says, "Sparing"?

A. Yes, the rash did not affect the face at that time.

Q. Okay. "About one month after the said incident, 14:37:18 he is wondering about the relationship between the incident and his skin rash."

Do you see that?

A. So it looks like, on this note, somehow he noted this rash in late May, May 30th, or something like that. 14:37:30 About one month after the incident in April.

Q. Okay. And that's a description of his physical condition at that time; is that right?

A. Yes.

Q. Okay. All right. So let me find you another here, just to make sure I've got the pages right.

14:37:51

There it is. Okay.

Doctor, if you can go to 2294. It may be the same exhibit you're in.

A. Yeah, I think I'm in 2294.

14:38:29

Q. Okay. And then go to page 597.

A. 597?

Q. 597.

A. I don't think they go -- maybe they do.

Q. I could have it wrong. Actually, Doctor, I think I've got it wrong.

14:38:50

MR. LOMBARDI: Doctor, your Honor, would it be okay to take the break now, so I can stop fumbling?

THE COURT: Yes. That's fine. Okay.

Why don't we take the afternoon recess now, Ladies and Gentlemen. We'll be in recess for 15 minutes, and we'll resume at five to 3:00 on the wall clock. All right? Thank you.

14:39:09

You can step down for 15 minutes.

(Recess.)

14:57:27

THE COURT: Welcome back, Ladies and Gentlemen,

Dr. Nabhan.

Dr. Nabhan remains under oath.

And Mr. Lombardi, you may continue.

MR. LOMBARDI: Thank you, your Honor.

14:57:37 Q. Okay, Doctor, a little more efficient this time. 2294, please. I think you might be there already.

A. I am.

Q. Okay. And let's go to page 621. I'll stop you at 620 first.

14:57:53 A. 620?

Q. Yes. Do you have that?

A. Yes, I do.

Q. And just for the record, this, again, is the Permanente Medical Group.

14:57:59 Do you see that?

A. I do.

Q. And it looks like this is records of a call that Mr. Johnson made to that group after the second exposure incident; is that right? The backpack.

14:58:16 A. Yes. I'm just trying to see where they call --

Q. Yeah. I can refer you to it, if it'd be helpful.

A. Yes, please.

Q. Why don't we just go down to the second-to-last

14:58:29 box, where it says "Two."

A. Okay.

Q. Do you see that?

A. Yes, I do.

Q. Okay. And that's the backpack situation?

14:58:38 A. Yes.

MR. DICKENS: Which?

MR. LOMBARDI: It's 2294, page 620. And I'm requesting to publish it.

THE COURT: Any objection?

14:58:53 MR. DICKENS: No objection.

THE COURT: All right. You may proceed.

MR. LOMBARDI: All right. Let's put it up on the screen.

Q. And just, again, let's start at the top, so we

14:59:02 can orient everybody.

Doctor, there's a Permanente Medical Group, and this is a company nurse injury hotline.

Do you see that part?

A. I do, yes.

14:59:16 Q. Okay. Let's go down to the bottom. And let's look under "Triage Notes."

A. I just can't tell if this is a phone call. Is it? I'm trying just to see where the phone call is. But I believe it is.

14:59:23 Q. I believe it is, too. Let's see if we find that

as we go through, Doctor.

So it says, "Describe your medical complaint: Pesticide chemical exposure to the shoulders and upper to lower back, stinging and burning sensation."

14:59:37 Do you see that?

A. I do, yes.

Q. And this is -- from the record, this is Mr. Johnson describing what happened; right?

A. Correct.

14:59:42 Q. And then it says, "How did the accident happen?" "Duane was spraying pesticide when he started to feel wetness and dampness to his shoulders and back. He took the backpack off and noted it was" -- "noticed it was leaking onto his back."

14:59:58 Do you see that?

A. I do. It just makes me wonder if it's him saying it or maybe somebody helping him. It's just unusual to refer to yourself as -- by your first name.

Q. Understood.

15:00:10 Let's go to the next page, too, if that helps you at all, Doctor. Just the very next page.

A. Okay.

Q. And then there's more information. And do you see "Essential Nursing Notes" there?

15:00:21 A. Yes, I do.

Q. And it says, "Employee state that the pesticide from the backpack sprayer leaked out onto his back and shoulders. He is having burning and stinging to the skin but has" -- it says, "no rinsed off the substance." I wonder -- it sounds like that might be "now"?

15:00:37

A. Or "not."

Q. Pardon? "Rinsed off the substance and had not observed his skin."

A. I think it's probably "not."

15:00:47

Q. I think you're right on "not."

A. It's probably "not."

Q. Yep, I think you're right. And I'll just read it that way, Doctor, so it's clear.

"But has not rinsed off the substance and has not observed his skin. He is on his way home to take a shower. He is concerned because he is being treated for cutaneous T-cell lymphoma on the skin in that same area. Triage could be seen within 4 hours, facility information given."

15:00:56

Do you see that?

A. I do.

Q. So it sounds like the nurse told him, "Come and see us within four hours." He's going to go home and take a shower and so forth, and then come into the facility; right?

15:01:14

A. Correct.

Q. All right. Then let's go to page 599 in the same exhibit, Doctor. And tell me when you have that.

A. I do.

15:01:39 Q. All right.

MR. LOMBARDI: And I'd ask to publish that.

THE COURT: Any objection?

MR. DICKENS: No objection.

THE COURT: You may proceed.

15:01:51 MR. LOMBARDI: All right. Let's put that up on the screen.

Again, to orient everybody, it looks like he's seeing Dr. Gao.

Q. Do you see that up at the top?

15:01:59 A. Yes, I do.

Q. And the date here is January 29th of 2015; right?

A. Yes, it is.

Q. All right. And let's go down to Dr. Gao is now

15:02:08 going to report. And let's look at the notes.

It says, "Mechanism of jury: Herbicide chemical spill onto his left shoulder area at work."

Do you see that?

A. I do.

15:02:20 Q. And then it says, "Duane A. Johnson is a

43-year-old right-hand-dominant male who had history of herbicide exposure one year ago, had some skin irritation, was not treated then, now with history of skin cancer as well. Now with CC of earlier today" --

15:02:41 CC?

A. Chief complaint.

Q. -- "chief complaint of earlier today when spraying herbicide with full Tyvek suit and full hood and respirator protection on, had some chemical spill from a

15:02:55 leaky tank and onto his left shoulder area with minimal burning at the time. Total exposure time is about 15 minutes, per the patient."

And then it says, "Prior treatment for this injury and illness: He went home soon after the exposure

15:03:10 and washed the area with soap and water several times. Now no more skin irritation."

Do you see that?

A. I do so that.

Q. And are those medical records from the backpack

15:03:19 spill that Mr. Johnson described to you?

A. I believe so, yes.

Q. Okay. Now, you also talked about -- let's look at PTX -- Plaintiff's Exhibit 1039. Again, this is your timeline. I'm going to put it on the screen. It's just

15:03:30 your timeline, Doctor.

A. Sure.

Q. And you talked specifically about Mr. Johnson making a phone call to Monsanto.

Do you see that?

15:03:43 A. I see that, yes.

Q. Okay. And so we place this in the timeline. This is at a time after Mr. Johnson has been seeing doctors; is that right?

A. Yes.

15:03:54 Q. And he's been diagnosed already?

A. Yes.

Q. And so he -- the doctors have clearly heard about his job in the course of their discussions with him; is that right?

15:04:07 A. Yeah. I think it looks like November 11th he had just started light therapy. So just around and about when his diagnosis was confirmed. And I don't think he had seen Stanford at the time, but he was still at Kaiser, I believe.

Q. Okay.

A. He went to San Francisco UCSF in December, I think.

Q. Okay. And you talked about Mr. Johnson's phone call to Monsanto; right?

15:04:34 A. Yes. Counsel put the exhibit on.

Q. And you've heard about that phone call from Mr. Johnson; is that right?

A. He did tell me that he called twice. This is one. I don't recall exactly when the other call took place.

15:04:46

Q. Okay. And you read in his deposition -- you read his depositions obviously. That's part of your reliance materials in this case.

A. I have.

15:04:54

Q. And you read in his deposition about the nature of the phone call; is that right?

A. Yes.

Q. All right. And specifically about this one?

A. Yes.

15:05:01

Q. All right. So I'll ask you to turn to -- we have the December 7th deposition in one of your binders there. I can help you, if you need it, but it looks like you may have it.

A. December 13, December 21st?

15:05:19

Q. December 7th, it should be. It should be in that same --

A. Oh, this one, December 6th, Johnson (indicating).

Q. December 7th, Johnson.

15:05:28

A. Okay. You said, "December 6th." That's fine.

MR. LOMBARDI: Let's make sure we have the right one.

Q. It is the 6th, you're right.

A. Okay.

15:05:39 Q. And that is Mr. Johnson's deposition from December 6th?

A. I think he had two. This is one of them.

Q. Okay. And then let's turn to page 168 of the deposition.

15:05:59 A. Okay.

MR. LOMBARDI: All right. Your Honor, permission to publish?

THE COURT: Any objection?

MR. DICKENS: No objection, your Honor.

15:06:14 THE COURT: You may proceed.

Q. BY MR. LOMBARDI: Okay. Let's go to line 11 on page 168, Doctor.

And this is something you read during your preparations for this case; right?

15:06:23 A. It's been a while since I read this, but, yes, I did read -- at some point, I did read it.

Q. I'm not going to give you a pop quiz on what it says.

But let's just -- let's just take a look at it.

15:06:34 The questions are by the attorneys, and the answers are

Mr. Johnson; right?

A. Yes.

Q. "Did you contact Monsanto about your use of Ranger Pro or Roundup?

15:06:44 "Answer: Yeah, when I first found out.

"Question: When you first found out what?

"I don't know exactly, but I was trying to find out and pull the stars and squares, whatever I can pull, to find out what happened. I know I'd been spraying

15:06:59 Ranger Pro, so I contacted them to say, you know --

"Question: All right. When you say 'what happened,' you're talking about your diagnosis?

"Yeah."

Do you see that?

15:07:06 A. I do.

Q. So he's talking about contacting Monsanto after he got his diagnosis. That fits with that November time frame you were talking about; right?

A. Yes.

15:07:12 Q. All right.

"And who did you contact?

"Answer: At Monsanto?

"Question: Yes. Who at Monsanto?

"I don't know who I talked to. Secretary.

15:07:23 "Question: Was there a particular office that

you asked for or got ahold of?

"Answer: No, no. She had a whole spiel for me. She had a whole thing like she understood what she needed to do, and I just never heard back."

Keep going up.

"A secretary. Yeah, she had it down.

"All right.

"Now, she knows her product very well.

"Now, how many times did you talk to the secretary?

"Only once.

"How long were you on the phone with her?

"I would say about 45 minutes.

"45 minutes?"

He nods his head.

"And did you write any notes of your conversation?"

We'll skip that part, because he says he didn't write notes; right, Doctor?

15:07:58 A. I believe so.

Q. Okay. But so far I've read accurately his depiction of the conversation; right?

A. Yes.

Q. Okay. Let's go to -- a couple lines down, to 170, line 4.

"Do you remember what you told her?

"Answer: I told her that I'd been exposed to chemicals, and I was wondering if this Roundup might -- Ranger Pro might be the one. And then she said, 'Well, what symptoms are you having?' What symptoms are you having? I told her what I was having and going on. She said, 'Well, we really don't have those symptoms along with this product. But if you want, I can have somebody call you back and they can talk about -- talk about -- to you about it later.' I said, 'Okay.' Well, I told her a few more questions. I don't remember those questions. And then 30, 45 minutes, we was off the phone.

"Did you email anybody?

"Answer: She asked -- she asked me a lot of questions, it just seemed liked. And I couldn't really answer some of her questions either.

"What kind of questions did she ask you?

"The same ones I went into: Exactly where were you exposed? You know, what time was it when you got exposed? It's, like, I don't know."

Do you see that?

A. I do.

Q. And is that consistent with your understanding of that conversation between the person at Monsanto and Mr. Johnson?

A. I do know that they called. This is more detailed than what I knew before --

Q. Okay.

A. -- in terms of the context.

15:09:38 Q. Well, you had read this?

A. Yes, I had.

Q. And it's not inconsistent with anything you've heard from Mr. Johnson; right?

A. No.

15:09:46 Q. All right. You made reference to another phone call with Mr. Johnson; is that right?

A. I believe he told me that he called twice.

Q. Okay. And you're aware that during that phone call Mr. Johnson also talked to somebody about his

15:09:57 symptoms and his questions about Ranger Pro; right?

A. Yes.

Q. And you're aware that at the end of that conversation, the representative said to Mr. Johnson, "If your treating doctors have any questions, have them call

15:10:14 us"; right?

A. I don't really recall the exact details, but I have no reason to believe it's not the case. I believe it's somewhere in the deposition.

Q. Okay. All right. Thank you.

15:10:25 Now, Doctor, the folks at Stanford worked with

Mr. Johnson in 2015-ish; is that right?

A. Yeah, they saw him first sometime in March 2015.

Q. Okay. And I think it's Dr. Hoppe helps coordinate some of the treatments he was having -- Mr. Johnson was having; is that right?

15:10:49

A. Well, he had -- at Stanford, he had -- later on in 2015, he had radiation, total skin electron beam radiotherapy, and that's what Dr. Hoppe does.

Q. Okay.

15:11:00

A. So that's really the reason why Hoppe was more involved, just because he received radiation therapy there. It's called electron beam radiotherapy.

Q. Okay. All right. And when Dr. Hoppe finished that round of therapy, he sent a letter to Mr. Johnson's employer; is that right?

15:11:18

A. I don't really recall a letter to the employer.

Q. Okay. Let's look at Exhibit 2287. Should be one that you've already looked at before, Doctor.

A. Yeah, I see that.

15:11:35

Q. Okay. And we'll go to page 675.

MR. LOMBARDI: And I'm going to ask for permission to publish, when counsel had a chance to look.

THE COURT: Any objection?

THE WITNESS: I see that.

15:12:01

MR. DICKENS: One second.

Can we have a sidebar, your Honor?

THE COURT: Yes.

(Sidebar.)

[redacted]

(Sidebar ends.)

THE COURT: All right. You may proceed.

MR. LOMBARDI: Thank you.

Q. Okay. Doctor, you've got page 675 there?

A. I do.

MR. LOMBARDI: Okay. Permission to publish, your Honor?

THE COURT: Very well, yes.

MR. LOMBARDI: Okay. Let's put that up on the screen.

Q. And you can see this is on -- again, on Stanford Healthcare letterhead. This is in November of 2015; is that right?

A. It is right.

Q. And this is about a year and a bit after his first -- Mr. Johnson's first T-cell lymphoma diagnosis; is that right?

15:13:26 A. Correct.

Q. All right. And here's what -- you can see this letter, if you go down, it's from Dr. Hoppe.

MR. LOMBARDI: A little bit further down, please.

15:13:37 Q. Do you see that?

A. I do.

Q. Okay. And the letter says -- it's to the Benicia Unified School District. "To whom it may concerned, I assumed care for Mr. Johnson on

15:13:48 November 2nd, 2015. His care continues with us until November 19, 2015. Mr. Johnson may return to work on a full-time basis with no restrictions on Monday, December 7th, 2015."

Do you see that?

15:14:01 A. I do.

Q. Okay. And this was a letter sent by Dr. Hoppe at Stanford to the school district; is that right?

A. It is a letter from Dr. Hoppe to the school.

Q. Thank you. All right, Doctor, now --

15:14:16 A. I may disagree with the content, but it is a

letter from Dr. Hoppe.

Q. And Dr. Hoppe, as you've said, is an expert on mycosis fungoides; correct?

A. I'm not sure he reviewed all the epidemiological literature.

15:14:28

Q. Okay. All right. Well, let's talk for a second. Doctor, you're -- I'm not going to try to name all of the doctors that Mr. Johnson has seen, but you have reviewed not only the medical records, but you've reviewed depositions of Doctor -- of Mr. Johnson's treating physicians; right?

15:14:42

A. I have.

Q. All right. And as you went through the records and you went through the depositions, you noted that each of them came to the conclusion that they didn't know what caused mycosis fungoides; is that right?

15:14:56

A. They were not aware of what may have contributed to it. Again, none of them really reviewed the epidemiologic literature. As I told you before, even before I reviewed the literature myself in the spring of 2016, I was not aware of the association, but after reviewing the literature, I became aware. So I don't know if they have actually had a chance to review all of the literature that we went through today --

15:15:12

Q. Okay.

A. -- but in their deposition, I'm not aware that they said there's an association.

I think -- I don't recall exactly, but probably one of them said maybe, and she had to look at some literature and so forth.

Q. Okay. Well, it's true that many of them thought that the disease was idiopathic. You defined idiopathic for us earlier today, I think.

A. Most -- again, like we said, in the majority of all our cancers that we deal with and the majority of non-Hodgkin's lymphoma, we really don't have a good explanation as to why the lymphoma occurred. There are certain situations where we can, but for the most part, we don't really know, but every case is different.

Q. Okay. So Dr. Ofodile thought that mycosis fungoides was idiopathic. We don't know the causes yet; is that right?

A. As I said, I mean, all of these physicians were treating physicians. I'm not really aware that they took the time to actually review the epidemiologic literature. I'm not sure they actually looked at the IARC Monograph or any of these much, so, you know, again, unless you actually review the literature, unless you look at what is published, you probably can't comment on that. You know, again, it will take time and effort to look at the

literature before you provide an opinion as to whether there's an explanation or not.

Q. Okay. These are good doctors; right?

A. I hope so.

15:16:48 Q. All right. Do you know?

A. I have not shared patients with them, but there's no reason for me to believe they're not.

Q. So whatever the explanation might be, let's just go through. Dr. Tsai, didn't have an opinion, T-S-A-I,

15:17:02 on the cause of Mr. Johnson's mycosis fungoides?

A. To my knowledge, yes.

Q. Dr. Pincus, she's the one who actually diagnosed him with T-cell lymphoma. Do you remember her?

A. Yes.

15:17:11 Q. She didn't have an opinion on whether glyphosate caused his lymphoma?

A. Again, as I said, all of these doctors did not take the time to review the literature, but, yes, they did not have an opinion.

15:17:22 Q. Dr. Truong, who assumed his care, I think maybe in 2017. Does that sound right to you?

A. Or 2016, when she treated him with chemotherapy.

Q. Okay. And she has not formed an opinion as to why Mr. Johnson has mycosis fungoides; is that right?

15:17:37 A. True.

Q. Dr. Hoppe, the guy -- fellow at Stanford, he hasn't formed an opinion about mycosis fungoides; is that right?

A. True.

15:17:46 Q. And Dr. Kim hasn't formed an opinion either; right?

A. True.

Q. And actually, you read Dr. Kim's deposition, didn't you?

15:17:54 A. A while back.

Q. Okay. So let's look at it. Okay. It should be in your book. It's her January 10th, 2018, this year, deposition.

A. Okay.

15:18:11 Q. This is one of the depositions you read as part of your participation in this case; right?

A. Yes, it was.

MR. LOMBARDI: Your Honor, I would like to publish page 9, line 20, through 10, line 2.

15:18:32 THE COURT: Of Dr. Kim's deposition?

MR. LOMBARDI: Yes.

THE COURT: Any objection?

MR. DICKENS: Which lines?

MR. LOMBARDI: 9, line 20, through 10, line 2.

15:18:45 THE WITNESS: Which page do you want me to look

at?

Q. BY MR. LOMBARDI: Page 9, line 20, and hopefully I'll put it on the screen, if that's easier.

MR. DICKENS: No objection, your Honor.

15:18:56 THE COURT: Okay.

MR. LOMBARDI: Let's just put up Slide 71. That will be easier, a little faster.

Q. And this is the questioning of Dr. Kim at Stanford: "And is it correct that you made no

15:19:08 attribution of causation of Mr. Johnson's mycosis fungoides to glyphosate or Ranger Pro or Roundup?

"Answer: Correct. I did not make those.

"Did you make any attribution of the cause of Mr. Johnson's mycosis fungoides at all?

15:19:24 "I did not, because the scientific current factor is that there is no known cause for this cancer."

Did you see that answer that she gave?

A. I see that. I see that, yes.

Q. All right. Let's go to page 11, line 8.

15:19:39 Now, she's an expert; right?

A. Again, I mean, she's not an epidemiologist. She didn't review the literature. I'm not an epidemiologist either, but I reviewed the literature. That's really the difference.

15:19:49 Q. Well, let's take a look at line -- page 11,

line 8, and I'll put it up on the screen again, Doctor.

MR. LOMBARDI: May I publish your Honor?

THE COURT: Any objection?

MR. LOMBARDI: 11, line 8, to 12, line 5.

15:20:18 MR. DICKENS: Give us one second to read it.

No objection.

MR. LOMBARDI: Let's put Slide 80 up.

Thank you, your Honor.

Q. And this is Dr. Kim's testimony. Do you

15:20:48 remember this, Dr. Nabhan? Maybe not directly right now; right?

A. I can't pretend I remember it word by word. I did read the deposition.

Q. And she's saying she's asked a lot by patients

15:21:03 what causes your cancer. And that's one of the frustrations, Doctor, of being an oncologist, isn't it, that frequently there is no answer as to why somebody got cancer; right?

A. That's correct. Many times there are no answers, and others there is.

Q. Okay. "And what's our typical answer," she says, "which is consistent with what's published scientifically by others and in our own publications, is that there currently -- there is no known cause that we

15:21:27 could pinpoint to this particular rare disease. Now, we

have studies. We have done whole genome sequencing, like molecular work, because we are all wanting to know, because obviously, if we know the cause, we will be closer to curing this disease better, so we're invested in that, so we're not side players. So we are actively the frontrunners in trying to find the cause, Stanford is."

15:21:45

You agree Stanford is a frontrunner in mycosis fungoides; right?

15:21:51

A. It is.

Q. "And believe me. If we knew there was a cause, I would know. But right now, the scientific fact -- not my opinion, the scientific fact is that so far there is no established cause for this particular rare disease. Now, anything else would be like guess, implication, but there is no link to cause and effect, and a lot of them are questioned routinely, and a lot of causes, but scientifically, it has not been established. So we do review that consistently, and other things are prognosis treat. Those are all included in our standard discussion in our consultation visits."

15:22:05

15:22:24

Is that what Dr. Kim said in her deposition under oath?

A. This is what Dr. Kim said.

15:22:35

Q. And she said it in January of 2018?

A. She said it in January 2018.

Q. And she's one of the nationally and internationally recognized experts on mycosis fungoides?

A. Again, she's a treating physician. I just don't know how much she reviewed of the epidemiologic literature.

Q. Now, Doctor, you did -- I think this was your differential analysis?

A. Yes.

Q. And you put in there some categories, but if we were going to -- well, you left one big thing out of this list, didn't you?

A. I'm not sure what you're referring to.

Q. Well, you put -- I won't try to read them all, because I'm not sure I can read your writing any better than I can read mine, Doctor, but you put down a list of things that you considered as possible causes; right?

A. Right.

Q. But one possible cause is it's an unknown cause?

A. Well, obviously, I put in the causes that we know contribute. I didn't put that -- I -- I did preface that by saying the majority of cutaneous T-cell lymphomas we don't know the cause. I was putting here what we think may contribute to the causes of this disease.

Q. But what -- but if we're trying to figure out

what the cause was, one category is unknown causes; right?

A. That's implied. Like I said, I prefaced this with -- I put in here the known causes.

15:24:00 Q. Now, there are people -- well, right. But if you want -- it could be -- it could be that the cancer was caused by an unknown cause?

A. Not in his condition. Not in somebody who has now been exposed to an agent of known carcinogen causing

15:24:15 non-Hodgkin's lymphoma.

Q. And you make that assumption based on your review of IARC and the literature; right?

A. Yes, of course.

Q. That you undertook after you were retained in

15:24:24 this case?

A. Yes.

Q. Okay. And so -- so you've heard it said, haven't you, that non-Hodgkin's lymphoma is idiopathic 80 to 90 percent of the time?

15:24:33 A. I have cared for patients -- hundreds of patients of non-Hodgkin's lymphoma where I've told them I don't know why the disease happens, so, I mean, I know that for sure.

Q. Okay.

15:24:43 A. But there are situations that are different.

There are scenarios where you are able to identify a particular cause, and I think it's your obligation if there's a particular cause that you believe is substantially contributing to the disease to eliminate this, because you can modify a risk factor. And there are times when you don't -- you can't identify that, and, yes, you say, "I really don't know, but let's focus" -- as I told you earlier -- "Let's focus on treating you and getting you through this."

15:25:14 Other scenarios, if you are able to identify a cause, you say, "You know what, I believe that this is substantially contributing to your disease. Let's eliminate this and then proceed with treatment. I mean, I never said that every non-Hodgkin's lymphoma is caused by Roundup.

Q. Okay. And, sir, there are lots of patients that you have seen with mycosis fungoides for which -- for whomever you have no idea what caused it; right?

A. The majority of mycosis fungoides I've seen I was unable to identify a cause, and I think I said that to everybody in this courtroom.

Q. You have treated many patients who have developed this disease who have never had any occupational exposure to any possible carcinogen; right?

A. Correct.

Q. And it is certainly possible that something in Mr. Johnson's genetic makeup, for instance, predisposed him to the disease; is that right?

A. I think, you know, being of the African American race, it's a well-known risk factor, and we actually -- I believe that this is not necessarily a race thing. I think it's a surrogate for something else. Maybe it's a genetic makeup in the African American race, but just the fact you have a genetic makeup or a particular reason to develop the disease, it doesn't mean that there are other factors that may lead to substantially increased risk of developing the disease.

I mean, again, it's -- you know, again, I don't want -- there are many things that you could have more than one risk factor, but one could actually make that risk substantially higher.

THE COURT: Mr. Lombardi, you have just a few minutes left.

MR. LOMBARDI: Oh, I thought it said 45. Did I get that wrong?

THE COURT: Oh, I'm sorry. You know what, that is correct. It is 45. I apologize.

MR. LOMBARDI: Thank you, your Honor, but I'm getting close anyway.

THE COURT: Yes.

Q. BY MR. LOMBARDI: So Mr. Johnson could well be someone who would have developed mycosis fungoides when he did, whether he was exposed to glyphosate or not?

A. I don't believe so. I do not believe so.

15:27:09 Q. Okay. Let's go to your deposition January 30, 2018.

A. Which?

Q. January 30th. There's a binder that has your depositions in it.

15:27:30 A. I think, you know, as we talked about -- which one? January 30th.

Q. It's January 30, 2018.

A. I see it.

Q. And go to page 138, if you would, please, lines

15:27:44 21 to 25.

MR. LOMBARDI: And I'll ask permission to publish, your Honor?

THE COURT: Any objection?

MR. DICKENS: Which lines?

MR. LOMBARDI: Lines 21 to 25, page 138.

THE WITNESS: Which lines are you looking at, Counsel?

MR. DICKENS: We do have an objection, your Honor. Can we have a sidebar?

15:28:12 THE COURT: Yes.


(Sidebar.)
15:28:36
15:28:50
15:29:06
15:29:29
15:29:42

[redacted]

(End sidebar.)

THE COURT: All right. You may proceed, Mr. Lombardi.

MR. LOMBARDI: Thank you, your Honor.

Q. Doctor, if you could go to page 138, lines 21 to 25.

A. Okay.

Q. And this is your testimony under oath at your deposition. You're familiar with that process, obviously?

A. Yes.

Q. Same oath that you took as you took before you testified today; right?

A. Can't play crystal ball with patients developing cancer or not, true.

Q. And let's look at Slide 7.

MR. LOMBARDI: May I publish, your Honor?

THE COURT: Yes.

Q. BY MR. LOMBARDI: And here's -- did you give this answer to the very same question I just asked you under oath at the deposition: "Mr. Johnson could well be someone who would have developed mycosis fungoides when he did, whether he was exposed to glyphosate or not for

all you know; correct?"

Your answer, under oath, was: "He could have"; isn't that correct?

A. Yes. You can't play crystal ball. You can't really tell if somebody -- I can't tell if I'm going to develop cancer today or not. I mean, how could you actually tell?

Q. Thank you, Doctor.

A. You're welcome.

Q. Doctor, I wanted to ask you quickly about -- you went on a bit about IARC this morning. Do you remember that?

A. Yes.

Q. And you told us -- I'm going to ask you for help with the statistics, Doctor, but you told us that -- I think you said that 20 percent of IARC is Categories 1 and 2A and the rest is --

A. 2B, 3 and 4.

Q. And you said for 2B, 3 and 4, that means they're not carcinogenic; right?

A. 2B is possibly; 3 means that there was no data to be able to classify the agent as carcinogenic or not; and 4 means it's absolutely not carcinogenic. But 3 means that there wasn't enough data to classify if the compound is carcinogenic or not.

Q. So -- and I'm not trying to quote your testimony, but if anybody understood your testimony this morning as saying that a Category 2B finding by IARC indicates that there's no carcinogenicity, that would be incorrect; right?

15:32:05

A. The 2B is possibly, which obviously is significantly lower evidence than probably.

Q. But it still means it could be carcinogenic; right? That's not IARC saying it's not carcinogenic; right?

15:32:18

A. Again, I mean, you have to look how they define "possibly" and "probably."

Category 1 is absolutely carcinogenic; Category 2A is probably carcinogenic; Category 2B is possibly, as I said; 3 means there is no data. There is not enough data to even classify an agent; and 4 means no -- it's not carcinogenic.

15:32:33

Q. And so category -- Group 3, you agree, doesn't mean -- if you're putting Group 3 -- if an agent is putting Group 3, that doesn't mean that that agent is not a carcinogen. It just means there's not enough data at the time; right?

15:32:46

A. They couldn't find data to say that this is carcinogen, which means that the other categories there was enough data to find its carcinogen.

15:33:00

Q. And then the last category, which is the only category -- this is the category that says the agent is probably not carcinogenic to humans. Do you remember that?

15:33:08 A. Yes, that's Category 4.

Q. And that's the only one where a conclusion is reached that an agent is probably not a carcinogenic agent; isn't that right?

A. So I disagree with that. Category 3 means that

15:33:22 there was no evidence. There was no data to support there's carcinogenicity, which means this data doesn't exist. That's what it means. How can you -- we can't assume that this means that it's carcinogenic. If there is no data of carcinogenicity, it means it's not

15:33:36 carcinogenic.

Q. Okay. All right. Fair enough.

Group 4, though, they are able to reach a conclusion that it's probably not carcinogenic?

A. Because there was data to show that it's

15:33:47 absolutely not carcinogenic.

Q. And how many chemicals fall within that category?

A. In Category 4 is 1.

Q. Thank you.

15:33:53 A. And Category 3 is over 500.

Q. Thank you, Doctor.

Doctor, I wanted to ask you a few questions about latency. Do you remember latency?

A. I do.

15:34:07 Q. All right. Let's -- first, I want to read you something from your expert report in this case.

And, Doctor, this is at your expert report. You have a couple. So this is the one from April 28th of 2017, if you want to look along.

15:34:46 A. Okay. I have it.

Q. And I'm at page 5 of your report.

A. Okay.

MR. LOMBARDI: And, your Honor, permission to publish?

15:34:58 THE COURT: Any objection?

MR. DICKENS: No objection, your Honor.

THE COURT: Proceed.

MR. LOMBARDI: Let's publish that.

Q. Now, I'm going to start halfway down the page. 15:35:15 And just so the jury understands, Doctor, when you appear in a litigation like this, you put together an expert report to tell everybody what your opinions are and your basis for the opinions and so forth; right?

A. Yes.

15:35:27 Q. And this one, if we could skip quickly to

page 22 and just show the jury, you sign it; right? And there's your signature?

A. Oh, yes.

Q. Okay. And the date was April 28th of 2017; right?

A. Yes.

Q. All right. And let's go back to page 5. And let's just read here together, Doctor. "Regardless of the type and subtype of NHL, the natural history of each histology varies widely. Indolent lymphomas can carry a long latent period."

Do you see that?

A. Yes.

Q. And you described Mr. Johnson's lymphoma as indolent for a period of time; isn't that right?

A. It didn't behave as indolent, as I mentioned. Usually cutaneous T-cell lymphoma, you would believe that they should be indolent. But the behavior of his particular disease is far from indolent. It's actually behaved very aggressively.

Q. Okay. Well, at first it was indolent; isn't that right?

A. These no such thing as "at first" or "second." I mean, usually when somebody is diagnosed with a disease you have an idea what the natural history of this disease

is, based on prior research and prior work. And then you have to look at how the disease behaved.

So, you know, there is -- if somebody has a disease diagnosed in 2014, and within one year they have developed large cell transformation, which is an aggressive behavior, you can't really say it was indolent for one year. It just doesn't -- this is not how we usually classify these diseases.

15:36:50

Q. Understood. Let's read on.

"In other words, the disease could be present. For months to years before it is discovered and diagnosed often, coincidently, when a patient undergoes testing for something unrelated."

15:37:05

Do you see that?

A. Yes.

Q. And that's true; isn't it?

A. Yes. For some of these indolent diseases.

Q. "By its nature, some indolent NHL may have no symptoms at diagnosis but can progress over the years and eventually cause symptoms that require therapy."

15:37:26

Do you see that?

A. Correct.

Q. And indolent patients can transform into an aggressive histology; is that right?

15:37:35

A. Yes.

Q. So it's fair to call patients -- some of these patients indolent, and then their -- their disease transforms into something aggressive; isn't that right?

A. Yes. But in general -- again, the rate of

15:37:49 transformation is very small, because -- it's about 5, 10 percent per year.

So, in general, we don't see that transformation to happen. It's move often than not it happens much later, the more you have the disease.

15:38:01 Q. Okay. And that's -- I was just going to get to that next sentence. "It is estimated that the rate of transformation is 5 to 10 percent per year. And it should be suspected when patients with indolent disease start having a more aggressive clinical course."

15:38:13 Do you see that?

A. And that's usually more often in B-cell lymphomas, the 5 to 10 percent per year. It's actually not very well defined for the T-cell lymphomas, how often the transformation occurs.

15:38:26 So it's really more accepted for the B-cell non-Hodgkin's lymphoma that you see the 5 to 10 percent per year.

Q. Okay. But -- and you remember from looking at the medical records that many of the doctors

15:38:37 characterized Mr. Johnson's NHL mycosis fungoides as

indolent and then transforming into something more aggressive? Do you remember that?

A. It transformed in September of 2015.

Q. And you remember that his doctors referred to it as indolent before that?

15:38:50

A. Again, any time this disease is diagnosed, you always presume -- you would hope it's going to be indolent. Just that's the nature of the disease. And then you see how things go.

Q. Did his doctors refer to it as indolent, sir?

15:39:01

A. In the beginning, yes.

Q. Thank you.

Now, Doctor, you talked about a latency period. Do you remember that?

A. I did.

15:39:09

Q. And that was where you were talking about how long it takes to actually get the disease. Do you remember that?

A. From the exposure to an offending hazard, an offending agent.

15:39:19

Q. I got that.

And you -- you cited a couple of -- a couple of different articles. But you would agree that the articles that you cited have nothing do with glyphosate; right?

15:39:31

A. Yes. And I actually said that.

Q. Okay.

A. I said this is just illustration just to explain that the latency period of patients with non-Hodgkin's lymphoma could be very short, could be very long. And I explained that these are examples for illustration.

15:39:40

Q. And you cited the 911 Commission's work with the compensation system. It dealt with the latency issue as part of that?

15:39:55

A. Yes. I mean, the only way to actually answer the question definitively for patients with the latency period in glyphosate is to expose people to glyphosate and just wait and see what's the natural history and how long it takes to develop non-Hodgkin's lymphoma. And nobody in this courtroom would agree to that.

15:40:10

Q. And, Doctor, just so it's clear, the 911 Commission, the data for which -- that they used for their estimates in that article was low-level ionizing radiation studies; right?

15:40:26

A. As a clinician, it uses as an offending hazard. Again, I provide examples of chemotherapy. I provide examples of immunosuppression. The data they have here is from low-level ionizing radiation. But the way we have to look at it as clinicians in clinical context is the fact that latency period could be short or could be

15:40:44

long regardless of the offending hazard.

Q. And, Doctor, just so it's clear, low-level environmental exposures are different; isn't that right?

A. Depending on what's the environmental agents you're talking about.

Q. But they're different than ionizing radiation, aren't they?

A. Yeah, they're different. But they're offending hazards. Again, you know --

Q. And isn't it true, sir, that in one of the articles that you cited in your expert report, the estimate for acute -- the estimates for low-level environmental exposures are more, like, 5 to 20 years? Isn't that right?

A. It depends on the actual agent. Again, it could be short, it could be long. In fact, I've already described -- and I told everybody -- that the latency period is based on clinical expertise. I mean, and at the end of the day, this is what you see in clinic. You cannot dismiss a particular problem just because five years did not pass or ten years did not pass.

It could be short, could be long. It's not a binary decision, that you have to have five years in order for me to believe that something could cause a disease or not.

It just doesn't happen this way. It's just not the way clinical decisions work.

Q. Are you aware of a plaintiff's expert in this case named Dr. Weisenburger?

15:42:11 A. I have not read his deposition in a while. I'm aware that he did witness.

Q. Are you aware that he's estimated that if there is an association between the glyphosate and non-Hodgkin's lymphoma, the latency period is more on the

15:42:24 order of 20 years?

A. It's a bell curve. Again --

Q. I'm asking if you're aware of what Dr. Weisenburger said?

A. But you need to show me this, because it can be

15:42:33 taken out of context. I'm aware he said that, but it's a bell curve.

Q. You are aware that he said that?

A. I'd like to see -- to see it in the context, because I do know that he saw this in one of the

15:42:44 articles.

Having said that, you have to look at the fact that there's a bell curve. There are patients who would develop the disease at a much shorter period of time. And others will take them 15 years. In fact, this is

15:42:56 really --

Q. Doctor, I have the -- I can show you where he said it. Will that help you?

A. Well, I'm trying to explain the bell curve, if I may. What I mean by bell curve, some patients, could develop the disease early on. Some patients could take them more than 20 years. Could take them 30 years. And some patients, could take them 10 years. That's why it varies.

I took care of patients who were exposed to Chernobyl in the mid-'80s. Some of them had disease early on, some of them had disease later on. All I'm saying, it varies. That's all I'm trying to say.

Q. Okay. Well, let's look at 2749.

MR. LOMBARDI: Your Honor, do I still have a couple minutes?

THE COURT: You're about two minutes left.

Q. BY MR. LOMBARDI: Okay. We're going to go fast. Exhibit 2749.

MR. DICKENS: We have an objection, your Honor. Can we have a sidebar?

THE COURT: Yes.

(Sidebar.)

[redacted]


1
2
3
4
15:44:17
5
6
7
8
9
15:44:30
10
11
12
13
14
15:44:43
15
16
17
18
19
15:45:00
20
21
22
23
24
15:45:15
25

[redacted]

(End sidebar.)

Q. BY MR. LOMBARDI: Doctor, you've seen that letter before from Dr. Weisenburger; correct?

A. Actually, I have not. This is the first time I have seen it.

Q. All right. Have you ever heard Dr. Weisenburger say that he considers the latency period -- appropriate latency period for glyphosate exposure to be 20 years?

A. I have not heard that.

MR. LOMBARDI: No further questions, your Honor.

THE COURT: Thank you.

Mr. Dickens.

REDIRECT EXAMINATION

BY MR. DICKENS:

Q. Doctor, you've been asked a lot of questions today. I want to start, kind of, at the beginning with respect to general causation.

You were shown the De Roos 2005 article. Do you recall that?

A. Yes, I do recall that.

Q. And the suggestion to you was that Dr. De Roos,

because of that 2005, doesn't believe that glyphosate causes cancer. Do you recall that?

A. Yes.

Q. Have you reviewed, in preparation for your opinions, the article written by Dr. Portier with respect to the differences between IARC and the European -- or EFSA?

15:46:44

A. Yes, I have.

Q. If you can -- I am going to --

15:47:05

MR. LOMBARDI: Your Honor, if Counsel could just show me where that is disclosed on his reliance materials, I wouldn't have an objection. But I don't see it.

MR. DICKENS: (Indicating.)

15:47:36

MR. LOMBARDI: Okay. No problem, your Honor.

THE COURT: All right. You may proceed.

MR. DICKENS: Go ahead and publish Plaintiff's Exhibit 293, which has previously been shown to the jury.

Q. Is this the paper that you've seen, Doctor?

15:47:49

A. Yes.

Q. And the lead article is Dr. Christopher Portier; correct?

A. Yes.

Q. And one of the co-authors --

15:47:59

A. I think Dr. De Roos is a co-author.

Q. Okay. And we're going to now turn to the actual conclusion for this particular paper.

A. Actually, two co-authors on this paper from the Agricultural Health Studies, Dr. Lynch is also a co-author.

Q. All right. I am going to direct your attention to the conclusion.

And it states: "The most appropriate and scientifically-based evaluation of the cancers reported in humans and laboratory animals, as well as supportive mechanistic data, is that glyphosate is a probable human carcinogen."

And that's your opinion as well; correct?

A. Yes.

Q. And so based on the fact that Dr. De Roos has signed onto this article, is it your understanding that she shares these beliefs?

A. Absolutely. Otherwise, she wouldn't be a co-author.

Q. And that's what happens all the time with respect to publication of medical literature; correct?

A. You have to sign off as a co-author that you agree with everything. From the conclusion to the methodology to everything else.

Q. And it goes on that, "On the basis of this

conclusion and the absence of evidence to the contrary, it's reasonable to conclude that glyphosate formulation should also be considered likely human carcinogens."

Do you see that?

15:49:31 A. I do see that.

Q. And, once again, that is your opinion that you're expressing here today with respect to general causation?

A. Yes.

15:49:39 Q. You were asked some questions with respect to Dr. Kim's opinion; is that correct?

A. Yes.

Q. And you reviewed Dr. Kim's records?

A. I have.

15:49:46 Q. And you've reviewed Dr. Kim's deposition transcript?

A. I have.

Q. Is it your understanding that Dr. Kim had reviewed any literature with respect to glyphosate and

15:49:57 the incidence or association with non-Hodgkin's lymphoma?

A. She has not.

Q. So she hadn't reviewed anything at that point?

A. I don't believe any of the treating physicians have reviewed any of the literature pertaining to

15:50:11 glyphosate and the development of non-Hodgkin's lymphoma

in general or mycosis fungoides in particular.

Q. And as you said earlier, you hadn't been aware of the association before you actually took the time to review?

15:50:25 A. That is correct.

Q. I am going to --

A. And it took me several months until I finished reviewing the literature, if you recall.

Q. I'm going to turn your attention back to your

15:50:38 summary chart that you prepared in this case, Doctor, which is Plaintiff's Exhibit 1039.

MR. DICKENS: Permission to publish, your Honor?

THE COURT: Any objection?

MR. LOMBARDI: No objection, your Honor.

15:50:49 THE COURT: Very well.

Q. BY MR. DICKENS: And I'm going to direct your attention to what you listed for July 23rd of 2014.

So Mr. Johnson visits Dr. Chanson for treatment of whole body rash. That's what occurred at that point in time; is that correct?

A. Yes. That was the progress that we saw.

Q. And he's told his condition is not related to Ranger Pro. And what was that based on?

A. Based on the Monsanto safety data sheet.

15:51:16 Q. Okay. And that's where Dr. Chanson turned to

figure out whether or not there was an association between Roundup and cancer; correct?

A. Yes. None of the other physicians actually looked at the epidemiologic literature.

15:51:28 Q. As far as you know, has Monsanto ever warned doctors, such as yourself, of an association between Roundup or Ranger Pro and non-Hodgkin's lymphoma?

A. To my knowledge, it has not.

Q. They brought up the phone call Mr. Johnson made 15:51:45 to Monsanto specifically and went and showed you that actual testimony. Do you recall that?

A. Yes.

Q. It said he talked to them for 45 minutes; is that right?

15:51:55 A. Yes.

Q. Do you have an understanding as to whether anyone on that phone call ever told Mr. Johnson his symptoms or his condition were the result of his exposure to Roundup or Ranger Pro?

15:52:06 A. To my knowledge, this was not conveyed to Mr. Johnson.

Q. And that's based not solely on the medical records. It's from your conversation with Mr. Johnson; correct?

15:52:14 A. Yes.

Q. And based on -- are you aware that Mr. Johnson called a second time? Is that right?

A. Yes.

Q. And Counsel brought up the fact that it said, "Have your doctors call if they have any questions"; is that correct?

15:52:32

A. Yes.

Q. Are you aware of -- on that phone call, did anyone from Monsanto ever tell Mr. Johnson that his mycosis fungoides or non-Hodgkin's lymphoma could be the result of his exposure to Roundup or Ranger Pro?

15:52:42

A. I am not aware that he was told at all.

Q. Okay. And that date of that second call, where he called in, was March 27th, 2015; is that right?

15:53:00

A. Yes.

Q. He's still spraying at that point in time?

A. Yes.

Q. What do you have directly a week before he made that phone call?

15:53:06

A. What do I have?

Q. On your chart.

A. Oh, the week before. Yeah. I mean, that's -- on March 20, 2015, the IARC published the classification of Group 2A as Roundup is probably a human carcinogen.

15:53:21

And, frankly, no matter what, whether you

believe these conclusions or not, it's an obligation to tell a patient that is calling, and say, "You know what? I'm not really -- maybe I'm not convinced with this conclusion, but for the sake of safety, let's just hold off on this right now, because -- let's just do additional investigation."

15:53:37

And I think that's really the responsible way of handling a situation like this. Even if you have issue with the conclusion. Because it's a human cancer at hand.

15:53:49

Q. And are you aware of the person he talked to, whether or not they were an actual medical doctor?

A. I do not know, actually.

Q. Is that important to you in -- in -- whether or not the person they were talking to had a medical background?

15:54:02

A. Medical background, as well as knowledge of what's actually going on. I mean, as we just already said, there are many physicians that were involved in this case that are not aware of the IARC classification. So medical background is important, but it's certainly not sufficient. You have to be aware also of the literature.

15:54:14

Q. You mentioned the medical community, such as yourself, was not aware of an association. Has Monsanto

15:54:27

ever reached out to you personally, while you were practicing, with respect to an association between Roundup and the actual disease course you were treating?

A. No. This has never happened. And, actually, you know, working with manufacturers, in my current role and my previous role, any time there is any warning that comes from regulatory agencies or anything that you actually are aware that could cause a problem or side effects for patients -- you see this coming into your office or your home, and telling you that this has actually been published and there are possible side effects that we just became aware of from the manufacturers' standpoint.

Q. Doctor, you were also shown the Eriksson study by Counsel.

MR. DICKENS: And if I could bring that up. It's Plaintiff's Exhibit 758.

Permission to publish, your Honor?

THE COURT: Any objection?

MR. LOMBARDI: Which --

THE COURT: This is the Eriksson study.

MR. LOMBARDI: No objection.

THE COURT: Very well. You may proceed.

THE WITNESS: I see that, yes.

Q. BY MR. DICKENS: And this is the same study that

was shown to you by Counsel during your questioning; is that right?

A. Yes.

Q. Now, in your questioning -- I'm going to turn your attention to page -- or Table 7, which is on page 1661.

15:55:55

A. Table 7. Okay.

Q. And can you explain what Table 7 represents?

A. Table 7 looked at a variety of agents that these patients were exposed to. And it looked at the univariate analysis of the odds ratios of the risk of developing non-Hodgkin's lymphoma.

15:56:14

And you'll will see that MCPA has an odds ratio of 2.81 and glyphosate has an odds ratio of 2.02. So it's doubling the risk.

15:56:32

Then they did a multi-variate analysis. They tried to adjust for the co-exposure of all of these pesticides. And the glyphosate odds ratio became 1.51, and the MCPA became 1.88.

15:56:53

And as Counsel actually showed, that many patients who were using MCPA were switching to glyphosate. And this is exactly why the multi-variate analysis did not show a statistical significance.

But at the same time, if you have a patient -- again, let's talk clinical. Just from a clinician

15:57:07

standpoint, if who have a patient that is actually spraying glyphosate or being exposed to glyphosate, are you going to tell him, "Well, you know what? The univariate analysis showed double the risk, but the multi-variate analysis did not, so I think it's totally okay. Just keep going"?

15:57:24

Q. And there was some suggestion that the multi-variate analysis was actually negative. Do you recall that?

15:57:32

A. Yes.

Q. The odds ratio for the multi-variate, that's not negative; correct? That's an increased association.

A. It is still the odds ration. It is still over -- it's 1.51. It's not statistically significant, but it's -- still there is a trend. And that's what I talk about. You have to look at the trend.

15:57:44

If you just continue to be bogged down by the P value, you are going to do mistakes that could harm patients.

Q. And when you were reviewing all of these studies, you looked at all of them; correct?

15:57:56

A. Yes, I did.

Q. And you were looking to see if you could find that trend?

A. Yes.

15:58:05

Q. And was the trend -- did you see a trend in all --

A. Yes, there was a trend.

Q. Okay. I'll turn your attention to the next page, 1662, and the conclusion in the particular article.

It says, "Glyphosate was associated with a statistically significant odds ratio for lymphoma in our study, and the result was strengthened by a tendency to dose response effect, as shown in Table 2."

Do you see that?

A. Yes.

Q. What do they mean by that, Doctor?

A. It means that patients who were exposed to glyphosate have an increased risk of developing non-Hodgkin's lymphoma.

And what they actually saw is that the more exposure they get, the more likely that they are going to develop the disease. That's what they mean by a dose response effect.

Q. Okay. And in this study, there was a lot of talk about other pesticides and adjusting for those. And it's true, some farmers, some occupational workers, have multiple exposures; right?

A. Absolutely. It's -- I mean, again, it's -- that's what happens. You can't -- in every single

disease, you could have several factors that may contribute to a particular disease. It doesn't take away from each individual factor.

Q. Mr. Johnson doesn't have those multiple exposures; correct?

15:59:26

A. No, he does not.

Q. I want to turn to Mr. Johnson. There was a lot of talk about whether or not when he actually had cancer. And there's an easy way, isn't there, Doctor, to figure out whether or not he actually had a rash in September of 2013, is to look at all of the 15,000 pages of records; is that right?

15:59:37

A. I was not able -- again, I -- you know, again, I saw, in my opinion, the best evidence that the rash started developing sometime in the spring of 2014. And I do note some of these private notes we just saw.

15:59:54

But the reality is I know exactly how many of these electronic medical records are actually used. And, you know, there's a lot of copy/paste, and a lot of these that are not necessarily very accurate. But that's what we have right now.

16:00:15

Q. And were you shown at all any actual contemporaneous medical records saying he had a rash in September or the fall of 2013?

16:00:27

A. Just a suggestion based on a few progress notes.

Q. So, Doctor, is fair to say, then, that in your review of all the pages of medical records, you didn't see anything in 2013 where Mr. Johnson had a rash?

A. I can only told -- I can only tell you what I've noticed and what I've observed under oath.

Q. Okay. And let's actually look at some of those records closer in time to when Mr. Johnson -- or when the suggestion was that he had cancer in 2013.

A. What do you want me to look at?

Q. Let me pull this, Doctor. I've got a lot of paper. All right. I'm actually going to come --

MR. DICKENS: Can I go to the Elmo?

MR. LOMBARDI: No objection.

Q. BY MR. DICKENS: I'm going to show you a record here, and I think you mentioned it before.

What's the date of this particular record, Doctor, if you can see?

A. September 18, 2013. I think that's when he had a nest wasp incident and had a lot of stings on both arms.

Q. Okay. And when you say "nest wasp," we're talking bee stings; is that --

A. Yes.

Q. And so in September of 2013, Mr. Johnson actually had a whole episode where he had a bunch of bee

stings; is that right?

A. Yes, he did.

Q. Okay. And is there anything in the actual record here that indicates he had any other type of rash, or any of the other medical records you reviewed, with respect to this particular incident?

A. No. This is the primary medical record as opposed to hearsay and how you recount the medical record.

Q. And you also mentioned, I believe, a car accident; is that right?

A. And then the car accident that he had on September 26, 2013, there was no evidence on the exam that he had a skin rash also.

Q. No evidence at all?

A. No evidence at all.

Q. And you were asked, with respect to the clinical history, that you, as doctors, your obligation is to take a full clinical history when you see a patient; is that right?

A. Yes. There's also a note in December 2013, when he was seen with a back pain from lifting. Was seen also by Dr. Chanson. And the exam mentions no skin abnormalities whatsoever.

Q. So the actual records from 2013, there's no

indication of any type of rash; is that right?

A. Yes.

Q. And you've reviewed his Workers' -- you know, his actual employment record as well?

16:03:29 A. I have.

Q. Any mention of rash in the employment records?

A. Not before. I mean, again, not that I've seen until, obviously, he got diagnosed and so forth.

Q. Okay. If I can stay at the Elmo, I'm going to

16:03:48 show you a document you've already seen. I'll just use Defendant's exhibits, to make it easier. Defendant's Exhibit 2294.

MR. DICKENS: May I publish, your Honor?

THE COURT: Any objection?

16:03:59 MR. LOMBARDI: No objection.

THE COURT: You may proceed.

And, Mr. Dickens, you have until 4:10.

MR. DICKENS: Okay. Thank you, your Honor.

Q. So this record we've already taken a look at.

16:04:09 This is from July 23rd of 2014; is that right?

A. Yes.

Q. And one thing, this is the record that actually has an injury date there. Is that -- is that fair?

A. Yes. The injury is April 13th.

16:04:20 Q. Okay. And you were actually asked about that

incident and said there's rashes all over his body, except for the face where he wasn't exposed.

Was Mr. Johnson exposed on the face in that incident, as far as you recall?

16:04:34 A. I don't recall if he was exposed on the face during that incident.

Q. How long after this actual incident did Mr. Johnson develop a rash, according to him?

A. It looks like about a month later.

16:04:47 Q. And he said a month later. And this was before -- in July 2014, before any of the records defense counsel showed you; right?

A. Yes.

Q. And so is the 2013 -- or suggestion of fall 16:05:01 2013, that only came at least a month after this; right?

A. Yes.

Q. So if Mr. Johnson truly had a rash that was going on for a significant period of time, you would expect him to inform his doctors at the time he went to 16:05:14 actually get treated for the rash.

A. The original records from September, as well as December, should have reflected that. But they don't.

Q. And, in fact, when he went before this, in June of 2014, for -- yeah, 2014, for his rash, there was no 16:05:29 mention of the fact that it was going on for any

particular period of time. Is that fair?

A. Correct.

Q. Now, I want to show you one of those records that defense counsel showed you. Defense Exhibit 2294.

16:05:48 THE COURT: Any objection?

MR. LOMBARDI: No objection.

THE COURT: Okay.

Q. BY MR. DICKENS: This record -- you saw this previously. This is where you were shown October 2014.

16:05:56 It says he has a one-year history of progressive papulosquamous eruption. Is that what you see there, Doctor?

A. I do.

Q. And it says that that eruption, which apparently

16:06:08 was a year old, that was actually biopsied where?

A. Solano Dermatology in Vallejo.

Q. Okay. Did Solano Dermatology, in all your review of the records, ever biopsy any eruption in 2013?

A. No. The -- it is very closer that Solano

16:06:26 Dermatology did not do the biopsy until August 1st, 2014.

Q. Okay. And I will show you -- it's Defendant's Exhibit 2283.

MR. DICKENS: Permission to publish?

THE COURT: Any objection?

16:06:37 MR. LOMBARDI: No objection.

Q. BY MR. DICKENS: And this is the Solano Dermatology record, is it not?

A. It is August 1st, 2014, when he had the biopsy.

Q. Okay. And it actually has a record here as to how long the rash had been lasting at that point in time.

Do you see that?

A. Yes.

Q. And how long did Mr. Johnson report in August of 2014?

A. As you see from the second sentence, "This episode has lasted several months."

Q. And that's several months prior to August 2014?

A. Yes. So this -- again, as I mentioned in my brief report, I believe in the spring of 2014 when the rash started.

Q. Okay. And that's based on your review of all of the medical records; right?

A. Specifically the original records, yes.

Q. Okay. And these records are closer in time to that period?

A. Yes.

Q. One more record, Doctor. This is actually the preliminary pathology report for Mr. Johnson from UC San Francisco; is that right?

A. Yes, it is.

Q. In one of those reports that you saw, where it listed the year from September of 2014, that suggested, did it not, that that was from UC San Francisco?

A. It's probably history taken by a resident, fellow or a student that was not very accurate.

Q. Okay. And so this date of this record is August of 2014?

A. Yes.

Q. And, once again, how long is the rash reported here for?

A. It says, "Several months, history of a widespread rash."

Q. Okay. So is it fair to say, based on your review of all of the materials, that Mr. Johnson's cancer occurred, as you said, in May of 2014 or early June?

A. He started having the rash sometimes in May of 2014, to the best of my knowledge.

Q. Okay. Even if Mr. Johnson's cancer began in September of 2013, would that change your opinions in any way?

A. It would not. But it did not start in 2013. There is nothing in the records -- from the original record to suggest that his rash started September 2013.

But even then, it would not change. Because he had significant exposure. And, again, the latency

period, as we discussed, could be very short.

Q. Do you recall you were asked about Mr. Johnson's spraying, and it was suggested that he only sprayed in the summer months? Do you recall that?

16:08:53 A. I recall that.

Q. Do you recall they showed you that -- that telephone call he made to the hospital complaining of the fact he got Roundup on him? Do you remember that?

A. I do remember that.

16:09:04 Q. Do you remember the date?

A. Was it November?

Q. I believe it was January, Doctor?

A. Okay. I don't remember, obviously, the date. But I'm sure we can find it.

16:09:16 Q. And if it was January, then it's not true he only sprayed in the summer months. Do you agree with that?

A. I agree with that. Again, I -- you know, his major exposure appears to be in the summer months, but it

16:09:24 looks like he also could have had some sporadic area of spraying.

MR. DICKENS: I'm going to show what would be marked as Exhibit 1040.

THE COURT: Any objection?

16:09:43 MR. LOMBARDI: I do object. I've never seen

this document in this litigation before, your Honor.

MR. DICKENS: Can we have a sidebar?

THE COURT: Yes.

(Sidebar.)

[redacted]

(End sidebar.)

Q. BY MR. DICKENS: Okay, Doctor. Are you aware -- you were asked about Dr. Kim at Stanford; correct?

16:11:22 A. Yes, I was.

Q. Are you aware of whether or not Stanford Healthcare's website lists exposure to chemicals, like herbicides, as a risk factor for non-Hodgkin's lymphoma?

A. The American Cancer Society, I know for sure it

16:11:40 lists that. So, again, you'll see that -- if you go to the American Cancer Society, you will see that listed. I don't know, actually, if Stanford website does that, but I know that American Cancer Society does.

MR. DICKENS: I have no further questions.

16:11:53 THE COURT: Thank you.

Mr. Lombardi.

MR. LOMBARDI: Thank you, your Honor.

RECROSS-EXAMINATION

16:11:55 BY MR. LOMBARDI:

Q. Doctor, can you look at Exhibit 2283? We talked a lot -- it's in our book.

Doctor, you are the one that told us to look at the medical records to understand what happened with

16:12:13 Mr. Johnson, aren't you?

A. 2283?

Q. 2283.

A. Sure.

Q. Page 24?

16:12:25 THE COURT: Any objection? Are you requesting to publish?

MR. LOMBARDI: Yes, I am.

THE COURT: Any objection?

MR. DICKENS: No objection. I'm at page 24.

16:12:35 Q. BY MR. LOMBARDI: But first, Doctor, you relied on the medical records; right?

A. Of course.

Q. And now you're telling the jury that they should not believe what was written in certain parts of the

16:12:46 medical records; right?

A. I didn't -- you're taking what I said out of context. I think sometimes if there is some conflicting results in the medical records it is very important to look and make sure that the records are reflected

16:13:00 appropriately.

And so, I mean, it's not unusual to see certain areas in the medical records that are not clear or mistaken. I think that happens in every single medical record. So that's really what I mean by that.

16:13:13 Q. Okay. But you weren't there?

A. I wasn't there, no.

Q. You don't know what the truth is?

A. I wasn't there.

Q. You're reconstructing records on this limited point for Counsel; right?

16:13:22

A. Well, I'm actually making -- again, you have to look at the actual original records from the fall of 2013. That's all I have. And the other records, they just say, "Year before," or, "Twelve months before."

16:13:36

What I said is, you know, there's an emergency room visit. There was a nest wasp visit. There's another visit in December. During those visits, I wasn't able to see that there was any skin rash on Mr. Johnson's visits.

16:13:50

Q. Okay. Although, you don't dispute that there is evidence that he had a rash in the fall of 2013; right?

A. Again, I -- I saw the bee stings. In the original record, there was evidence that he had bee stings on both arms. That's what I saw.

16:14:08

Q. Did you see evidence in the records that Mr. Johnson had a rash on his body in the fall of 2013?

A. It's what you showed me from Stanford and UCSF before. But, again, it wasn't reflected in the original records.

16:14:20

Q. Now, just so the jury understands, the reason

this is so important, Doctor, is if Mr. Johnson had the cancer in the fall of 2013, you would even agree that there's almost no way it could have been caused by glyphosate exposure; isn't that right?

16:14:36 A. I would not agree with that.

Q. Well, Doctor, you agree that you would have a tough time linking glyphosate and non-Hodgkin's lymphoma together if the lag time was less than a year, wouldn't you?

16:14:50 A. I have said several times today that -- I think what you're referring to is the latency period. It could be very short, it could be very long. So you look at each individual case. You look at the exposure. So even if he had a rash that was related to his mycosis

16:15:07 fungoides, in the fall of 2013 my opinion would not change.

Q. Sir, if -- you would have a tough time linking glyphosate exposure to mycosis fungoides if the lag time was less than a year; isn't that right?

16:15:22 A. I'm not sure what you mean by "tough time." I mean, help me understand how --

Q. Aren't those your words?

A. No. I'm trying to understand what you mean by that. Would you say -- I told you I wouldn't change my

16:15:32 opinion. But the reality is it's always -- you know, if

you have more exposure to an offending agent, it is more likely than not that this is related to the actual agent you're exposed to.

Q. Doctor, look at your deposition from January 30th, at page 165, please.

A. What's the date?

Q. It's the January 30th, 2018, deposition, please.

THE COURT: And what page, Counsel?

MR. LOMBARDI: It would be page 165, lines 6 to 19.

THE WITNESS: 165, you said?

Q. BY MR. DICKENS: Yes.

A. Okay.

MR. DICKENS: Permission to publish, your Honor?

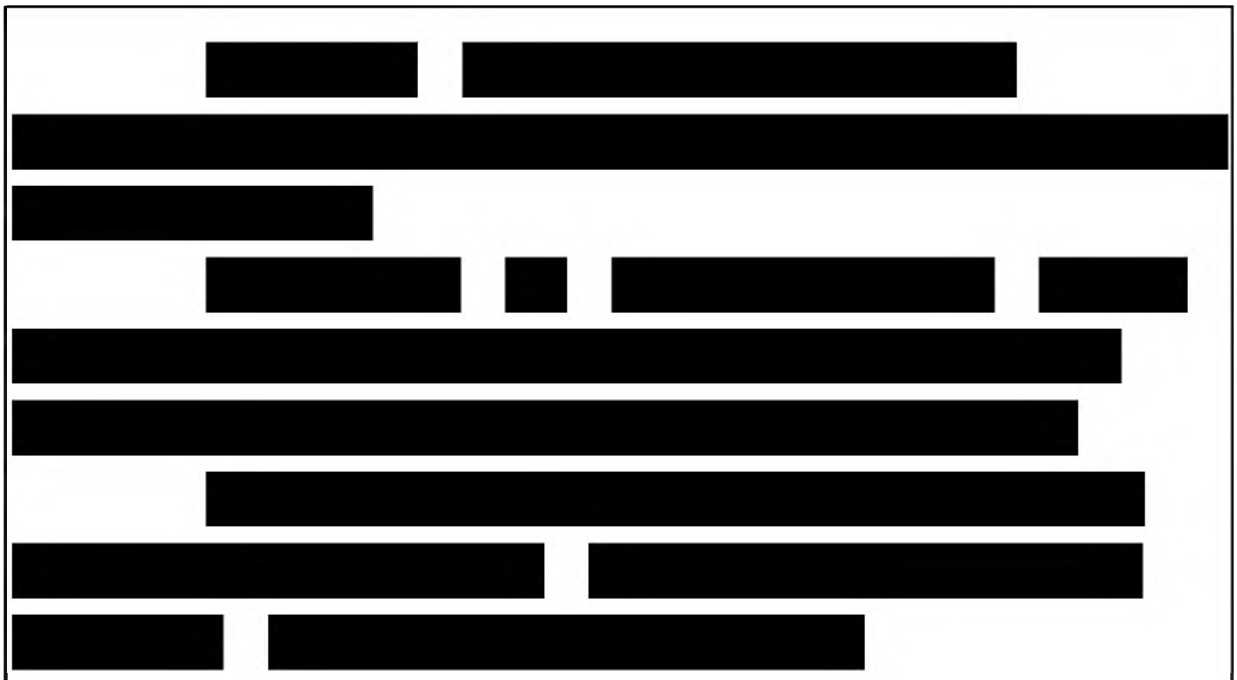
THE COURT: Any objection?

MR. LOMBARDI: Yes, your Honor. Object. Can we have a sidebar?

THE COURT: Yes.

(Sidebar.)

[redacted]



16:17:25 (End sidebar.)

THE COURT: Okay. You may proceed.

MR. LOMBARDI: May I publish, your Honor?

THE COURT: Yes.

MR. LOMBARDI: Let's put the January 30th, 2018, deposition, page 165, up.

16:17:37 Q. Were you asked this question, and did you give this answer under oath, Doctor?

A. I did.

Q. "How long -- that was a 26-month lag. How long a lag would be too short for you to believe that somebody could have contracted non-Hodgkin's lymphoma from chronic exposure to glyphosate?

16:17:48 "Answer: That's also a good question. It's tough to tell. I mean, I think the -- in general, I would say the more aggressive the disease is, the lag

16:18:01

time is shorter. The more indolent the disease, the lag time is longer. I think it's very difficult to pinpoint a particular duration, but I would say -- I would struggle -- or have -- I would have a tough time linking both together if the lag time was less than a year."

Did you give that answer to that question under oath at your deposition?

A. I did.

Q. Doctor, could you turn to Defendant's Exhibit 2283, please?

A. I'm here.

Q. And I want to go to page 24. This is in the medical records; right, Doctor?

A. Yes.

Q. Let's go to page -- I think I said 23. I mean 24. The bottom number on the page. It's 2283, 24.

A. Sure. I'm here.

Q. Okay. And, Doctor, you were just talking about some medical records from August of 2014, weren't you?

A. Yes.

Q. This is a medical record from UCSF, August of 2014; is that right?

A. August 26, 2014.

Q. Okay.

MR. LOMBARDI: Permission to publish, please?

MR. DICKENS: No objection.

THE COURT: You may proceed.

Q. BY MR. DICKENS: All right. And this is Dr. Pincus. Remember, she's the doctor who initially diagnosed Mr. Johnson; correct?

A. Yes.

Q. Okay. And here's what she says: "Clinical data: African American male with approximately one year of rash on trunk, extremities. Now with three-month of spreading to all body and becoming more scaly. Refer to recent" -- and I'll just stop there.

Do you see that, Doctor?

A. I do.

Q. Okay. And that's in the medical records of Mr. Johnson that you reviewed?

A. That's the clinical data of a pathology report.

Q. Doctor --

MR. LOMBARDI: You can take that down.

Q. Doctor, going back for a moment, you said you don't believe that any of the treating physicians looked at the epidemiology.

A. I don't believe they did, no.

Q. And you didn't until you were retained in this case; right?

A. Correct.

Q. So maybe what this tells us is that IARC isn't that important to physicians who are actually practicing?

A. It's actually very important to physicians who are interested in the epidemiologic literature and the impact of what these compounds could affect cancer. So that's not true.

Q. But you didn't look at it until you were hired by plaintiff's lawyers; is that right?

A. Yes, but I was --

16:20:42 Q. Go ahead. I'm sorry.

A. I mean, again, in treating non-Hodgkin's lymphoma, I was fully aware of the agriculture exposure in pesticides in farming. So when I'd see a patient that was in farming and exposure, I would advise them, in general, to avoid exposure to pesticides.

But you're correct, I wasn't aware of this specific relation between glyphosate and non-Hodgkin's lymphoma, which is fairly recent, obviously. In March 2015. So it's not been there for decades.

16:21:10 Q. And isn't it true, Doctor, that IARC does something very specific in its analysis?

A. It looks at the published literature and the peer-reviewed literature looking at -- again, I think we went through this. Looking at possible mechanistic data, look at animal studies, epidemiology literature,

toxicology literature, to come up with the conclusion.

Q. And what IARC actually does, sir, is what's called a hazard assessment?

MR. DICKENS: Your Honor, objection. Beyond the scope of the redirect.

16:21:39

THE WITNESS: I'm not a statistician.

THE COURT: Overruled.

THE WITNESS: I'm not a statistician.

Q. BY MR. DICKENS: Well, I'm asking about IARC. IARC.

16:21:46

A. Yes.

Q. You relied on IARC. It does a hazard assessment; isn't that right?

A. It does do a hazard assessment and a statistical.

16:21:55

Q. Which is different than a risk assessment?

A. Again, it looks at the increased risk, at the incremental increase risk, yes.

Q. It's a hazard assessment, which -- Counsel read something. It's just designed to raise a red flag, and then others can figure out what needs to be done and do further study on it; isn't that right?

16:22:06

A. If you're able to do additional studies, that's fine, but again, at this point, I mean, there's no one -- no one -- there's no clinician that would be absolutely

16:22:20

willing to do a prospective study randomizing patients to glyphosate versus not. I'm not sure there's anybody in this room that would be willing to do that.

So if we really don't believe the data, and we don't believe that glyphosate is a human carcinogen, and we don't believe that glyphosate would cause non-Hodgkin's lymphoma, would you be willing to be randomized to a trial like this? I think the answer is very clear. Nobody would be willing to do that.

16:22:36

16:22:51

Q. It's -- IARC is doing something different than a risk assessment? Isn't that right, Doctor? Very simple question.

A. I answered that.

Q. Okay. Was it "yes"?

16:22:58

A. Yes.

Q. All right. And, Doctor, you mentioned Dr. De Roos, again. Do you remember -- we've talked about several De Roos papers. There was De Roos 2003, which you raised this morning. Do you remember that?

16:23:16

A. I do.

Q. And then De Roos 2005, which was the preliminary AHS study. Do you remember that?

A. Yes.

Q. And then Counsel just showed you a paper that

16:23:26

Dr. Portier was an author on with Dr. De Roos, and what

was that, 2015?

A. 2016.

Q. 2016.

And you know, Doctor, as you sit here today, that Dr. De Roos was then an author on the 2018 Journal of National Cancer Institute Article, isn't that --

A. She was.

MR. LOMBARDI: Okay. No further questions, your Honor.

Q. Thank you very much, Doctor.

A. You're welcome.

MR. DICKENS: Just one question, your Honor, or two questions.

THE COURT: Very well.

REDIRECT EXAMINATION

BY MR. DICKENS:

Q. There was a lot of discussion, Doctor -- we all agree that the medical records have inconsistencies; is that right?

A. Yes.

Q. You were read some testimony you gave where you said, "I would have a tough time linking both together if the lag time was less than a year"; is that right?

A. Yes.

Q. Mr. Johnson had his first exposure June 2012?
A. Yes.
Q. So even if it was September 2013, that's more than a year; right?
16:24:26 A. Yes, it was not less than a year.
Q. And so once again, regardless of whether we're talking early May, late June 2014 or September 2013, your opinion does not change in any way, shape or form; is that right?
16:24:41 A. It does not. And I think what's also important is recognize that the disease course that this patient had was very aggressive compared to any type of TCTL, or cutaneous T-cell lymphoma, that you would read about, and the fact that it behaved aggressively would tell you that
16:25:00 the latency or that lag time is not going to be long, and this is really consistent with what we usually see.
MR. DICKENS: No further questions.
THE COURT: All right. Thank you.
Thank you, Dr. Nabhan --
16:25:09 THE WITNESS: You're welcome.
THE COURT: -- you may be excused.
All right. Ladies and Gentlemen, we're going to adjourn for today. I do have some special instructions for you on Monday.
16:25:24 On Monday, we are expecting a large attendance,

and in order to make it just more comfortable and easier for you, I'm going to ask you to please report to Department 514. So when you get off the elevator every day, you've been turning to the right and coming to this hallway. Well, instead, on Monday morning, when you get off the elevator, turn to the left and gather in front of Department 514. The bailiff will meet you there, and just to make it easier for you, because we might have crowds in the hallway, he or she will bring you through the interior hallway into the courtroom when we're ready to begin.

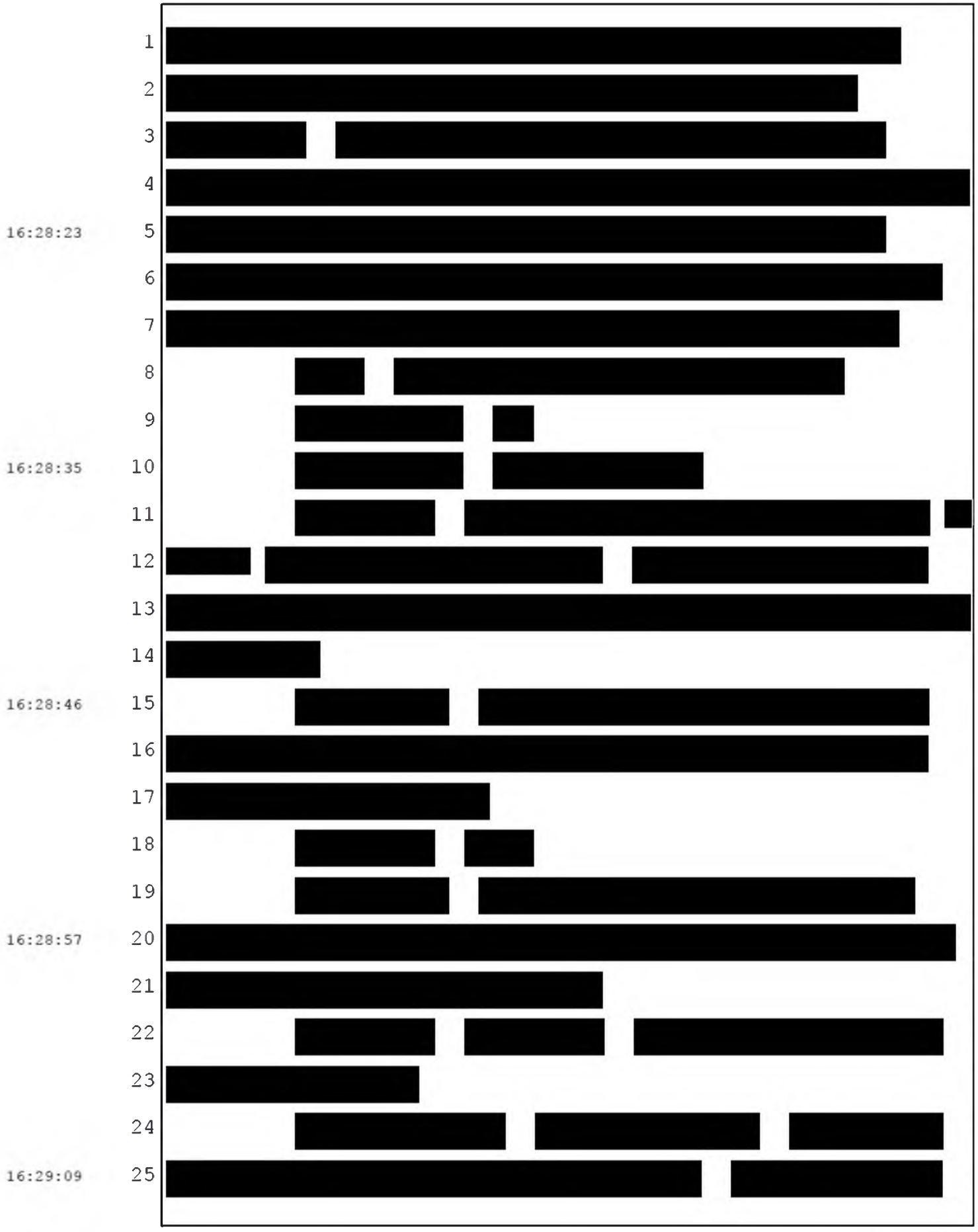
All right. So if you could please report on Monday morning to Department 514, that, I think, will just make it easier for you. Okay. And remember please do not do any research or discuss the case in any way, and have a very good weekend. Thank you.

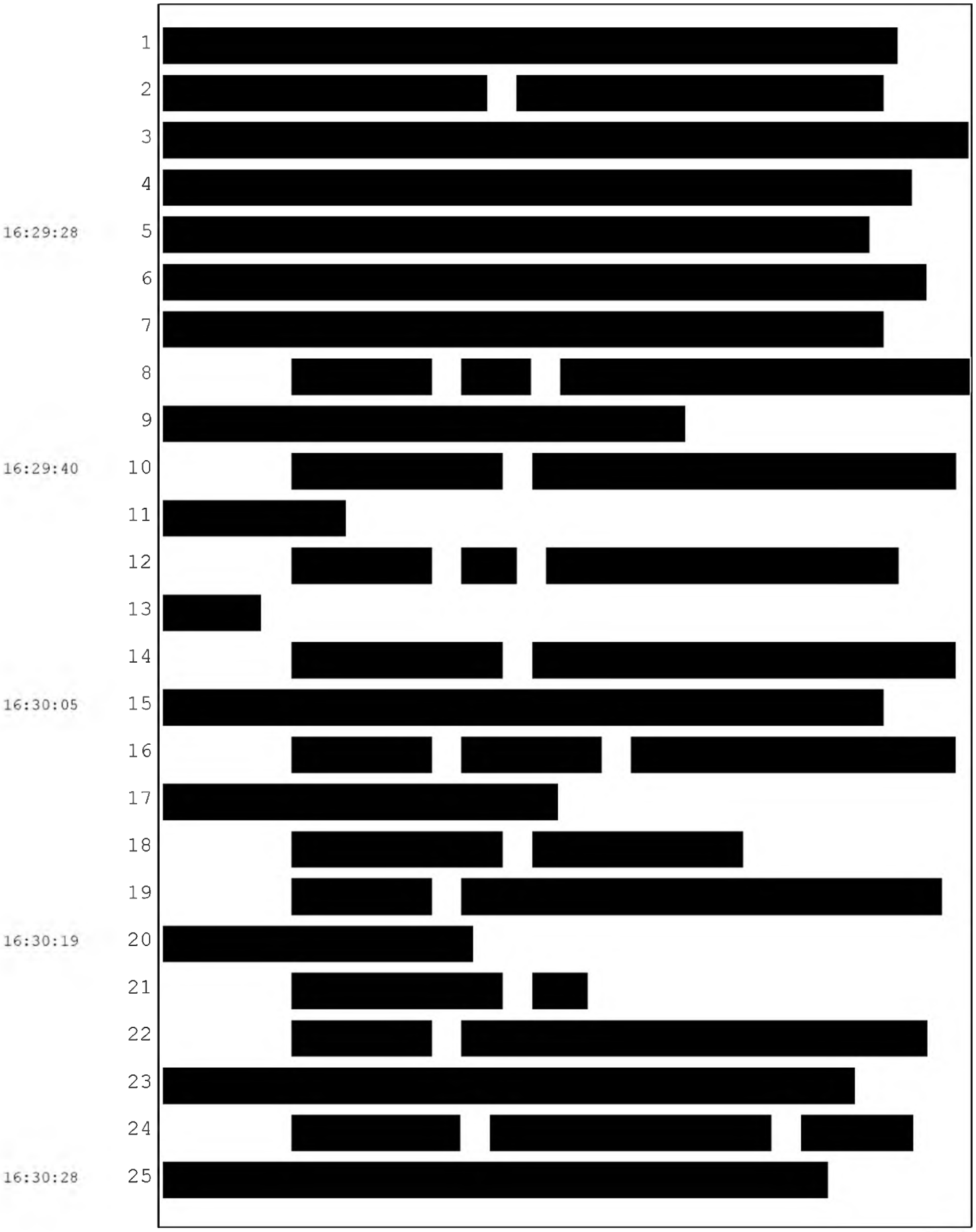
And, Counsel, will you please remain.

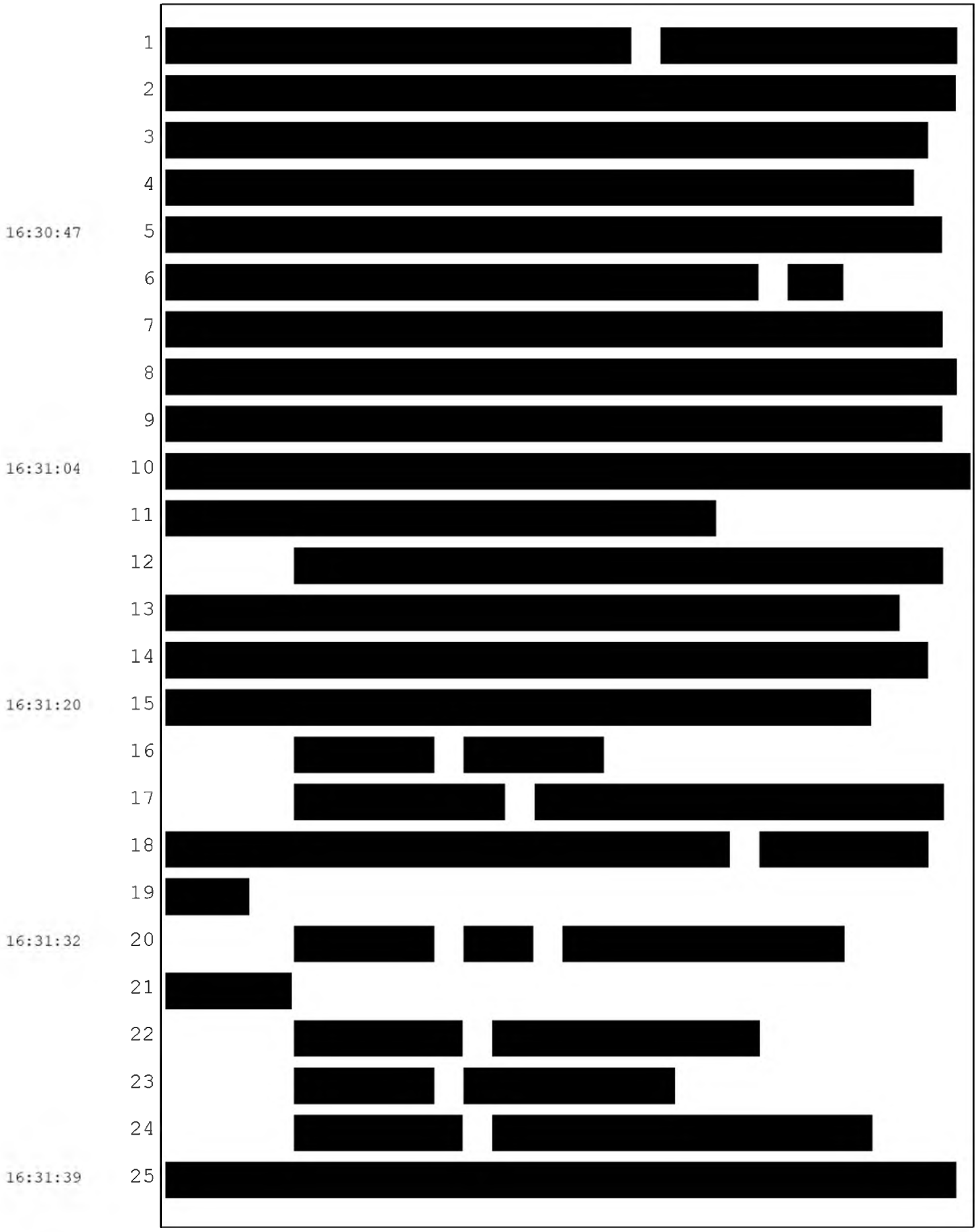
We will be starting again at 9:30, yes.

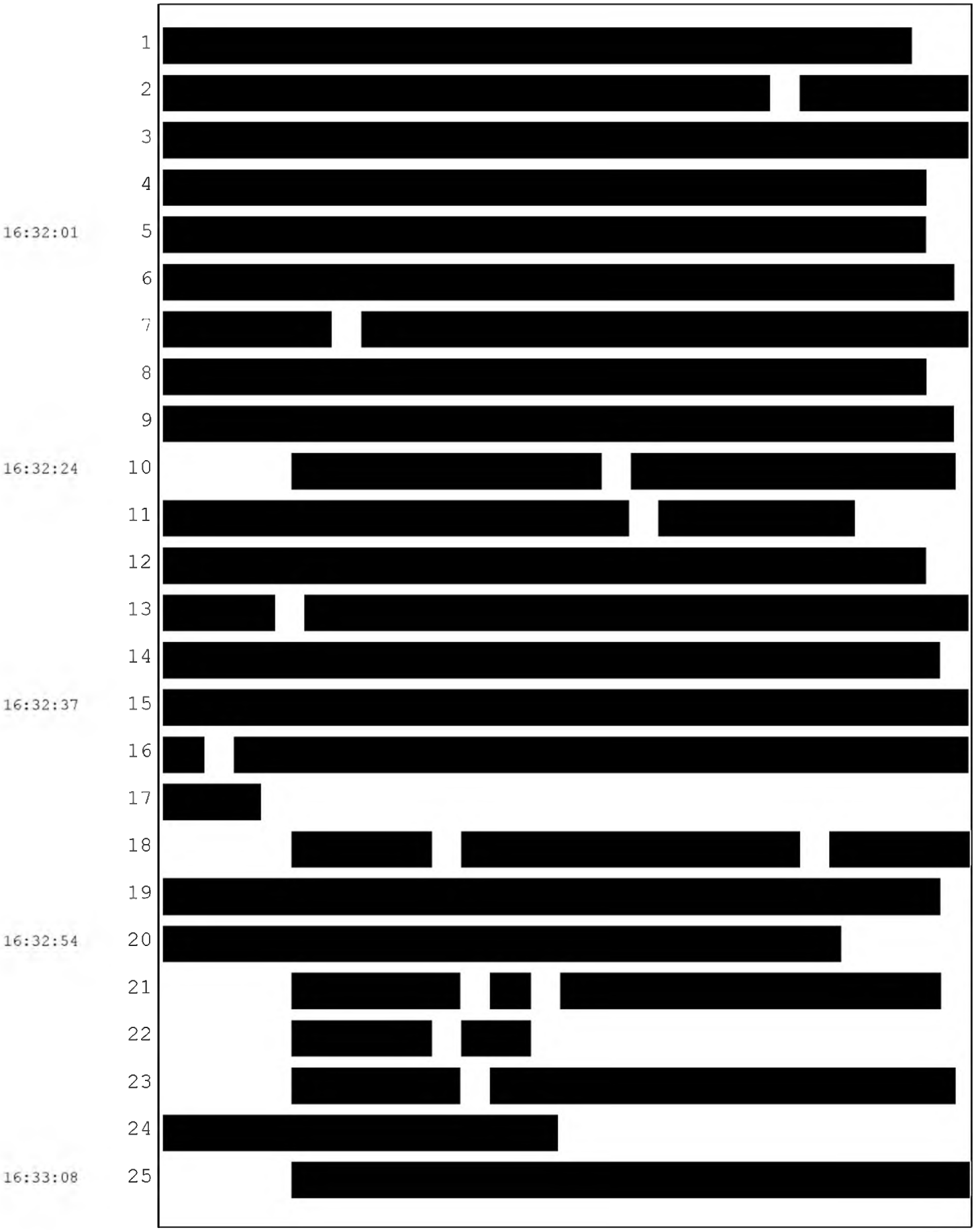
(Jury leaves courtroom.)

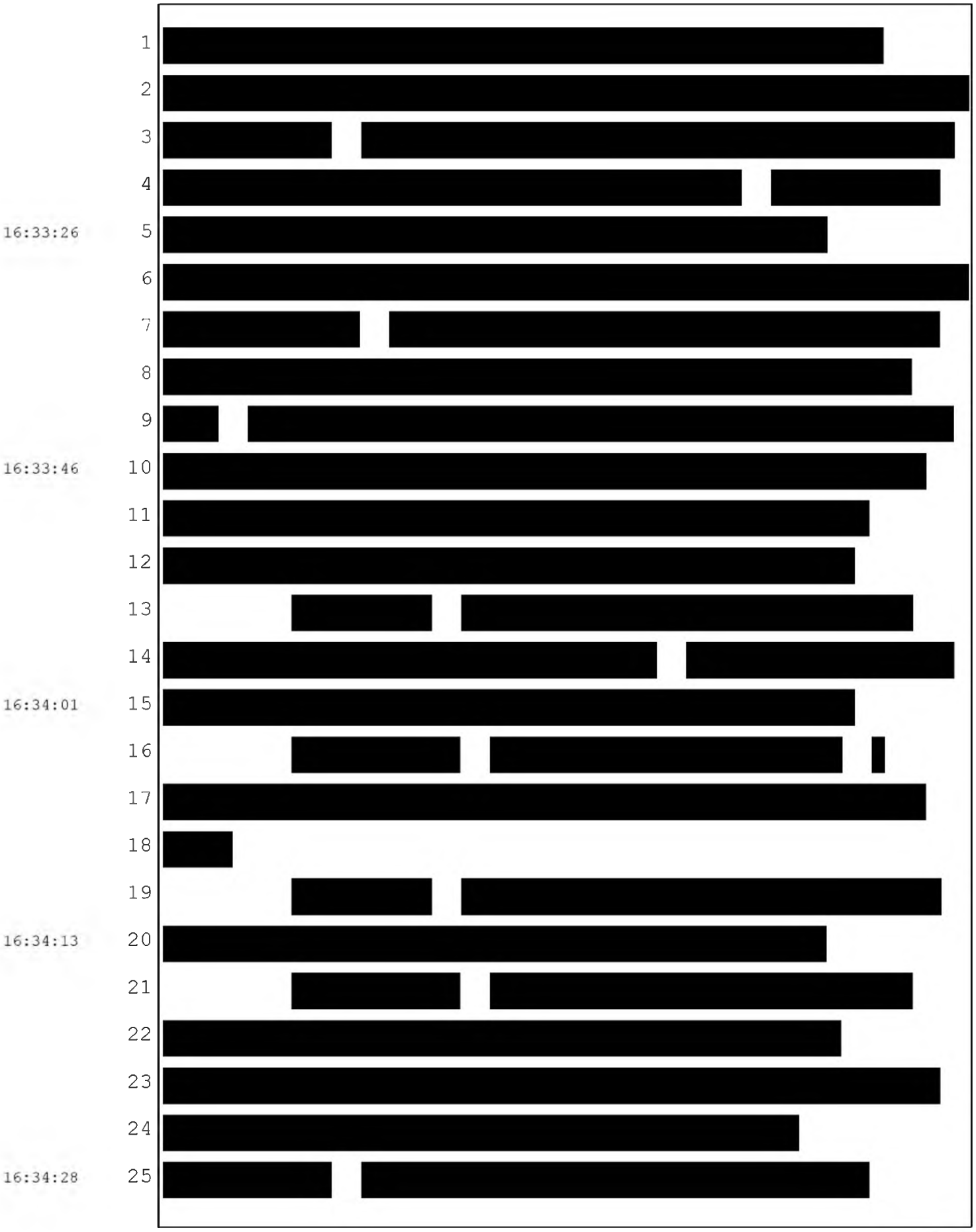
[redacted]

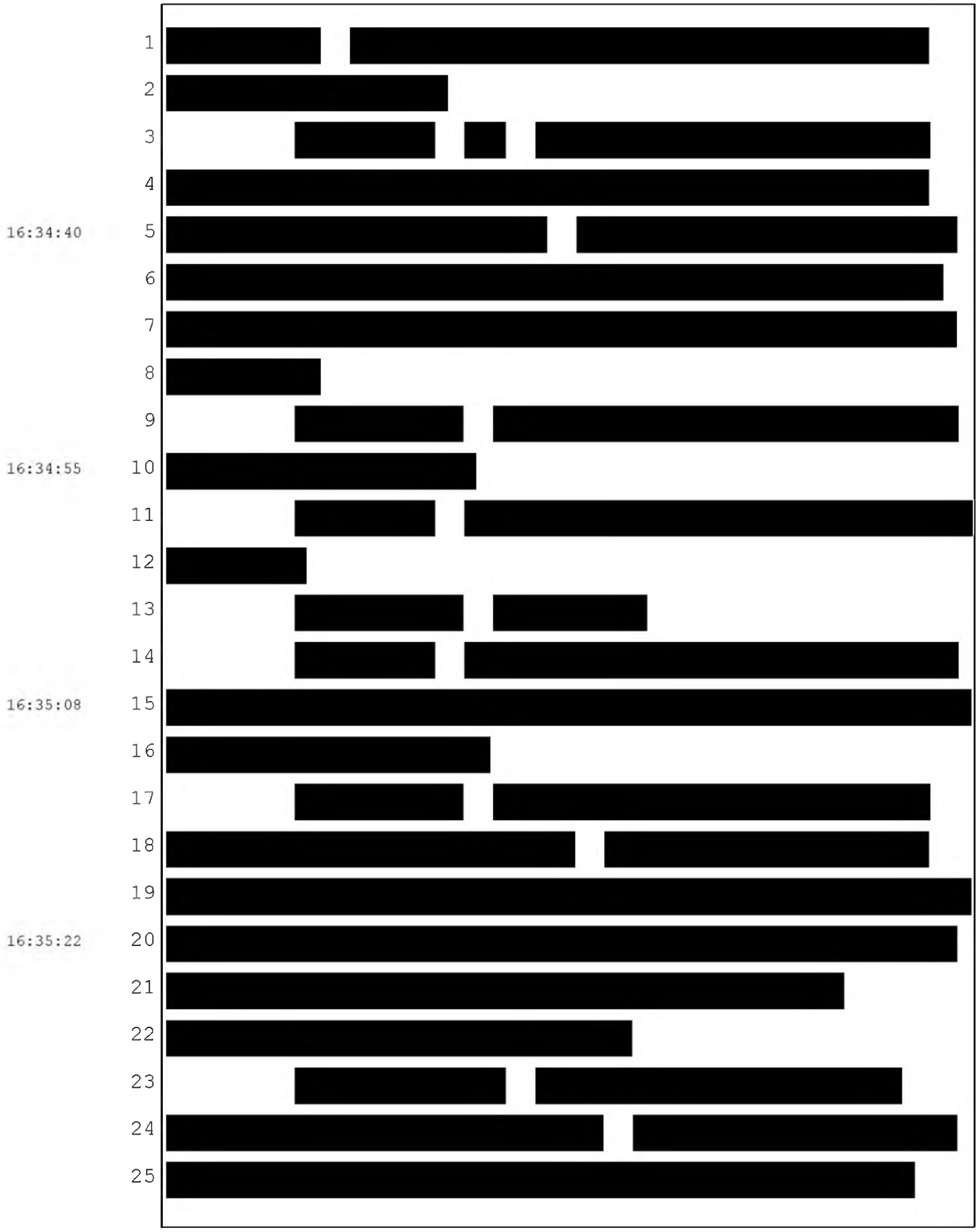

1
2
3
4
16:28:23
5
6
7
8
9
16:28:35
10
11
12
13
14
16:28:46
15
16
17
18
19
16:28:57
20
21
22
23
24
16:29:09
25

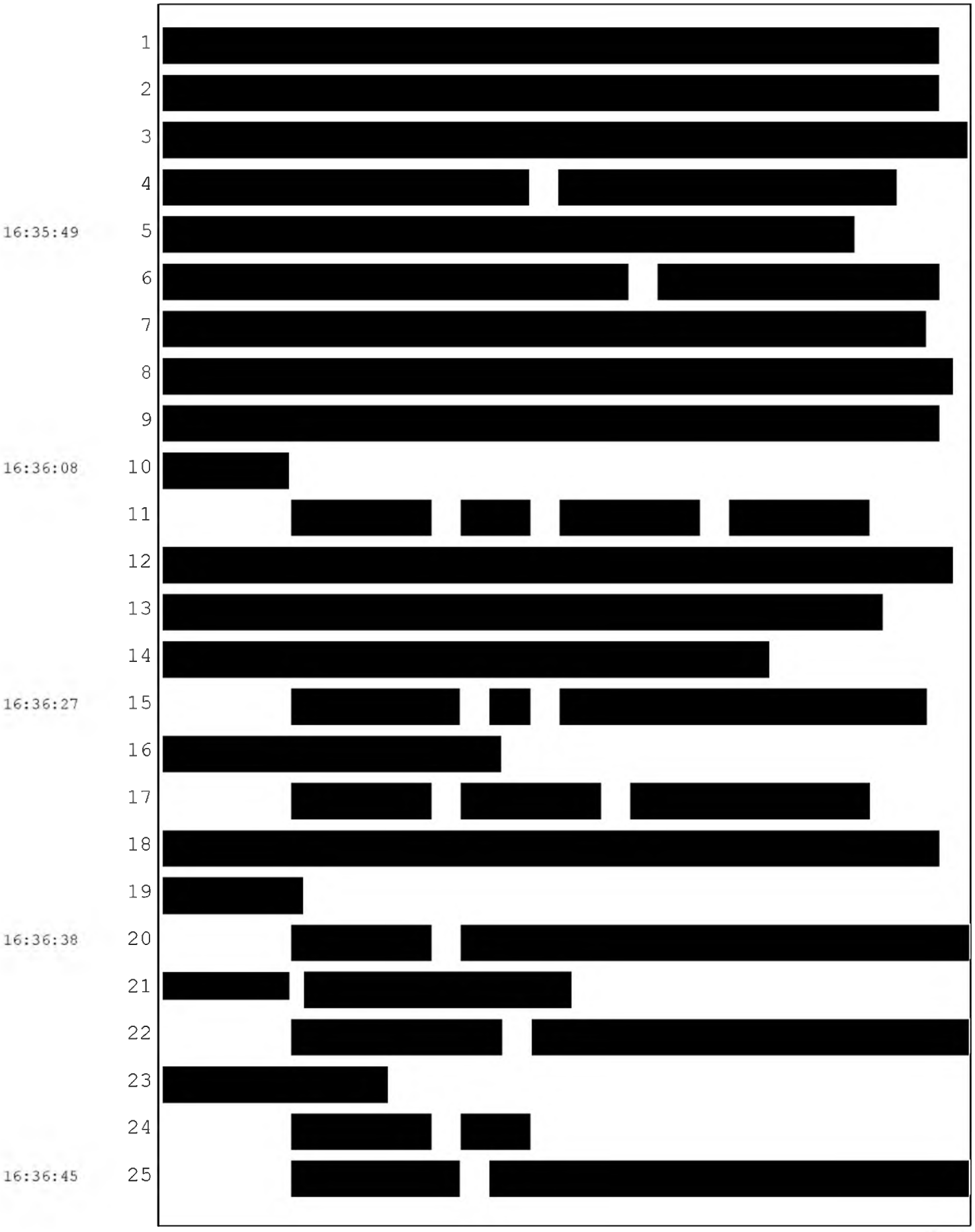

1
2
3
4
16:29:28
5
6
7
8
9
16:29:40
10
11
12
13
14
16:30:05
15
16
17
18
19
16:30:19
20
21
22
23
24
16:30:28
25

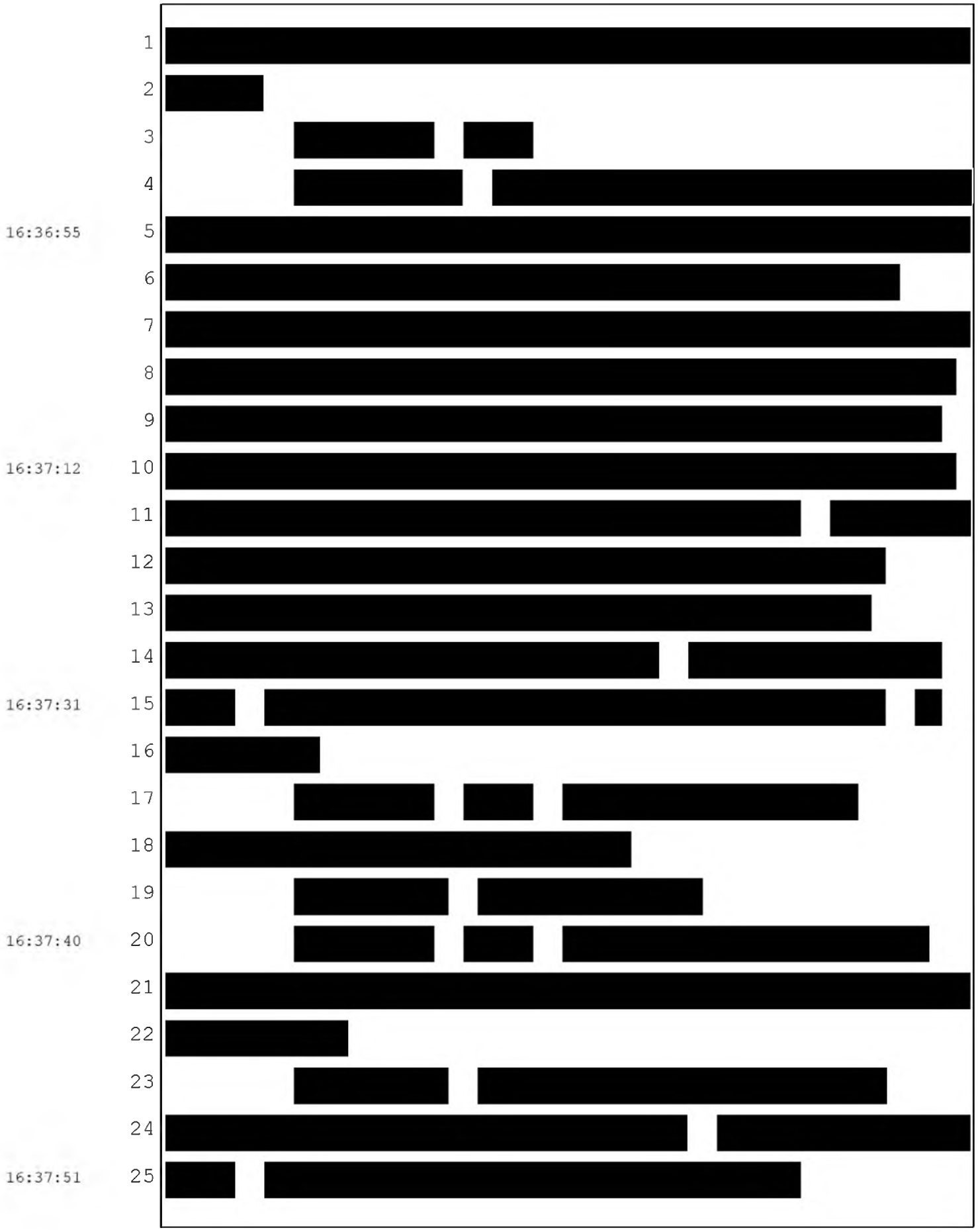

16:30:47
16:31:04
16:31:20
16:31:32
16:31:39

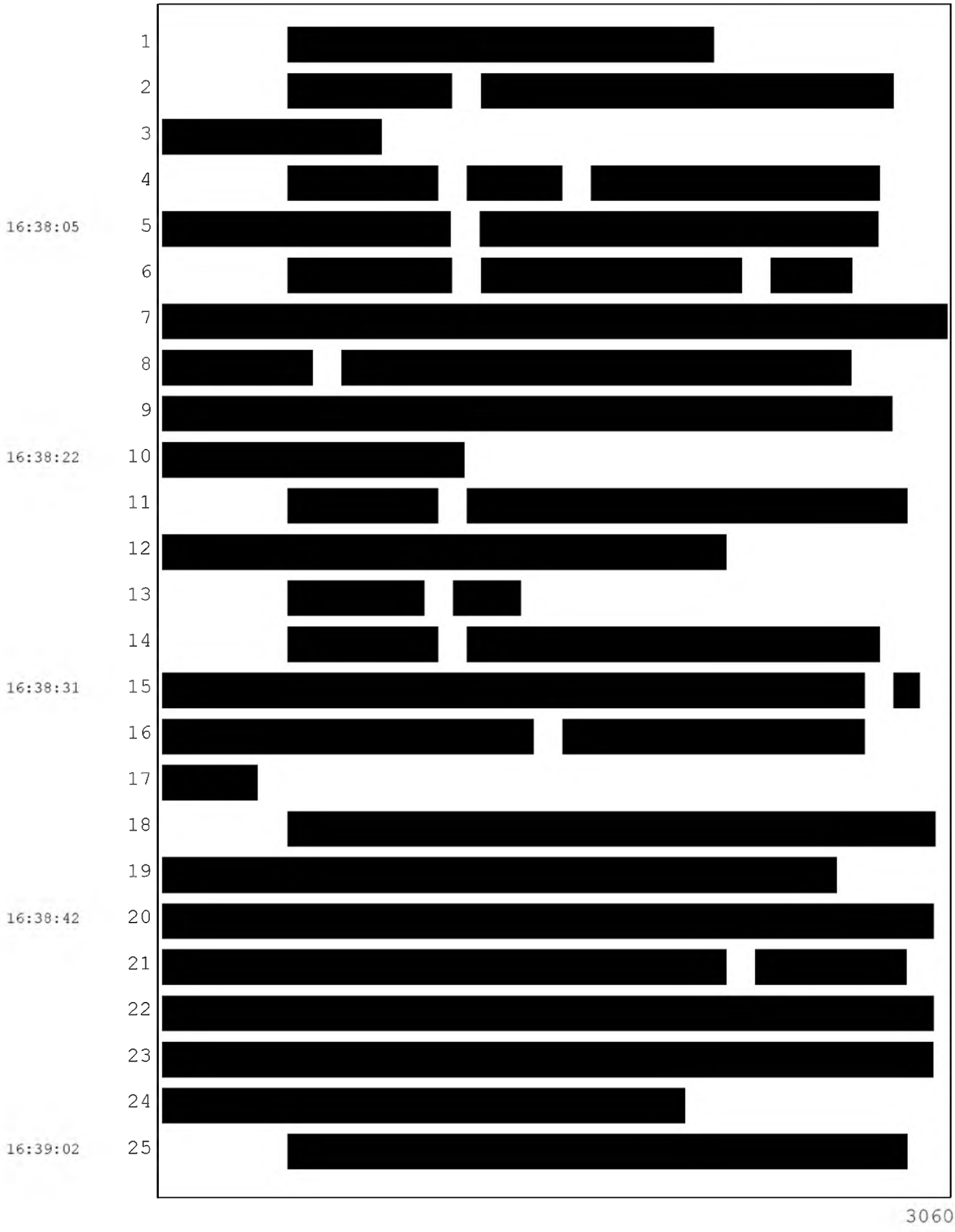

16:32:01
16:32:24
16:32:37
16:32:54
16:33:08

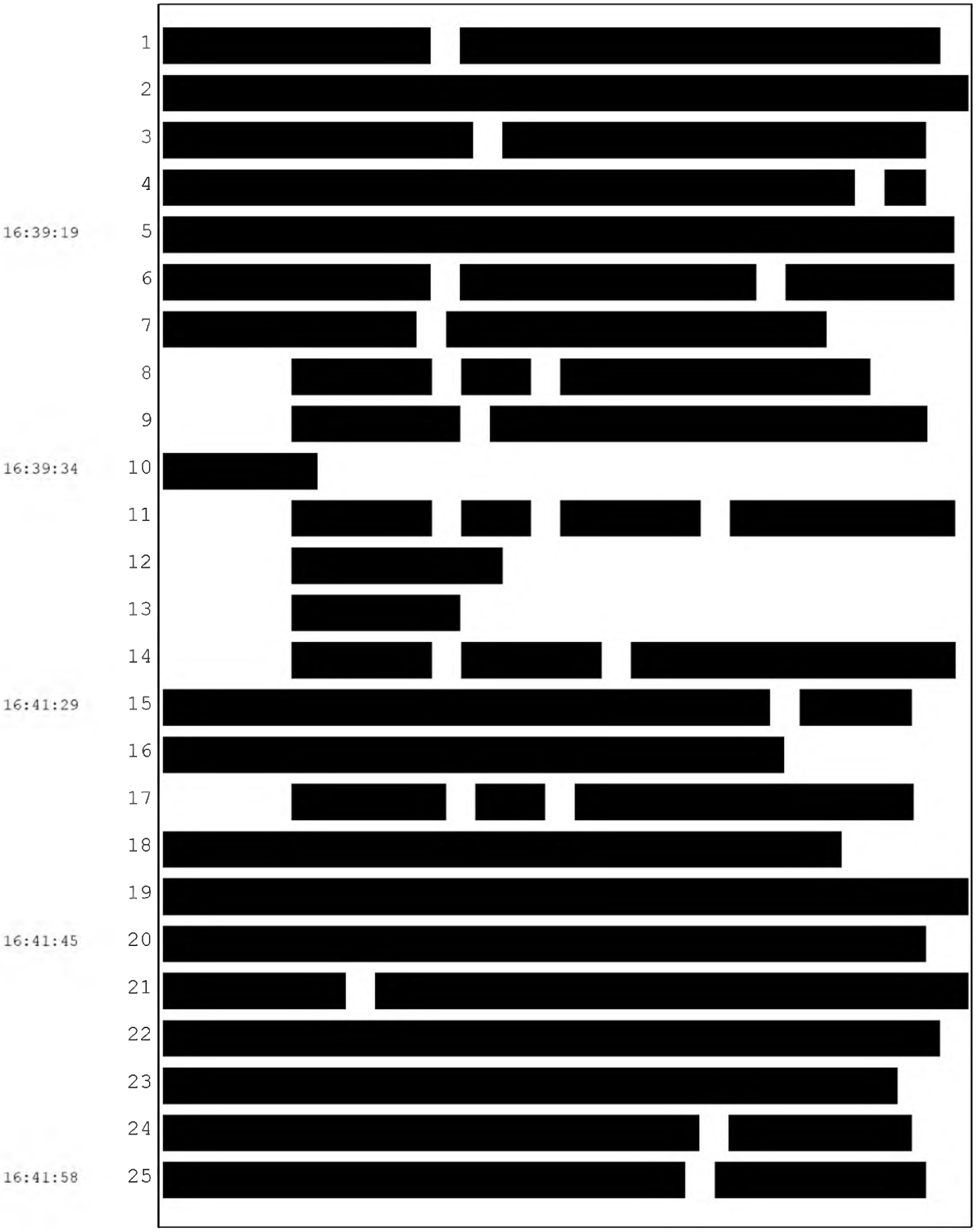

16:33:26
16:33:46
16:34:01
16:34:13
16:34:28

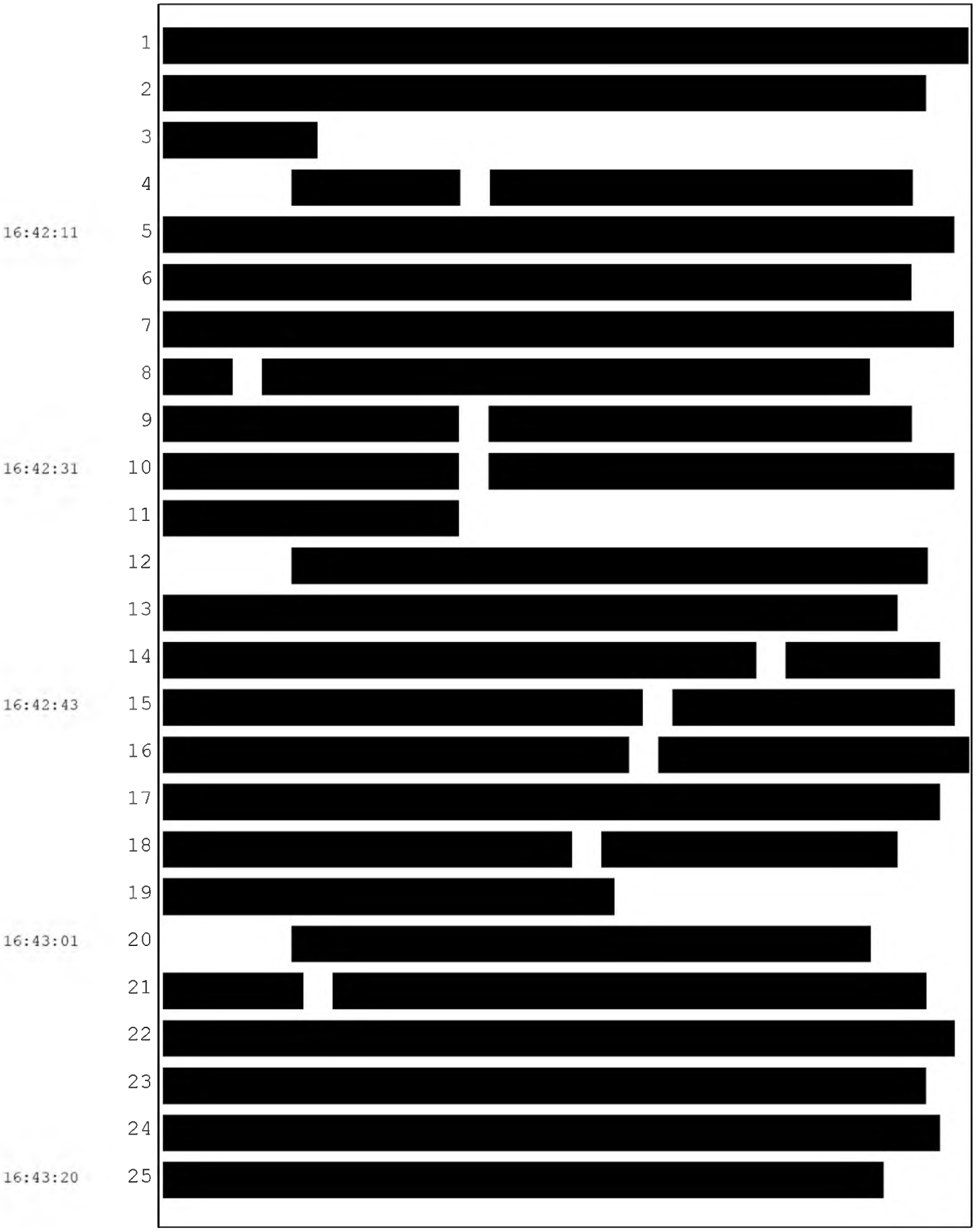

16:34:40
16:34:55
16:35:08
16:35:22

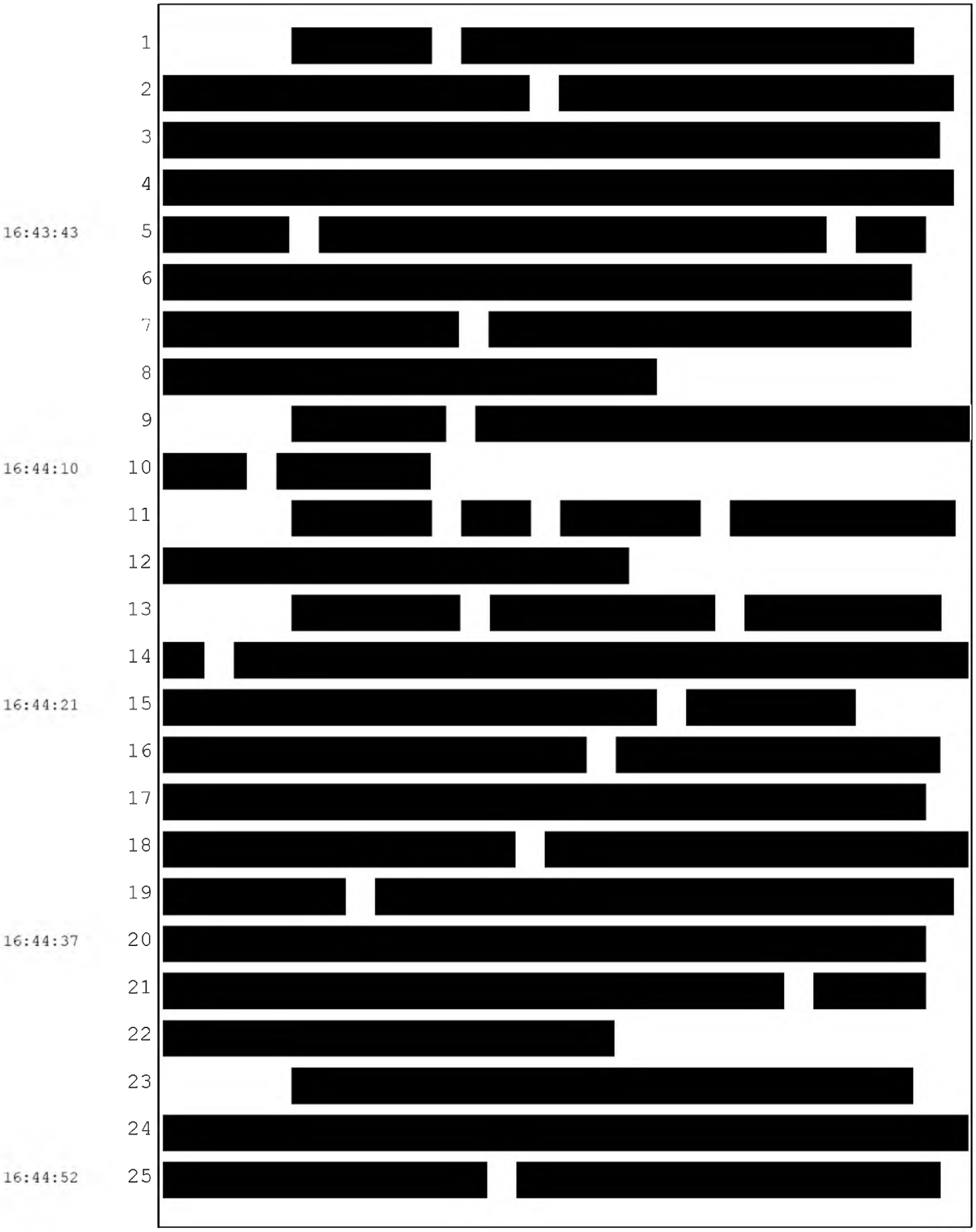

1
2
3
4
16:35:49
5
6
7
8
9
16:36:08
10
11
12
13
14
16:36:27
15
16
17
18
19
16:36:38
20
21
22
23
24
16:36:45
25

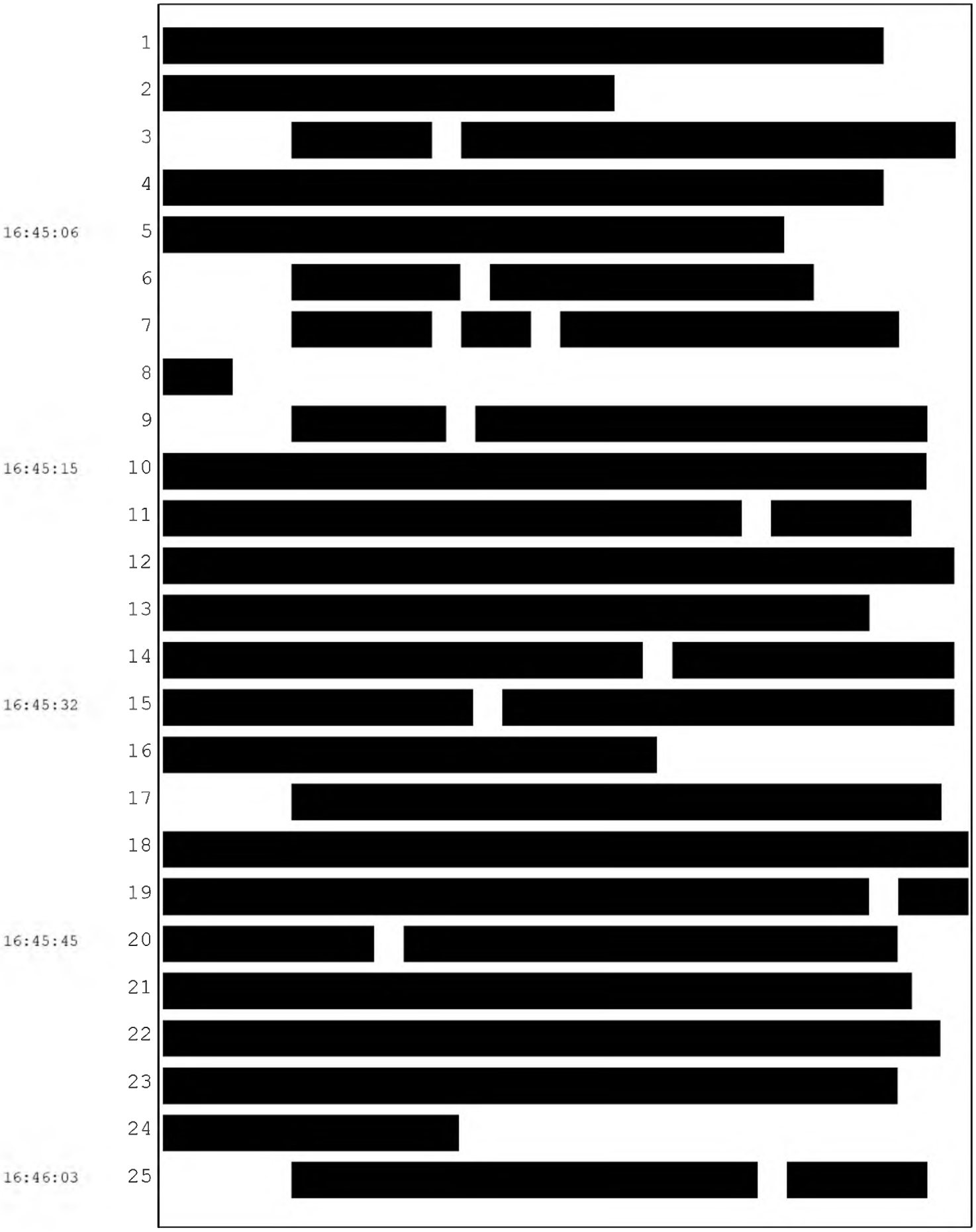

16:36:55
16:37:12
16:37:31
16:37:40
16:37:51

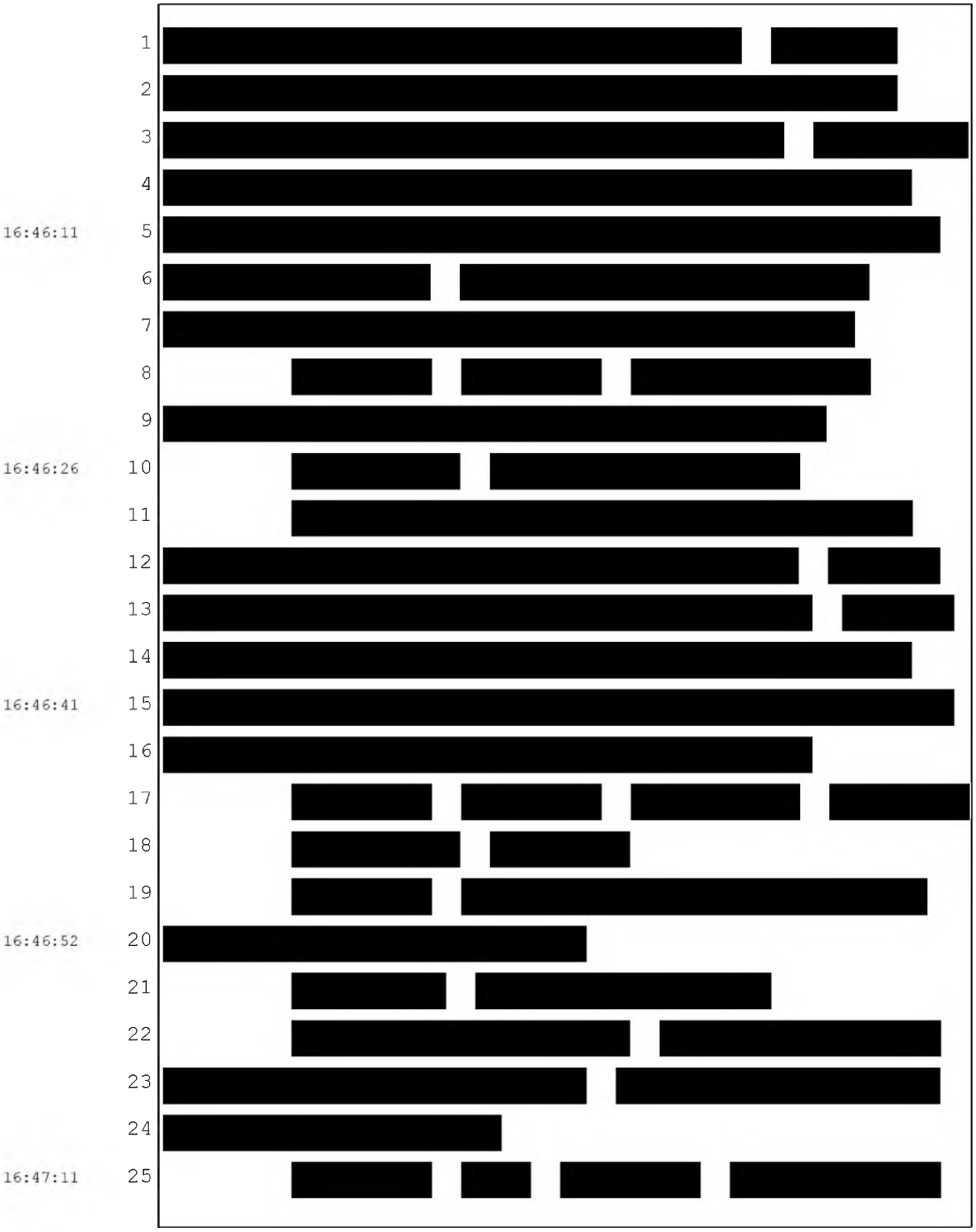

1
2
3
4
16:38:05
5
6
7
8
9
16:38:22
10
11
12
13
14
16:38:31
15
16
17
18
19
16:38:42
20
21
22
23
24
16:39:02
25
3060


16:39:19
16:39:34
16:41:29
16:41:45
16:41:58

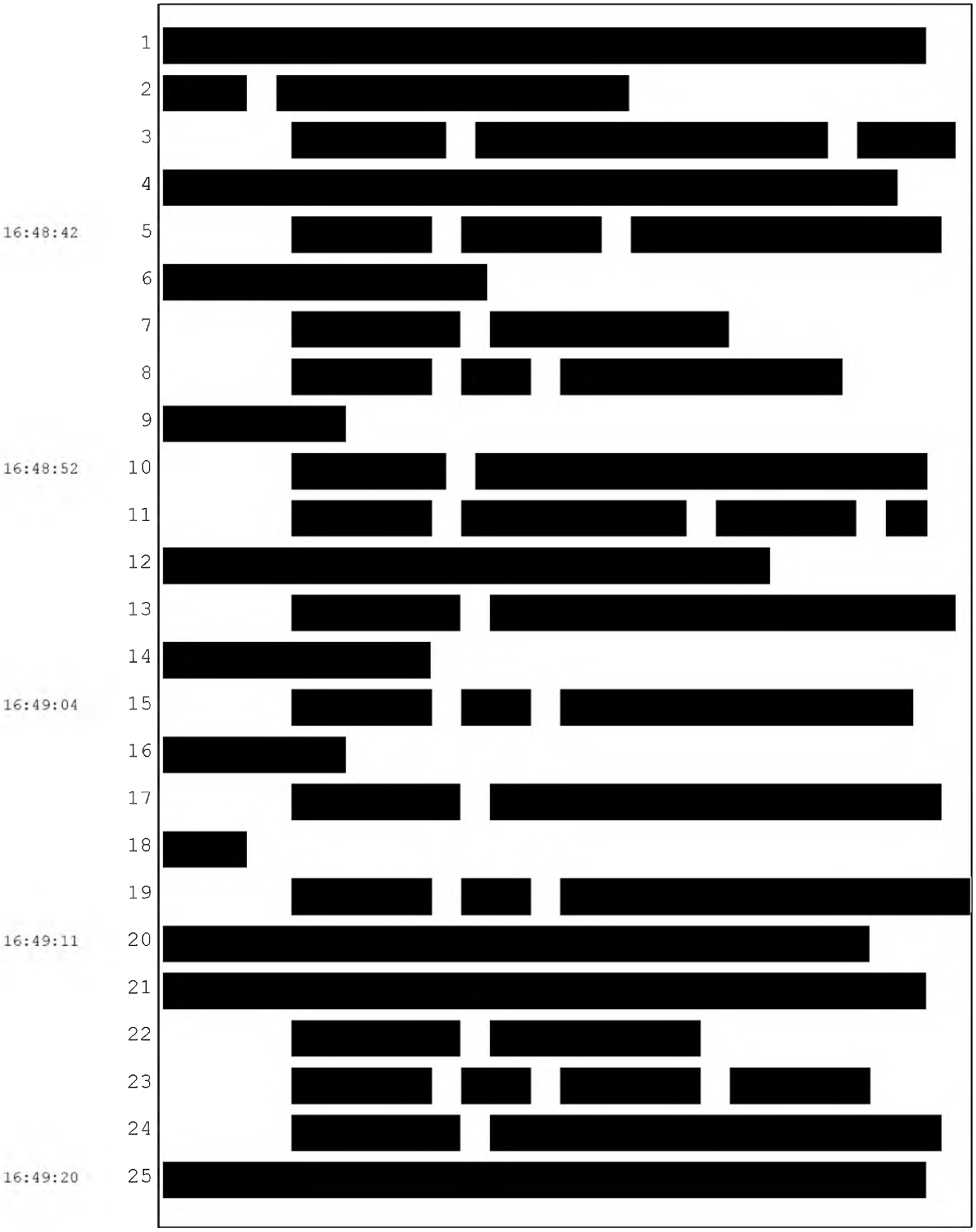

16:42:11
16:42:31
16:42:43
16:43:01
16:43:20

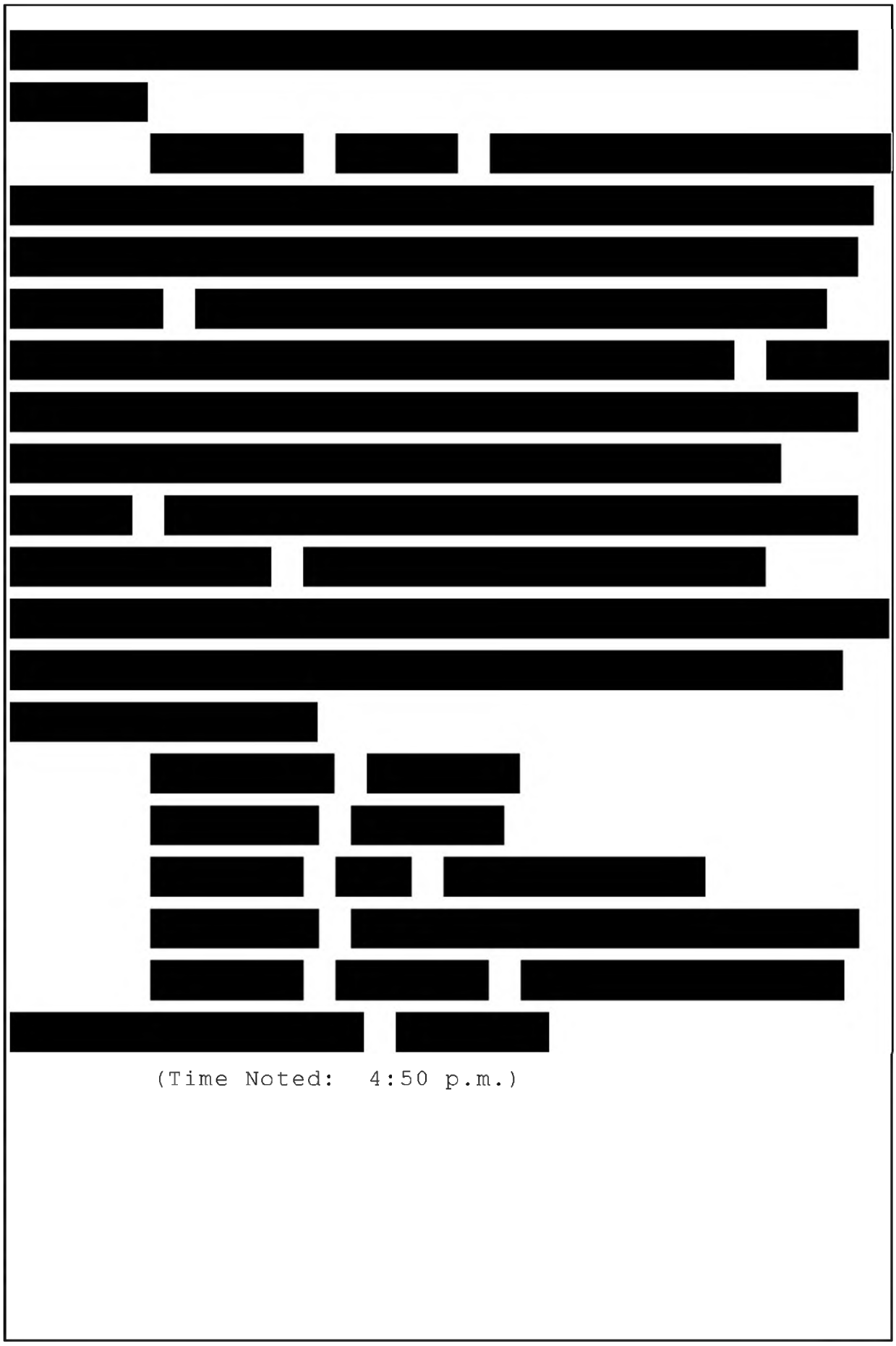

16:43:43
16:44:10
16:44:21
16:44:37
16:44:52


16:45:06
16:45:15
16:45:32
16:45:45
16:46:03


1
2
3
4
16:46:11
5
6
7
8
9
16:46:26
10
11
12
13
14
16:46:41
15
16
17
18
19
16:46:52
20
21
22
23
24
16:47:11
25


16:47:30
16:47:43
16:47:51
16:48:11
16:48:26


16:48:42
16:48:52
16:49:04
16:49:11
16:49:20



16:49:35
16:49:54
16:50:15
16:50:21
(Time Noted: 4:50 p.m.)

REPORTER'S CERTIFICATE

I certify that the proceedings in the within-titled cause were taken at the time and place herein named; that the proceedings were reported by me, a duly Certified Shorthand Reporter of the State of California authorized to administer oaths and affirmations, and said proceedings were thereafter transcribed into typewriting.

I further certify that I am not of counsel or Attorney for either or any of the parties to said Proceedings, not in any way interested in the outcome of the cause named in said proceedings.

IN WITNESS WHEREOF, I have hereunto set my hand: July 20th, 2018.

<%signature%>
Leslie Rockwood Rosas
Certified Shorthand Reporter
State of California
Certificate No. 3462