Raj, Kavitha 2019-01-08 Played in Court

Raj, Kavitha 01-08-2019

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7:19 - 7:24	**Raj, Kavitha 01-08-2019 (00:00:08)** 7:19 Q. Hi. My name is Brent Wisner. I'm an 7:20 attorney for Alva and Alberta Pilliod. 7:21 Do you know them? 7:22 A. Yes, I do. 7:23 Q. How do you know them? 7:24 A. I have treated them.	RajFINAL.1
8:2 - 8:7	**Raj, Kavitha 01-08-2019 (00:00:15)** 8:2 How long have you treated Alberta? 8:3 A. I'd probably have to look at my notes to 8:4 see when exactly I started treating her. For a few 8:5 years now, a couple years. But I don't know the 8:6 exact date, like maybe 2015 or '16. Since then, 8:7 yeah.	RajFINAL.2
12:19 - 12:25	**Raj, Kavitha 01-08-2019 (00:00:11)** 12:19 What sort of doctor are you? 12:20 A. I am a hematologist and medical 12:21 oncologist. 12:22 Q. And what does that mean? 12:23 A. I treat cancers and blood disorders. 12:24 Q. How long have you been doing that for? 12:25 A. I've been doing that since 2010.	RajFINAL.4
13:1 - 13:3	**Raj, Kavitha 01-08-2019 (00:00:04)** 13:1 Q. Okay. And are you -- is there any board 13:2 certification associated -- 13:3 A. Correct. Uh-huh. There is.	RajFINAL.3
13:17 - 13:25	**Raj, Kavitha 01-08-2019 (00:00:19)** 13:17 Q. And what is that certification called? 13:18 A. It is American Board of Internal Medicine. 13:19 They hold exams. Those are the board certifications 13:20 for both hematology and medical oncology. 13:21 Q. And have you specialized in that type of 13:22 medicine your entire career? 13:23 A. Correct. 13:24 Q. Okay. Did you go to medical school? 13:25 A. Yes.	RajFINAL.5
14:1 - 14:23	**Raj, Kavitha 01-08-2019 (00:00:58)** 14:1 Q. Where did you go to medical school? 14:2 A. In India. 14:3 Q. Okay. And then did you -- after medical	RajFINAL.6

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	14:4 school there's a residency; is that right? 14:5 A. Right. 14:6 Q. Did you do a residency in the States or in 14:7 India? 14:8 A. I did both. 14:9 Q. Okay. How does that work? 14:10 A. So I finished my medical school in India 14:11 and did a residency for one year where you are 14:12 licensed to practice medicine, and then I came here. 14:13 You have to do certain exams, multiple 14:14 exams to apply for residency. And then I finished 14:15 my residency in internal medicine for three years. 14:16 I worked as a faculty in internal medicine 14:17 for two years. And then you apply for fellowship. 14:18 And it's a very comprehensive process. 14:19 And then I did a fellowship in hematology 14:20 and oncology for another three years at University 14:21 of California, Irvine. And then I finished that in 14:22 2010. And since then I have been practicing 14:23 hematology and oncology.	
16:3 - 16:10	**Raj, Kavitha 01-08-2019 (00:00:17)** 16:3 Have you ever heard of something called a 16:4 differential etiology? 16:5 A. Of course. 16:6 Q. What is that? 16:7 A. Meaning that's something basic in medical 16:8 school we go through. It's essentially what could 16:9 be the possible causes. That's what differential 16:10 etiology for a condition.	RajFINAL.7
16:20 - 17:17	**Raj, Kavitha 01-08-2019 (00:01:17)** 16:20 Q. And with regards to Mrs. Pilliod, do you 16:21 recall if you've ever engaged in a differential 16:22 etiology about her cancer? 16:23 A. I think they -- we -- after -- yes. So I 16:24 treated the husband. So when the wife came up with 16:25 a same diagnosis of lymphoma they did ask me the 17:1 question -- because they live in the same household 17:2 and they had been diagnosed with similar cancers. 17:3 And they asked me, well, what could be the cause of 17:4 it. So we did have a conversation about a possible	RajFINAL.8

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	17:5 environmental exposure to some toxins.	
	17:6 And I did tell them that we can't know	
	17:7 that for sure because it's not like lung cancer	
	17:8 where we know that probable etiology is smoking.	
	17:9 For lymphomas, we have possible theories,	
	17:10 but we don't know for sure.	
	17:11 Q. And when they asked you that question did	
	17:12 you do any research to see about whether or not any	
	17:13 of their exposures may have led to their lymphoma?	
	17:14 A. That's not what I do typically in	
	17:15 practice. I'm not an expert in, you know, finding	
	17:16 out the etiology of cancers. I don't do that type	
	17:17 of research. I treat cancers. So, no, I have not.	
17:24 - 18:2	**Raj, Kavitha 01-08-2019 (00:00:09)**	RajFINAL.9
	17:24 So would it by fair to say, then, that you	
	17:25 haven't formed any opinion about the cause of	
	18:1 Mrs. Pilliod or Mr. Pilliod's lymphoma?	
	18:2 A. Correct.	
19:12 - 19:13	**Raj, Kavitha 01-08-2019**	RajFINAL.10
	19:12 (Whereupon, Exhibit 3 was marked for	
	19:13 identification.)	
19:18 - 20:8	**Raj, Kavitha 01-08-2019 (00:00:30)**	RajFINAL.11
	19:18 Q. I have handed you Exhibit 3. It is a	RK3.1
	19:19 document printed from the American Cancer Society.	
	19:20 It's titled "Key Statistics for Non-Hodgkin's	RK3.1.1
	19:21 Lymphoma."	
	19:22 Do you see that, Doctor?	
	19:23 A. Yes, I do.	
	19:24 Q. Okay. And if you look at the paragraph	
	19:25 following the two bullet points, the first sentence	
	20:1 reads, "The average."	RK3.1.2
	20:2 Do you see that?	
	20:3 A. Yes, I do.	
	20:4 Q. Okay. It reads, "The average American's	
	20:5 risk of developing NHL during his or her lifetime is	
	20:6 about one in 47."	
	20:7 Did I read that correctly?	
	20:8 A. Yes, you did.	
22:25 - 23:4	**Raj, Kavitha 01-08-2019 (00:00:18)**	RajFINAL.12
	22:25 Q. Okay. During your treatment of either of	

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	23:1 the Pilliods, were you aware that the average 23:2 American's risk of developing NHL during his or her 23:3 lifetime was about one in 47? 23:4 A. Yes, those are known statistics.	
23:14 - 23:16	**Raj, Kavitha 01-08-2019 (00:00:04)** 23:14 Mrs. Pilliod was diagnosed with diffuse 23:15 B-cell lymphoma, correct? 23:16 A. Correct.	RajFINAL.13 clear
23:19 - 24:1	**Raj, Kavitha 01-08-2019 (00:00:20)** 23:19 Q. What was Mr. Pilliod diagnosed with? 23:20 A. The same, diffuse large B-cell lymphoma. 23:21 Q. Okay. And during your treatment of the 23:22 Pilliods and when they asked you that question about 23:23 maybe what could have caused their cancer, did you 23:24 consider the likelihood of -- of two different 23:25 individuals living together getting the same type of 24:1 lymphoma?	RajFINAL.14
24:3 - 24:4	**Raj, Kavitha 01-08-2019 (00:00:02)** 24:3 THE WITNESS: We did consider that 24:4 possibility, yes.	RajFINAL.15
24:18 - 24:25	**Raj, Kavitha 01-08-2019 (00:00:16)** 24:18 Q. Did you specifically discuss during that 24:19 conversation Roundup or a chemical called 24:20 glyphosate? 24:21 A. I don't remember discussing a particular 24:22 chemical. 24:23 Q. Are you familiar with either of those 24:24 chemicals? 24:25 A. Roundup, yes.	RajFINAL.230
25:25 - 26:12	**Raj, Kavitha 01-08-2019 (00:00:40)** 25:25 Q. And when you were treating Mr. and 26:1 Mrs. Pilliod, were you familiar with whether or not, 26:2 generally, pesticides are associated with lymphoma? 26:3 A. Yes. 26:4 Q. And what was your understanding at the 26:5 time? 26:6 A. I don't think we had talked about their 26:7 exposure to pesticides. I think very -- one 26:8 conversation we have had, if I remember correct, we 26:9 have had only one conversation about discussing the	RajFINAL.231

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	26:10 causality of their lymphoma. But I mean, any 26:11 chemicals, including pesticides, are known to cause 26:12 any form of cancers, including lymphoma.	
29:3 - 29:9	**Raj, Kavitha 01-08-2019 (00:00:16)** 29:3 Q. Okay. So if I said IARC, that wouldn't 29:4 ring any bells? 29:5 A. No. 29:6 Q. Okay. And I assume, then, since it 29:7 doesn't ring any bells, in your medical training and 29:8 as part of your work as an oncologist, you have not 29:9 come across any IARC monographs; is that fair?	RajFINAL.17
29:11 - 29:11	**Raj, Kavitha 01-08-2019 (00:00:00)** 29:11 THE WITNESS: Correct.	RajFINAL.18
29:13 - 29:17	**Raj, Kavitha 01-08-2019 (00:00:10)** 29:13 Q. Have you -- okay. So I know the answer to 29:14 this, but I'm just going to make sure. 29:15 You've never looked at a monograph by IARC 29:16 specifically related to glyphosate? 29:17 A. Correct.	RajFINAL.19
30:2 - 30:3	**Raj, Kavitha 01-08-2019 (00:00:04)** 30:2 Q. All right, Doctor. I'm handing you what 30:3 I'm marking as Exhibit 4.	RajFINAL.21 RK4.1
30:4 - 30:5	**Raj, Kavitha 01-08-2019** 30:4 (Whereupon, Exhibit 4 was marked for 30:5 identification.)	RajFINAL.22
30:9 - 30:19	**Raj, Kavitha 01-08-2019 (00:00:25)** 30:9 Q. Do you recognize this document? 30:10 A. It looks like it's my document. I signed 30:11 it. Uh-huh. 30:12 Q. What is it? 30:13 A. It is my initial consult visit for 30:14 Mrs. Pilliod, yeah. 30:15 Q. Okay. And this is dated May 22nd, 2015? 30:16 A. Correct. 30:17 Q. All right. And if you look at the last 30:18 page that's your digital signature? 30:19 A. Correct, it is mine.	RajFINAL.24 RK4.1.1 RK4.3.1
32:4 - 32:6	**Raj, Kavitha 01-08-2019 (00:00:05)** 32:4 Q. Okay. And so, you know, going through 32:5 this record here, the first section is History of	RajFINAL.25 RK4.1.2

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	32:6 Present Illness.	
32:9 - 32:16	**Raj, Kavitha 01-08-2019 (00:00:17)**	RajFINAL.26
	32:9 Q. What is that section generally supposed to 32:10 capture? 32:11 A. It's supposed to capture how someone 32:12 presented, what kind of symptoms that they had 32:13 preceding the diagnosis of their cancer. And if 32:14 they've had any treatment so far, we usually 32:15 summarize that treatment and that history of 32:16 presenting illness.	
33:22 - 34:10	**Raj, Kavitha 01-08-2019 (00:00:36)**	RajFINAL.27 RK4.2.8
	33:22 Q. Okay. And if we turn the page, there's a 33:23 section titled Family History. 33:24 Do you see that? 33:25 A. Yes. 34:1 Q. What does that reflect? 34:2 A. There are certain cancers that are 34:3 related, like meaning inherited, like genetical, 34:4 genetic predisposition. So we usually ask for 34:5 family history in every cancer patient that we see. 34:6 So that's what it lists there. 34:7 Q. And do you see anything in your record 34:8 related to Ms. Pilliod that shows a predisposition 34:9 for lymphoma? 34:10 A. No.	
37:21 - 38:8	**Raj, Kavitha 01-08-2019 (00:00:39)**	RajFINAL.28 RK4.1.3
	37:21 Q. All right. It says, "This is an initial 37:22 oncology consultation for Alberta Pilliod, a 37:23 71-year-old female. She has a history of diffuse 37:24 large B-cell primary CNS lymphoma." 37:25 Did I read that right? 38:1 A. Yes. 38:2 Q. What is, to the best of your knowledge, 38:3 B-cell primary CNS lymphoma? 38:4 A. So she has a lymphoma called diffuse large 38:5 B-cell lymphoma. There's B-cells, T-cells. It's a 38:6 B-cell lymphoma. And for her it was involving her 38:7 brain. And that's why it's called the primary. CNS 38:8 stands for central nervous system.	
38:9 - 38:15	**Raj, Kavitha 01-08-2019 (00:00:11)**	RajFINAL.29

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	38:9 Q. Okay. And I understand that lymphoma	
	38:10 starts in the bones, but it can ultimately manifest	
	38:11 at different parts of the body; is that right?	
	38:12 A. Correct.	
	38:13 Q. And so in her case it manifested in the	
	38:14 central nervous system?	
	38:15 A. Correct.	
38:16 - 41:17	**Raj, Kavitha 01-08-2019 (00:03:33)**	RajFINAL.30
	38:16 Q. Is diffuse large B-cell primary CNS	
	38:17 lymphoma an indolent or aggressive type of cancer?	
	38:18 A. It is a very aggressive type of cancer.	
	38:19 Q. And is that based on your experience as an	
	38:20 oncologist?	
	38:21 A. Yes.	
	38:22 Q. Okay. It goes on.	RK4.1.4
	38:23 "She initially presented in March 2015	
	38:24 with vertigo, gait instability, intermittent..."	
	38:25 A. Diplopia.	
	39:1 Q. "... diplopia and headaches that developed	
	39:2 ten days prior."	
	39:3 Did I read that right?	
	39:4 A. Yes.	
	39:5 Q. Just for the jury's benefit, what is	
	39:6 diplopia?	
	39:7 A. It's double vision.	
	39:8 Q. Okay. And these sort of symptoms that are	
	39:9 reported here in this record, are those consistent	
	39:10 with someone suffering from cancer in the central	
	39:11 nervous system?	
	39:12 A. Yes.	
	39:13 Q. Okay. It goes on.	RK4.1.5
	39:14 "She had a" -- is that a CT scan?	
	39:15 A. Correct.	
	39:16 Q. -- "of the head on March 12th of 2015,	
	39:17 which was negative for any acute abnormality. Two	
	39:18 days later she suffered a fall and hit her head on	
	39:19 the bathroom floor.	
	39:20 "A repeat CT scan on March 14th, 2015,	
	39:21 showed a stable hyperdense region within the right	
	39:22 inferior anterior cerebellum and mid brain."	

39:23 Did I read that right?
39:24 A. Yes.
39:25 Q. I'm actually proud of myself now.
40:1 Can you explain to me, to the best of your
40:2 ability, in layman's terms what I just read?
40:3 A. Yeah.
40:4 So the CT scan of her brain showed an
40:5 abnormal area in the back of her brain. That's the
40:6 cerebellum. And also the mid brain. That's --
40:7 that's what it means.
40:8 Q. And in your experience treating this type
40:9 of CNS lymphoma, is this a common occurrence where
40:10 the first scan doesn't catch it but a later one
40:11 does?
40:12 A. It is such a subtle abnormality. So CT
40:13 scan may not catch it. So that's why we'll end up
40:14 doing an MRI. So it is -- it is -- it happens, yes.
40:15 Q. Okay. It went on to say, "Follow up CT RK4.1.6
40:16 scan of the chest, abdomen and pelvis did not reveal
40:17 any primary malignancy."
40:18 What does that mean?
40:19 A. So sometimes, lymphoma presents as primary
40:20 CNS lymphoma where there's lymphoma involving just
40:21 the brain. Sometimes it presents all over the body,
40:22 and the brain involvement is a part of it. We treat
40:23 it very differently. So we do a CAT scan of the
40:24 body to differentiate that. So she has -- this
40:25 confirms that she has the primary CNS lymphoma.
41:1 Q. And why is diffuse large B-cell CNS clear
41:2 lymphoma treated differently than large B-cell
41:3 lymphoma in other parts of the body?
41:4 A. Because the general chemotherapy drugs
41:5 that we give do not penetrate the blood brain
41:6 barrier to go into the brain. So we'll have to
41:7 treat it very differently.
41:8 Q. Okay. So you have to use a sort of
41:9 special blood brain barrier penetrating drug?
41:10 A. Correct.
41:11 Q. Okay. Which one do you use that's
41:12 typically used?

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	41:13 A. We usually use the high-dose methotrexate. 41:14 Q. Okay. And that's -- and if I recall, 41:15 that's because the low dose hasn't been proven to 41:16 effectively penetrate the blood brain barrier? 41:17 A. Correct.	
41:25 - 42:3	**Raj, Kavitha 01-08-2019 (00:00:07)** 41:25 Q. With regards to Mrs. Pilliod, do you 42:1 recall if there was any additional drugs used to 42:2 help get to her CNS lymphoma? 42:3 A. Yes.	RajFINAL.31
42:4 - 42:8	**Raj, Kavitha 01-08-2019 (00:00:16)** 42:4 Q. What other drugs were used? 42:5 A. She got Temodar. She also received 42:6 Rituxan. And I think -- I have to confirm this. I 42:7 think she also received Revlimid when I saw her last 42:8 time.	RajFINAL.32
42:10 - 44:22	**Raj, Kavitha 01-08-2019 (00:03:04)** 42:10 A. I have to look it up to be sure. Yeah. 42:11 Q. And are those three drugs you just 42:12 mentioned, are -- are they known to penetrate the 42:13 blood brain barrier or no? 42:14 A. They are known to be effective, but we 42:15 have to use it in a different way. 42:16 Q. Okay. 42:17 A. She received it intrathecally into the 42:18 spine, some injections. 42:19 Q. Okay. 42:20 A. To directly go into the brain. 42:21 Q. Okay. So instead of doing it through the 42:22 blood you just do it straight into the central 42:23 nerve? 42:24 A. Correct. 42:25 Q. Okay. Makes sense. All right.	RajFINAL.33 RK4.1.7
	43:1 "She underwent a lumbar puncture on 43:2 March 14, 2015, and cytospin preparation revealed a 43:3 predominance of small lymphocytes and monocytes 43:4 without atypical features. No evidence of malignant 43:5 cells in the CSF." 43:6 Did I read that right? 43:7 A. Yes.	

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43:8	Q. What does that -- what does that mean?	
43:9	A. So the sheath -- that means the fluid that	
43:10	was removed, the cerebrospinal fluid -- showed a	
43:11	predominantly small lymphocytes and monocytes.	
43:12	Those are -- we saw that in excess. And we did not	
43:13	see any other type of cancer cells. We only saw	
43:14	those lymphocytes. That's what it means.	
43:15	Q. Okay. And all this -- this history, this	
43:16	is before she ever arrived in your office, right?	
43:17	A. Correct.	
43:18	Q. Okay. It goes on.	RK4.1.8
43:19	"She underwent an MRI of the brain on	
43:20	April 6th, 2015, which showed changes favoring a	
43:21	cellular process such as lymphoma given below ADC	
43:22	values and mild increased perfusion surrounding the	
43:23	fourth ventricle. No evidence of supra-" -- you	
43:24	know what, maybe I should have you read this since	
43:25	you're the doctor.	
44:1	Why don't you read just the rest of that	
44:2	paragraph, and I'll be able to ask you questions	
44:3	about it. Out loud.	RK4.1.9
44:4	A. Okay.	
44:5	"No evidence of supratentorial	
44:6	leptomeningeal disease. Increased size of the	
44:7	ventricle is consistent with a component of	
44:8	obstructive hydrocephalus likely secondary to	
44:9	increasing mass effect upon cerebral aqueduct.	
44:10	"She underwent staging PET scan on	
44:11	April 8, 2015, which confirmed a FDG-avid	
44:12	multilobulated mass lesion in the right cerebellar	
44:13	vermis crossing the midline and also another	
44:14	hypermetabolic lesion on the floor cerebral	
44:15	aqueduct. The lesion correlated with the brain MRI	
44:16	findings consistent with CNS lymphoma.	
44:17	"She underwent a brain biopsy of the	
44:18	posterior fossa on April 9, 2015. Pathology results	
44:19	revealed abnormal lambda monotypic B-cell population	
44:20	expressing CD19, CD20, CD23, and CD38. Negative for	
44:21	CD10. FISH was negative for BCL2, BCL6, and MYC.	
44:22	All consistent with diffuse large B-cell lymphoma."	

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45:1 - 45:24	**Raj, Kavitha 01-08-2019 (00:01:12)**	RajFINAL.34
	45:1 So I want to ask you a few questions about	
	45:2 that paragraph. Can you just generally tell me what	
	45:3 this paragraph is conveying.	
	45:4 A. Right.	
	45:5 So the earlier paragraph showed some vague	clear
	45:6 findings on the CT of the brain, and the CSF	
	45:7 finding's somewhat vague. It showed lymphocytes.	
	45:8 So we couldn't come to a definitive diagnosis there.	
	45:9 So we went again -- went ahead and ordered more	
	45:10 testing.	
	45:11 And the MRI now shows a large mass pushing	
	45:12 her brain to the other side and causing some	
	45:13 swelling of her ventricles. And also, another mass	
	45:14 close to the mass that we already saw.	
	45:15 And since we couldn't diagnose her with	
	45:16 the CSF analysis she went ahead and had a brain	
	45:17 biopsy, which showed abnormal lymphoma cells. And	
	45:18 we do certain special staining to see whether it's a	
	45:19 B-cell lymphoma, large B-cell lymphoma, or low --	
	45:20 low grade lymphoma and all that. It was all	
	45:21 consistent with diffuse large B-cell lymphoma.	
	45:22 Q. What is a brain biopsy?	
	45:23 A. Getting a tissue from the brain. I --	
	45:24 I -- it can be done open, closed.	
47:25 - 48:22	**Raj, Kavitha 01-08-2019 (00:01:05)**	RajFINAL.35
	47:25 "She started on April 14, 2015, repeat MRI	RK4.1.10
	48:1 on May 14th, 2015. After completion of cycle	
	48:2 number 2, showed significant improvement of the	
	48:3 enhancing brain lesions and most recently started	
	48:4 cycle number 3 of Rituxan, methotrexate on May 15th,	
	48:5 2015.	
	48:6 "However, despite radiologic improvement,	
	48:7 clinically her symptoms of diplopia and hearing loss	
	48:8 have not improved."	
	48:9 What does that mean?	
	48:10 A. So she has had, I think, two cycles of the	
	48:11 chemotherapy and she had a repeat scan which showed	
	48:12 that the mass was shrinking but her symptoms, we	
	48:13 have not made any difference in the way she felt.	

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	48:14 Her double vision, her hearing loss was the same.	
	48:15 That's what it means.	
	48:16 Q. When you have a mass developing in the	
	48:17 human brain like Ms. Pilliod, can that cause brain	
	48:18 damage?	
	48:19 A. Yes.	
	48:20 Q. And is it possible for it to cause brain	
	48:21 damage that can't repair itself?	
	48:22 A. Correct.	
49:10 - 49:19	**Raj, Kavitha 01-08-2019 (00:00:22)**	RajFINAL.36
	49:10 Q. Okay. All right. So let's -- I want to	
	49:11 say -- just quickly down here at the last paragraph	
	49:12 in that section.	RK4.1.11
	49:13 "She also has a history of bladder cancer	
	49:14 diagnosed in 2010."	
	49:15 Did you have any -- any part -- play any	
	49:16 part in her treatment of her bladder cancer?	
	49:17 A. No.	
	49:18 Q. Okay. Is this type of bladder cancer in	
	49:19 any way associated with CNS lymphoma?	
49:21 - 49:21	**Raj, Kavitha 01-08-2019 (00:00:01)**	RajFINAL.37
	49:21 THE WITNESS: Not that I know of.	
49:23 - 50:17	**Raj, Kavitha 01-08-2019 (00:00:44)**	RajFINAL.38
	49:23 Q. Okay.	
	49:24 It goes on to say, "SP."	RK4.1.12
	49:25 What does that mean?	
	50:1 A. Status post.	
	50:2 Q. Okay.	
	50:3 "Resection and also a reexcision. She	
	50:4 denies receiving adjuvant chemotherapy or radiation	
	50:5 therapy and is followed by Dr. Schmidt."	
	50:6 What is adjuvant chemotherapy or radiation	
	50:7 there?	
	50:8 A. There are some people with a bladder	
	50:9 cancer, after a cancer is removed, they may need	
	50:10 chemotherapy to prevent it from coming back or	
	50:11 radiation therapy. She did not require it. That	
	50:12 tells me that was an early stage bladder cancer.	
	50:13 Q. Okay. And is this -- is one of the	
	50:14 reasons why you included this is because if she had	

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	50:15 been exposed to radiation or chemotherapy that might 50:16 have actually been something that could have caused 50:17 the lymphoma?	
50:19 - 50:20	**Raj, Kavitha 01-08-2019 (00:00:02)** 50:19 THE WITNESS: Yes. Chemotherapy and 50:20 radiation can cause lymphoma.	RajFINAL.39
51:3 - 51:6	**Raj, Kavitha 01-08-2019 (00:00:07)** 51:3 Q. Okay. So if we turn the -- trust me, I'm 51:4 not going to go through this much detail with each 51:5 medical record. I just wanted to sort of get a 51:6 framework.	RajFINAL.40
51:15 - 52:17	**Raj, Kavitha 01-08-2019 (00:01:26)** 51:15 Q. Okay. And then it goes on, 51:16 "Unfortunately, she is not able to tolerate 51:17 high-dose methotrexate despite 50 percent dose at 51:18 4.5 g. And she went into acute renal failure with a 51:19 creatinine of 2.3, and it took almost ten days of 51:20 hospitalization on leucovorin" -- did I say that 51:21 right? 51:22 A. Leucovorin. 51:23 Q. Okay. Leucovorin. 51:24 -- "to clear her methotrexate." 51:25 What does that mean, Doctor? 52:1 A. So she had three rounds of chemotherapy 52:2 with these three chemo drugs. She did have a very 52:3 good response. But unfortunately, methotrexate 52:4 causes kidney damage. That's a side effect. 52:5 So we gave her one 50 percent dose of 52:6 methotrexate. Instead of full eight-gram she has 52:7 gotten only 4 or 4 and a half gram. Despite that, 52:8 her creatinine, meaning her -- she went into kidney 52:9 failure and it took -- so after the methotrexate is 52:10 done we usually give an antidote for a few days to 52:11 prevent this from happening. 52:12 In her case -- typically people receive it 52:13 for about three to five days at the most. In her 52:14 case, she had to be hospitalized for ten days. And 52:15 we kept giving her the leucovorin to clear the 52:16 methotrexate. Despite that, her creatinine -- 52:17 kidney numbers stayed very high.	RajFINAL.41 RK4.2.9 clear

Page/Line	Source	ID
52:24 - 53:6	**Raj, Kavitha 01-08-2019 (00:00:26)** 52:24 Just for the jury's sake, what is your 52:25 understanding of acute renal failure? 53:1 A. Acute renal failure means any significant 53:2 effect on the kidney function. When someone's 53:3 creatinine goes from one, which is normal, to two 53:4 that means they have lost more than 50 percent of 53:5 their kidney function. So that is a significant 53:6 impairment of kidney function.	RajFINAL.42
53:25 - 54:19	**Raj, Kavitha 01-08-2019 (00:00:52)** 53:25 Q. Okay. It goes on to, "Discuss with her 54:1 neurologist at Stanford. Clearly she is not a 54:2 candidate for further high-dose methotrexate." 54:3 I'll stop right there. 54:4 Why did -- why did you say that? 54:5 A. Because she had acute renal failure from 54:6 getting methotrexate. And once someone double up 54:7 that, they can't continue to get the same treatment 54:8 that will make it worse, which will make them go on 54:9 dialysis. So we had to stop that treatment.	RajFINAL.43 RK4.2.10
	54:10 Q. Okay. 54:11 "We will plan to continue Temodar and 54:12 Rituxan with a close follow-up MRI. I will also 54:13 refer her to UCSF for a clinical trial using 54:14 intrathecal Rituxan." 54:15 Did I say that right? 54:16 A. Yeah. Intrathecal Rituxan. 54:17 Q. Okay. And is that the injection directly 54:18 into the spinal? 54:19 A. Yes.	RK4.2.11
54:25 - 55:2	**Raj, Kavitha 01-08-2019 (00:00:07)** 54:25 Q. Okay. With regards to the intrathecal 55:1 Rituxan injection with Ms. Pilliod, how -- how would 55:2 that be done?	RajFINAL.44
55:5 - 55:15	**Raj, Kavitha 01-08-2019 (00:00:32)** 55:5 THE WITNESS: So she would go into the 55:6 hospital and an interventional radiologist who is 55:7 experienced in doing this type of procedures will 55:8 find a space between the spine and go into the 55:9 spinal area, the space where they're -- and then we	RajFINAL.45 clear

Page/Line	Source	ID
	55:10 inject that Rituxan. And so that the Rituxan can go 55:11 all through the spinal cord as well as the area, the 55:12 space that's coating the brain. 55:13 So it is given through an injection into 55:14 the -- it is like a -- it's called a lumbar 55:15 puncture.	
55:18 - 55:19	**Raj, Kavitha 01-08-2019 (00:00:03)** 55:18 The idea of having a needle go into your 55:19 spine, is that a painful process?	RajFINAL.225
55:21 - 55:21	**Raj, Kavitha 01-08-2019 (00:00:01)** 55:21 THE WITNESS: It does involve some pain.	RajFINAL.226
55:23 - 55:25	**Raj, Kavitha 01-08-2019 (00:00:03)** 55:23 Q. Okay. Different than a regular injection 55:24 in your blood? 55:25 A. Correct.	RajFINAL.47
56:5 - 57:12	**Raj, Kavitha 01-08-2019 (00:01:23)** 56:5 And it goes on to say, "Lethargy/balance 56:6 issues. She's been taken off steroids for several 56:7 weeks giving her worsening neurological symptoms. 56:8 There is concern for vasogenic edema." 56:9 A. Uh-huh. 56:10 Q. What is that? 56:11 A. So when there is a tumor pushing on the 56:12 brain, the surrounding structure of the brain, we 56:13 see swelling. That's called a vasogenic edema. And 56:14 there was a concern whether she could be developing 56:15 swelling around the mass. 56:16 So that's what it means. 56:17 Q. And does that sort of conflate the problem 56:18 in the skull when you have a mass and then swelling 56:19 in addition to that? 56:20 A. Yes, it causes the problems worse. Yeah, 56:21 it makes it worse. 56:22 Q. The next one says, "3. Depression. 56:23 Clearly patient is very depressed from her 56:24 diagnosis. We discussed about poor prognosis today. 56:25 Will plan to start her on Effexor." 57:1 Did I read that right? 57:2 A. Uh-huh. 57:3 Q. Did you, in your clinical capacity,	RajFINAL.48 RK4.2.12 RK4.2.6

Page/Line	Source	ID
	57:4 diagnose Mrs. Pilliod with depression?	
	57:5 A. Yes.	
	57:6 Q. And you said "very depressed." How --	
	57:7 what does that mean?	
	57:8 A. If someone is very depressed, that means	
	57:9 that they have a very obviously flat effect and	
	57:10 their mood has been affected and their general	
	57:11 well-being is affected. Their appetite could be	
	57:12 affected.	
57:15 - 57:25	**Raj, Kavitha 01-08-2019 (00:00:26)**	RajFINAL.40
	57:15 Q. And you said, "We discussed about poor	
	57:16 prognosis today."	
	57:17 What does that mean? Or do you recall	
	57:18 what you discussed?	
	57:19 A. Primary CNS lymphoma is one of the most	
	57:20 aggressive cancers to have. And it is typically not	
	57:21 curable. So we discussed about that when I met her	
	57:22 in the office that day.	
	57:23 Q. And did you convey that -- those facts to	
	57:24 her?	
	57:25 A. Uh-huh.	
58:7 - 59:6	**Raj, Kavitha 01-08-2019 (00:01:02)**	RajFINAL.50
	58:7 Q. Okay. Did you -- do you recall if you did	
	58:8 start her on Effexor?	
	58:9 A. Yes.	
	58:10 Q. What is Effexor?	
	58:11 A. Effexor is an antidepressant.	
	58:12 Q. And is it an SNRI?	
	58:13 A. SSRI, yes, uh-huh.	
	58:14 Q. All right. Number 4, "AKI." What is	RK4.2.13
	58:15 that?	
	58:16 A. Acute kidney failure or kidney	
	58:17 insufficiency.	
	58:18 Q. Okay. And that's related to the high-dose	
	58:19 methotrexate?	
	58:20 A. Correct.	
	58:21 Q. Okay. And number 5, Hypertension.	
	58:22 Do you recall anything about that?	
	58:23 A. I don't recall. But looking at my	
	58:24 notes -- obviously I can't recall what happened in	

Page/Line	Source	ID
	58:25 2015. But looking at my notes looks like I have 59:1 given her clonidine and norvasc. Those are two very 59:2 highly effective antihypertensive medications. And 59:3 I see that her blood pressure was high on that day, 59:4 175 over 85. Yeah. 59:5 Q. Is high blood pressure one of the side 59:6 effects of a drug like Rituxan?	
59:8 - 59:9	**Raj, Kavitha 01-08-2019 (00:00:05)** 59:8 THE WITNESS: High blood pressure is very 59:9 likely due to the acute kidney failure.	RajFINAL.51
59:11 - 59:18	**Raj, Kavitha 01-08-2019 (00:00:20)** 59:11 Q. That makes sense. Okay. Okay. Great, 59:12 Doctor. I appreciate you going -- step through 59:13 there. I'm just going to go through the next ones 59:14 much quicker. I just wanted to get through all the 59:15 initial meeting. 59:16 So I'm going to hand you Exhibit Number 5. 59:17 (Whereupon, Exhibit 5 was marked for 59:18 identification.)	RajFINAL.52 RK5.1
60:24 - 61:16	**Raj, Kavitha 01-08-2019 (00:00:47)** 60:24 So the record we're looking at, Exhibit 5, 60:25 it's dated May 26, 2015. 61:1 Do you see that? 61:2 A. Uh-huh. 61:3 Q. And if you look at your previous record 61:4 this appears to be a follow-up from just a few days 61:5 prior when you first met with Mrs. Pilliod, right? 61:6 A. Yes. 61:7 Q. Okay. And the information here's largely 61:8 the same. I just wanted to turn to the second page 61:9 under the assessment. Well, I'll back up. 61:10 Based on what you can see in this record, 61:11 do you know what the purpose of this follow-up was? 61:12 A. It was probably to see her, looks like 61:13 within a week, to check her labs to see where her 61:14 kidney numbers are, where her symptoms are, and what 61:15 her blood numbers are. Just as a follow-up to make 61:16 sure that things are not getting worse.	RajFINAL.53 RK5.1.1
61:17 - 62:2	**Raj, Kavitha 01-08-2019 (00:00:17)** 61:17 Q. Okay. And if you turn to the assessment	RajFINAL.54 RK5.2.1

Page/Line	Source	ID
	61:18 on page 2, there's a new one that's been added,	
	61:19 anemia.	
	61:20 Do you see that?	
	61:21 A. Uh-huh.	
	61:22 Q. What is anemia?	
	61:23 A. Anemia is low red blood cell count. It's	
	61:24 commonly seen as a side effect of chemotherapy.	
	61:25 Q. And that's what it says right here, "Due	
	62:1 to chemo." Was that your assessment?	
	62:2 A. Correct. Uh-huh.	
62:13 - 63:6	**Raj, Kavitha 01-08-2019 (00:00:57)**	RajFINAL.55
	62:13 And then on the last page, number 8,	RK5.3.1
	62:14 "Consider for intrathecal Rituxan study UCSF."	
	62:15 A. Uh-huh.	
	62:16 Q. Do you recall what that study was?	
	62:17 A. I think it was done by Dr. Rubenstein.	clear
	62:18 He's a very -- he's an expert neuro-oncologist.	
	62:19 Intrathecal -- Rituxan is given	
	62:20 intravenously. That has been known for years. But	
	62:21 to give any large molecule into the brain, it	
	62:22 carries a risk of dying from it. So that was	
	62:23 actually done as a study in people with high risk	
	62:24 disease who cannot tolerate standard of care therapy	
	62:25 or who don't do well or progressive on standard of	
	63:1 care therapy.	
	63:2 So that's a study that was ongoing at that	
	63:3 time at UCSF.	
	63:4 Q. Do you know why injecting straight into	
	63:5 the spinal or the nervous system can cause death?	
	63:6 A. Well, I mean --	
63:8 - 63:13	**Raj, Kavitha 01-08-2019 (00:00:17)**	RajFINAL.56
	63:8 THE WITNESS: -- if you inject a foreign	
	63:9 body into the most important part of our system, it	
	63:10 can cause problems like any swelling, inflammation,	
	63:11 people can go into seizures. Brain is a part which	
	63:12 controls our breathing. Any kind of, you know,	
	63:13 problems there could make someone stop breathing.	
63:15 - 64:5	**Raj, Kavitha 01-08-2019 (00:00:39)**	RajFINAL.57
	63:15 Q. At this time, in 2015, when Mrs. Pilliod	
	63:16 was presenting to you, was this the standard of	

Page/Line	Source	ID
	63:17 care, this direct injection into the nervous system?	
	63:18 A. No.	
	63:19 Q. Was it experimental?	
	63:20 A. Yes.	
	63:21 Q. And why at that time were you recommending	
	63:22 this experimental treatment for Mrs. Pilliod?	
	63:23 A. Two things. One, she had a very -- she	
	63:24 has a very high risk disease. And we were not able	
	63:25 to deliver the standard of care treatment, which was	
	64:1 the high-dose methotrexate. Even at lower doses she	
	64:2 was having kidney failure.	
	64:3 Q. So essentially, we're talking about life	
	64:4 or death here, why not go for it?	
	64:5 A. Correct.	
64:13 - 64:15	**Raj, Kavitha 01-08-2019 (00:00:01)**	RajFINAL.58
	64:13 I'm handing you Exhibit 6.	RK0.1
	64:14 (Whereupon, Exhibit 6 was marked for	
	64:15 identification.)	
64:17 - 64:18	**Raj, Kavitha 01-08-2019 (00:00:02)**	RajFINAL.59
	64:17 Q. This is another one of your medical	
	64:18 records, right, Doctor?	
64:22 - 64:22	**Raj, Kavitha 01-08-2019 (00:00:00)**	RajFINAL.60
	64:22 A. Yeah. Yes, it is.	
64:24 - 66:22	**Raj, Kavitha 01-08-2019 (00:02:08)**	RajFINAL.61
	64:24 This is dated June 8, 2015, right?	RK0.1.1
	64:25 A. Yes.	
	65:1 Q. And this is -- it says it's another	
	65:2 follow-up, right?	
	65:3 A. Yes.	
	65:4 Q. All right. If you turn to the last page,	RK0.2.1
	65:5 under Assessment, it has the same sort of problems	
	65:6 that we've identified in the previous medical	
	65:7 records.	
	65:8 A. Yes.	
	65:9 Q. Okay. And then it says, "Recommendation	RK0.2.2
	65:10 plan," and it says, "Proceed with dose reduced MTX."	
	65:11 Do you see that?	
	65:12 A. Yes.	
	65:13 Q. What was that?	
	65:14 A. Excuse me.	

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	65:15 Q. Sure.	
	65:16 A. So between May to now, which is June 8th,	
	65:17 the decision has been made to go ahead and try the	
	65:18 dose reduced methotrexate again.	
	65:19 So that's what it means.	
	65:20 Q. Okay. And why did you want to do that, if	clear
	65:21 you can recall?	
	65:22 A. I think more like we had more chances for	
	65:23 her to safely receive the high-dose methotrexate and	
	65:24 we had knowledge, medical knowledge that it would	
	65:25 work. So we were trying to give her one more chance	
	66:1 because the kidney numbers improved from 2 point	
	66:2 something to 1.8. So we were kind of desperate to	
	66:3 give something effective.	
	66:4 Q. Now, does -- generally speaking, does a	
	66:5 reduced MTX dose, does it get into the CNS?	
	66:6 A. Usually it's a high dose that has more	
	66:7 penetration. But hypothetically, we think once we	
	66:8 give high dose, we have made some dent in the blood	
	66:9 brain barrier and maybe there's more chance for even	
	66:10 a lower dose to penetrate.	
	66:11 So that's a hypothetical, you know,	
	66:12 understanding. Yeah.	
	66:13 Q. And are you doing this because you're	
	66:14 really sort of -- don't have any options at this	
	66:15 point?	
	66:16 A. Correct. No other choice, yeah.	
	66:17 Q. And then it says, number 2, "Continue more	RK6.2.3
	66:18 days of the" -- can you say that word?	
	66:19 A. Leucovorin.	
	66:20 Q. Leucovorin. And that's the stuff that	
	66:21 helps -- sort of antidote to that?	
	66:22 A. Correct. Yes.	
66:24 - 67:1	**Raj, Kavitha 01-08-2019 (00:00:02)**	RajFINAL.227
	66:24 I'm handing you Exhibit 7.	RK7.1
	66:25 (Whereupon, Exhibit 7 was marked for	
	67:1 identification.)	
67:4 - 68:1	**Raj, Kavitha 01-08-2019 (00:00:59)**	RajFINAL.62
	67:4 Q. This is another one of your medical	RK7.1.1
	67:5 records, right, Doctor?	

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	67:6 A. Yes.	
	67:7 Q. Okay. And this is dated September 21st,	
	67:8 2015. Do you see that?	
	67:9 A. Yes.	
	67:10 Q. Okay. And if you look under the History	RK7.1.2
	67:11 of Present Illness, the second paragraph on the	
	67:12 first page, it says, "After cycle number 3 of MTX	
	67:13 Rituxan/Temodar, MTX is discontinued since she could	
	67:14 not tolerate high-dose methotrexate due to elevated	
	67:15 creatinine.	
	67:16 "But now that her creatinine has	
	67:17 normalized since June 2015 dose reduced methotrexate	
	67:18 was restarted on July 27, 2015. She last received	
	67:19 methotrexate on September 14th, 2015, and is SP	
	67:20 cycle number 8."	
	67:21 Did I read that right?	
	67:22 A. Yes.	
	67:23 Q. Okay. So this is sort of a flash forward	
	67:24 in time as to how she's doing even with this low	
	67:25 dose methotrexate?	
	68:1 A. Yes.	
68:2 - 69:17	**Raj, Kavitha 01-08-2019 (00:01:53)**	RajFINAL.03
	68:2 Q. Okay. And just looking at this document,	
	68:3 to the extent that you can, Doctor, how did she	
	68:4 present at this time?	
	68:5 A. I mean, I can't recall, but I have to go	
	68:6 with what I have written in my note here.	
	68:7 Q. Sure.	
	68:8 A. I see that from my notes, that she has	clear
	68:9 completed eight cycles of her treatment and she had	
	68:10 continued trouble with her balance and blurred	
	68:11 vision. I remember her wearing an eye patch for her	
	68:12 double vision for the longest time. And she -- I	
	68:13 have written here saying that she is getting her	
	68:14 eyeglasses tomorrow. But otherwise, looks like --	
	68:15 other than that, she was doing fair.	
	68:16 Q. And then if you look at -- on -- on the	RK7.2.1
	68:17 assessment number 2 --	
	68:18 A. Uh-huh.	
	68:19 Q. -- under the "lethargy/balance issues."	

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	68:20 A. Uh-huh. 68:21 Q. It says -- after the first part, it says, 68:22 "She was started on dexamethasone." 68:23 A. Uh-huh. 68:24 Q. "Four milligrams twice a day." 68:25 Or is that once a day? What is BID? 69:1 A. BID is twice a day. 69:2 Q. Okay. 69:3 "However, there has not been any changes 69:4 in her symptoms." 69:5 What is that drug? 69:6 A. So we talked about the swelling around the 69:7 brain, and this drug can decrease the swelling if 69:8 the symptoms are due to the swelling. But if the 69:9 symptoms are due to the cancer or, like we 69:10 discussed, the brain, permanent brain damage caused 69:11 by the cancer, then their symptoms wouldn't change. 69:12 So we started her on steroids, but her 69:13 symptoms did not change. So we discontinued the 69:14 dexamethasone because the MRI showed an improvement 69:15 in the cancer, no swelling. 69:16 And then she was receiving physical 69:17 therapy.	
70:1 - 70:9	**Raj, Kavitha 01-08-2019 (00:00:24)** 70:1 Q. Okay. And I see here that you still have 70:2 her continuing with Effexor for depression; is that 70:3 right? 70:4 A. Looks like it. 70:5 Q. Okay. Great. All right. 70:6 I'm handing you another document, 70:7 Exhibit 8 to your deposition. 70:8 (Whereupon, Exhibit 8 was marked for 70:9 identification.)	RajFINAL.64 RK7.3.1 RK8.1
70:11 - 70:13	**Raj, Kavitha 01-08-2019 (00:00:06)** 70:11 Q. Do you recognize this document, Doctor? 70:12 A. Yes. Looks like I have -- this is my 70:13 document, yes.	RajFINAL.65
71:10 - 72:19	**Raj, Kavitha 01-08-2019 (00:01:33)** 71:10 Q. Okay. I'm just going to read you the 71:11 first paragraph and hopefully not butcher it too	RajFINAL.66 RK8.1.3

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71:12 much.
71:13 "This is a 72-year-old-female with a
71:14 history of bladder cancer and history of diffuse
71:15 large B-cell CNS lymphoma here for follow-up. I was
71:16 asked to see her to discuss treatment options while
71:17 waiting for UCSF consultant for evaluation for
71:18 clinical trial due to disease progression on recent
71:19 MRI.
71:20 "At this time, she reports they are unable
71:21 to see her for four weeks and she is concerned about
71:22 disease progression. She completed last dose of
71:23 Temodar on February 1st, 2016.
71:24 "She has ongoing trouble with balance and
71:25 blurred vision which is stable but no longer
72:1 requires the assistance of a walker. She continues
72:2 to have some dizziness unchanged from before. No
72:3 headaches or nausea. Otherwise, she feels well
72:4 today. Her energy level is improving. No shortness
72:5 of breath or chest pain. No abdominal pain. No
72:6 lower extremity swelling. She is accompanied by her
72:7 husband."
72:8 Did I read that right?
72:9 A. Yes.
72:10 Q. Based on this record, what did you
72:11 understand she was presenting with on August 11,
72:12 2016?
72:13 A. So based on this, it looks like she had
72:14 been off of treatment for about six months but looks
72:15 like the MRI showed that the cancer was getting
72:16 worse. And she was waiting to be seen by the UCSF
72:17 expert doctor and looks like she called in and
72:18 asked -- asked us to see her -- to see what could be
72:19 done in between.

73:8 - 74:19 **Raj, Kavitha 01-08-2019 (00:01:43)** RajFINAL.67 RK8.1.4

73:8 And it says here in this first paragraph
73:9 that, "She's still presenting with dizziness and
73:10 blurred vision."
73:11 Do you see that?
73:12 A. Yes.
73:13 Q. And this is over a year from the

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	73:14 previous -- the initial consult?	
	73:15 A. Right.	
	73:16 Q. And is it your understanding that her	
	73:17 neurological problems didn't -- were still present	
	73:18 as of August 11, 2016?	
	73:19 A. Yes.	
	73:20 Q. Okay. At the time that you were treating	
	73:21 her in 2016, did you have any opinions about the	
	73:22 cause of those neurological problems?	
	73:23 A. Or the cause that we -- we concluded, the	
	73:24 cause of the neurologic problems were due to	
	73:25 permanent damage to the brain because of the cancer	
	74:1 that she had in those areas.	
	74:2 Q. Okay. If you turn to the second page	RK8.2.1
	74:3 under Assessment, "Diffuse large B-cell CNS	
	74:4 lymphoma. Repeat MRI brain July 31st, 2016. Shows	
	74:5 two new abnormal enhancing lesions in the right	
	74:6 lateral ventricle, 5 by 5 by 6 millimeters and right	
	74:7 periventricular white matter, 6 by 8 by 9	
	74:8 millimeters. Concerning for disease recurrence in	
	74:9 this patient with prior history of CNS lymphoma."	
	74:10 What does that mean?	
	74:11 A. That means the MRI shows two new areas of	
	74:12 cancer growth that are concerning obviously for	
	74:13 cancer to have come back.	
	74:14 Q. Okay. If you look at the bottom, it still	
	74:15 mentions lethargy and balance issues.	
	74:16 Do you see that?	
	74:17 A. Yes.	
	74:18 Q. And it also still has depression there.	
	74:19 A. Yes.	
75:5 - 75:7	**Raj, Kavitha 01-08-2019 (00:00:01)**	RajFINAL.69
	75:5 Q. Okay. I'm handing you another document.	RK9.1
	75:6 (Whereupon, Exhibit 9 was marked for	
	75:7 identification.)	
76:4 - 76:19	**Raj, Kavitha 01-08-2019 (00:00:39)**	RajFINAL.70
	76:4 Q. All right. So this is a follow-up, and	RK9.1.3
	76:5 this is now March 9th, 2017.	
	76:6 Do you see that?	
	76:7 A. Uh-huh. Uh-huh.	

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	76:8 Q. I'm sorry, I need a "yes."	
	76:9 A. Yes. Sorry.	
	76:10 Q. Yeah. All right.	
	76:11 History of Present Illness. "This is a	RK0.1.4
	76:12 17-" -- "72-year-old-female with a history of	
	76:13 bladder cancer and history of diffuse large B-cell	
	76:14 CNS lymphoma here for a follow-up. She was treated	
	76:15 at UCSF with MTR in October of 2016. She was	
	76:16 started on consolidation with" -- do you know what	
	76:17 that is?	
	76:18 A. Yeah. Etoposide and cytarabine. Those	
	76:19 are chemotherapy drugs.	
76:20 - 76:24	**Raj, Kavitha 01-08-2019 (00:00:15)**	RajFINAL.71
	76:20 Q. Okay. So February 4th, 2017, she reports	
	76:21 that, "MRI in 2017 was normal. Upon completion of	
	76:22 treatment, she was hospitalized due to severe	
	76:23 neutropenia."	
	76:24 A. Neutropenia.	
76:25 - 77:21	**Raj, Kavitha 01-08-2019 (00:00:42)**	RajFINAL.72
	76:25 Q. Neutropenia.	
	77:1 What are those -- the second one?	
	77:2 A. Pyelonephritis. That's kidney infection.	
	77:3 Q. And pneumonia?	
	77:4 A. Yes.	
	77:5 Q. Are all three of those types of infection?	
	77:6 A. Neutropenia is low blood count, severely	
	77:7 low blood count that puts people at a very	
	77:8 immunocompromised state due to the chemotherapy that	
	77:9 has resulted in the kidney infection and pneumonia	
	77:10 likely.	
	77:11 Q. Okay. So based on this, she had these	
	77:12 infections and these low blood counts and that's why	
	77:13 she was hospitalized; is that right?	
	77:14 A. Yes.	
	77:15 Q. And that was in response to the -- the	
	77:16 chemotherapy she was receiving?	
	77:17 A. Yes.	
	77:18 Q. Based on your experience, was the	
	77:19 chemotherapy she was receiving, was that pretty	
	77:20 intense chemotherapy?	

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	77:21 A. Very intense.	
78:16 - 79:3	**Raj, Kavitha 01-08-2019 (00:00:47)**	RajFINAL.73
	78:16 Q. Okay. So based on what you reviewed here,	clear
	78:17 how did she present on March 9th, 2017?	
	78:18 A. So she was mostly treated at UCSF because	
	78:19 she looks like, from the notes that we have reviewed	
	78:20 earlier, she ended up having recurrent disease and	
	78:21 she ended up requiring a very heavy duty, high dose	
	78:22 chemotherapy drug and that resulted in some	
	78:23 complications and infections and then hospitalized	
	78:24 for that.	
	78:25 And she was weak so she went to a rehab	
	79:1 facility to get stronger. And then she looks like	
	79:2 she was discharged from that and recovering from all	
	79:3 of that hospitalization and illness.	
79:9 - 80:2	**Raj, Kavitha 01-08-2019 (00:00:47)**	RajFINAL.74
	79:9 Q. And again, she still has depression.	
	79:10 Do you see that?	
	79:11 A. Yes.	
	79:12 Q. On the next page.	RK9.3.1
	79:13 Doctor, the depression, do you know -- do	
	79:14 you have a -- since you're the one who diagnosed	
	79:15 her, do you believe you know what the cause of her	
	79:16 depression was?	
	79:17 A. The cause of the depression is very likely	
	79:18 having a very serious cancer. In addition to going	
	79:19 through all of this very aggressive treatment	
	79:20 that's -- that's making her feel, you know, tired	
	79:21 and have a lot of other side effects and	
	79:22 complications. So it's all multifactorial together.	
	79:23 Q. Do you know or have any opinion whether	clear
	79:24 the depression in any way was associated with any	
	79:25 brain damage she may have received?	
	80:1 A. Brain damage does increase the risk of	
	80:2 depression in people.	
80:23 - 81:7	**Raj, Kavitha 01-08-2019 (00:00:19)**	RajFINAL.75
	80:23 Q. And did -- are you still treating	
	80:24 Mrs. Pilliod?	
	80:25 A. I am not the primary treating physician.	
	81:1 Q. Okay. Do you still see her, though?	

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	81:2 A. I can't remember when was the last time I 81:3 had seen her. I -- it feels like it's been a while, 81:4 but I have seen her, yes. 81:5 Q. Okay. And you understand Mrs. Pilliod's 81:6 alive right now? 81:7 A. Yes, I know that.	
81:8 - 81:11	**Raj, Kavitha 01-08-2019 (00:00:07)** 81:8 Q. When she first presented with her CNS 81:9 lymphoma in 2015, did you think she'd be alive 81:10 today? 81:11 A. No.	RajFINAL.229
83:6 - 84:17	**Raj, Kavitha 01-08-2019 (00:01:23)** 83:6 But starting with an overview, it's my 83:7 understanding that you, yourself, did not actually 83:8 diagnose Ms. Pilliod with her CNS lymphoma; is that 83:9 right? 83:10 A. Correct. 83:11 Q. She was originally diagnosed at Stanford 83:12 in Palo Alto and then came to you when she was 83:13 already started treatment; is that right? 83:14 A. Correct. 83:15 Q. And I understand that you started treating 83:16 her, from the records, in about May of 2015; is that 83:17 right? 83:18 A. Correct. 83:19 Q. And she was already receiving some 83:20 high-dose methotrexate and other chemotherapy drugs 83:21 at the time she came to you? 83:22 A. Yes, she looks like she had received two 83:23 cycles of high-dose methotrexate before I had seen 83:24 her. 83:25 Q. And you were treating, based on your 84:1 records, Ms. Pilliod in conjunction with other 84:2 physicians at both Stanford and UCSF; is that right? 84:3 A. Correct. 84:4 Q. All right. And my understanding is 84:5 Dr. Gupta is at Stanford, yes? 84:6 A. Yes. 84:7 Q. And Dr. Rubenstein is at UCSF? 84:8 A. Correct.	RajFINAL.76

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	84:9 Q. All right. And is it your understanding 84:10 that both of those gentlemen have specialties in the 84:11 type of cancer that she actually had, which is the 84:12 CNS lymphoma? 84:13 A. Correct. 84:14 Q. And is it your understanding that she is 84:15 still; that is, Ms. Pilliod, is still followed by 84:16 Dr. Rubenstein at UCSF? 84:17 A. Correct.	
85:1 - 85:3	**Raj, Kavitha 01-08-2019 (00:00:04)** 85:1 Q. But in terms of the imaging, her brain had 85:2 normalized? 85:3 A. Correct.	RajFINAL.77
87:8 - 87:12	**Raj, Kavitha 01-08-2019 (00:00:11)** 87:8 Q. All right. And in terms of where you 87:9 practice now, where we are today, it's Valley 87:10 Medical Oncology Consultants that's affiliated with 87:11 Stanford Health; is that right? 87:12 A. Correct.	RajFINAL.78
89:12 - 89:14	**Raj, Kavitha 01-08-2019 (00:00:07)** 89:12 Q. All right. And are there benefits to your 89:13 patients here in Pleasanton of being affiliated with 89:14 a larger network of Stanford Health Care?	RajFINAL.79
89:16 - 90:2	**Raj, Kavitha 01-08-2019 (00:00:34)** 89:16 THE WITNESS: Of course, yes. 89:17 BY MR. TOMASELLI: 89:18 Q. And what are those, in your mind, in your 89:19 own mind, as you treat patients? 89:20 A. Well, most of the patients in this country 89:21 are treated in a community facility, community 89:22 oncology facility like this, about 85 percent of 89:23 patients. Not everybody can access university care 89:24 directly. So we are very excited to provide the 89:25 academic level care in our community and able to 90:1 communicate better with people who have some special 90:2 expertise and access to clinical trials.	RajFINAL.80
90:11 - 91:5	**Raj, Kavitha 01-08-2019 (00:01:03)** 90:11 Q. Okay. And how many patients do you think 90:12 you've treated in your time for non-Hodgkin's 90:13 lymphoma? And that's all the different subtypes.	RajFINAL.81

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	90:14 A. I don't think I can give a number, but it 90:15 is a pretty common type of cancer. It's not that 90:16 rare. So it is -- it is a common type of cancer. 90:17 Q. Hundreds maybe? 90:18 A. Like several hundreds. Definitely more 90:19 than a hundred. 90:20 Q. Okay. And -- and in your treatment of 90:21 your patients, do you consider non-Hodgkin's 90:22 lymphoma just one disease and treat them all the 90:23 same? 90:24 A. Not really. 90:25 Q. And approximately how many patients have 91:1 you treated for primary CNS lymphoma? 91:2 A. Handful. 91:3 Q. And is that because that's a relatively 91:4 rare type of non-Hodgkin's lymphoma? 91:5 A. Yes, it is a very rare type.	
96:13 - 96:18	**Raj, Kavitha 01-08-2019 (00:00:18)** 96:13 Q. But in terms of your care and treatment of 96:14 Mrs. Pilliod, did you agree and did you recognize 96:15 that -- that a risk factor for non-Hodgkin's 96:16 lymphoma is when the immune system is weakened 96:17 because of something or because of a various 96:18 treatment, like it says here in the website?	RajFINAL.82
96:20 - 96:23	**Raj, Kavitha 01-08-2019 (00:00:11)** 96:20 THE WITNESS: I -- I don't think this 96:21 applies to her because I don't think she had any 96:22 kind of an immune disease that weakened her immune 96:23 system that predisposed her to get the lymphoma.	RajFINAL.83
97:2 - 97:4	**Raj, Kavitha 01-08-2019 (00:00:04)** 97:2 Q. At least she didn't -- you're not aware of 97:3 any autoimmune disease that she had? 97:4 A. Correct.	RajFINAL.84
98:5 - 98:6	**Raj, Kavitha 01-08-2019 (00:00:04)** 98:5 I'm going to hand you what I've marked as 98:6 Exhibit Number 13.	RajFINAL.85 RK13.1
98:10 - 99:6	**Raj, Kavitha 01-08-2019 (00:00:54)** 98:10 Q. And does that appear to you to be one of 98:11 your records related to Mrs. Pilliod? 98:12 A. Yes.	RajFINAL.86 RK13.1.1

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	98:13 Q. And the date on this is December the 20th 98:14 of 2017, right? 98:15 A. Yes. 98:16 Q. And so that's about a year ago? 98:17 A. Yes. 98:18 Q. And I think this is your last note related 98:19 to Mrs. Pilliod in your records. But do you recall 98:20 seeing her as a patient anytime since December of 98:21 last year, or even two years ago now? 98:22 A. I -- I mean, if this is the last note, 98:23 then that's the last time I have seen her. I don't 98:24 remember seeing her in the recent past. 98:25 Q. Okay. And just to, again, follow up on a 99:1 few things, in the History of Present Illness at 99:2 the -- at the top of the page, it talks about the 99:3 fact that she's 73 and she had a history of bladder 99:4 cancer. 99:5 Do you see that? 99:6 A. Yes.	RK13.1.2
99:16 - 100:3	**Raj, Kavitha 01-08-2019 (00:00:26)** 99:16 Q. So she had a personal history of cancer, 99:17 of bladder cancer prior to you ever seeing her; is 99:18 that right? 99:19 A. Correct. 99:20 Q. "Yes"? 99:21 A. Yes. 99:22 Q. Okay. And is that an important -- is that 99:23 an important thing to know for your care and 99:24 treatment? 99:25 A. It is important to know the history, 100:1 especially if they had any exposure to radiation and 100:2 chemotherapy, like stated in that risk factor. 100:3 So it is important, yes.	RajFINAL.67 clear
100:4 - 100:12	**Raj, Kavitha 01-08-2019 (00:00:16)** 100:4 Q. And do you know what -- how she was 100:5 treated for that bladder cancer in 2010? 100:6 A. From looking through my previous note that 100:7 we had reviewed earlier, it looks like she had 100:8 surgery for that. 100:9 Q. Were you aware that she also had BCG	RajFINAL.68

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	100:10 therapy? 100:11 A. That's a very typical way of treating, 100:12 yes.	
100:13 - 100:18	**Raj, Kavitha 01-08-2019 (00:00:19)** 100:13 Q. Is BCG therapy a type of immunotherapy? 100:14 A. I'm not the doctor who usually administers 100:15 the therapy so I don't want to answer a lot of 100:16 questions on that. It is -- it is kind of a 100:17 vaccination type of therapy. It's similar to that, 100:18 yes.	RajFINAL.89
101:9 - 101:13	**Raj, Kavitha 01-08-2019 (00:00:13)** 101:9 Q. And in terms of the neurologic symptoms of 101:10 primary CNS lymphoma, are those generally different 101:11 from the symptoms you might expect with a systemic 101:12 diffuse large B-cell lymphoma? 101:13 A. Yes.	RajFINAL.90
101:18 - 102:3	**Raj, Kavitha 01-08-2019 (00:00:20)** 101:18 Q. And I -- I thought we established that she 101:19 had some neurologic symptoms when she presented, 101:20 like walking instability and double vision and some 101:21 vertigo and some headaches. 101:22 Do you recall that? 101:23 A. Yes. 101:24 Q. And my question to you is, in -- in the 101:25 care and treatment of her with those neurologic 102:1 symptoms, those are related to the primary CNS 102:2 lymphoma; is that right? 102:3 A. Correct.	RajFINAL.91 RK13.1.3
102:13 - 102:24	**Raj, Kavitha 01-08-2019 (00:00:40)** 102:13 Q. Okay. And in terms of -- in terms of 102:14 Mrs. Pilliod's age when she came to you, she was 102:15 about 70 years old; is that right? 102:16 A. Yes. 102:17 Q. And to put that into perspective, is it 102:18 unusual, in your experience, to be diagnosed with a 102:19 primary CNS lymphoma when you're 70 years old? 102:20 A. It's such a rare disease, so I really 102:21 don't think we have established what is the very 102:22 common age and all that. Lymphoma, typically, is a 102:23 disease of people who are a little older, not like	RajFINAL.92 clear

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	102:24 Leukemia where we see in the 20s and 30s.	
103:3 - 103:9	**Raj, Kavitha 01-08-2019 (00:00:16)**	RajFINAL.03
	103:3 Q. I think you said previously that -- I	
	103:4 think you looked at some records and you said that	
	103:5 Mrs. Pilliod was not predisposed, you said, to	
	103:6 lymphoma based on the fact that she did not have	
	103:7 chemotherapy or radiation with her bladder cancer.	
	103:8 Do you remember that?	
	103:9 A. Right. Correct.	
103:10 - 106:5	**Raj, Kavitha 01-08-2019 (00:03:06)**	RajFINAL.04
	103:10 Q. And -- and is it common, in your	
	103:11 experience, for persons with non-Hodgkin's lymphoma	
	103:12 to be older and that age be about the only thing	
	103:13 they have and not be, you know, subjected to prior	
	103:14 radiation or chemotherapy?	
	103:15 A. Correct. Most of the times they don't	
	103:16 have a risk factor. In some people we may be able	
	103:17 to identify a risk factor.	
	103:18 Q. Okay. And then you -- in your note here,	
	103:19 in December the 20th of 2017, the last time you saw	
	103:20 her, you go and -- and you talk about her	RK13.1.4
	103:21 presentation and the fact that she had an MRI of the	
	103:22 brain in April and then she was followed up with	
	103:23 a -- a PET scan and then she was followed up with a	
	103:24 brain biopsy.	
	103:25 Do you see all that?	
	104:1 A. Yes.	
	104:2 Q. And all of those imaging and testing and	
	104:3 biopsy were consistent, it says, with a primary CNS	
	104:4 lymphoma; is that right?	
	104:5 A. Yes.	
	104:6 Q. And does that include all of the pathology	
	104:7 results that are discussed at the bottom of that	
	104:8 fourth paragraph down there?	
	104:9 A. Yes.	
	104:10 Q. All right. And was there anything in the	clear
	104:11 biopsy or histopathology -- and -- and is	
	104:12 histopathology just the staining and the -- where	
	104:13 you put the tissue on the pieces of glass; is that	
	104:14 right?	

104:15 A. Yes. Uh-huh.
104:16 Q. Okay. Was there anything in the biopsy or
104:17 the slides, the histopathology, that suggested to
104:18 you that any use of Roundup or a pesticide was
104:19 related to her cancer in any way?
104:20 A. I don't think you can actually know that
104:21 by testing the lymphoma cells or cancer cells. You
104:22 can't say that.
104:23 Q. Okay. So they're -- so truly, there's
104:24 nothing in that pathology or histopathology that
104:25 would lead you to that conclusion?
105:1 A. I don't think we -- I don't think it's
105:2 possible to know that just based on looking at the
105:3 cancer cells under the microscope that -- what
105:4 caused it. We can only diagnose what it is. I
105:5 don't think we can tell from looking at the cells
105:6 that this is what had caused their cancer.
105:7 Q. Okay. And is that also true for the
105:8 imaging and testing that she received, the -- the
105:9 CTs and the MRIs and the PET scan, that there's
105:10 nothing in any of those imaging tests that would
105:11 suggest to you that Roundup, any use of Roundup or a
105:12 pesticide was the specific cause of her cancer?
105:13 A. So even if someone had received
105:14 chemotherapy or radiation and they developed
105:15 lymphoma we can only say that it is a possible
105:16 factor. We cannot say for sure.
105:17 Q. Right. The imaging, the biopsies, the
105:18 histopathology, there's no pathological marker in
105:19 any of those for the cause of a disease, or the
105:20 cause of a particular primary CNS lymphoma; is that
105:21 right?
105:22 A. Correct, not that I know of.
105:23 Q. All right. And likewise, you performed
105:24 physical exams on Mrs. Pilliod, right?
105:25 A. Yes.
106:1 Q. Every time you saw her, true?
106:2 A. Yes.
106:3 Q. All right. And that's very typical,
106:4 right?

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	106:5 A. Yes.	
106:6 - 106:15	**Raj, Kavitha 01-08-2019 (00:00:31)**	RajFINAL.05
	106:6 Q. And was there anything in any physical 106:7 exam that you ever did that suggested to you an 106:8 exact cause of her primary CNS lymphoma? 106:9 A. So I was treating her cancer. I was not 106:10 trying to find a cause of her cancer. And I really 106:11 don't think there are any physical exams pertinent 106:12 or I'm not like a toxicologist or chemist to look at 106:13 all that. So I wasn't doing any tests to look at 106:14 that. Other than that's when I -- I was doing 106:15 general physical exam, yes.	
106:21 - 107:12	**Raj, Kavitha 01-08-2019 (00:00:51)**	RajFINAL.06
	106:21 Q. And I just wanted to confirm that there 106:22 was knowing in all those 13 exams that you did 106:23 repeatedly with a physical exam that told you or led 106:24 you in any way to believe exactly what may have 106:25 contributed to her primary CNS lymphoma, right? 107:1 A. Correct. 107:2 Q. All right. And you talked about the fact 107:3 that the first time she was treated in the summer of 107:4 2015 she was treated with a high-dose methotrexate? 107:5 A. Yes. 107:6 Q. Along with a couple of other chemotherapy 107:7 drugs; is that right? 107:8 A. Yes. 107:9 Q. And is high-dose methotrexate, is that -- 107:10 like for Mrs. Pilliod, is that the standard 107:11 chemotherapy for primary CNS lymphoma? 107:12 A. Yes, it is.	
107:13 - 107:21	**Raj, Kavitha 01-08-2019 (00:00:29)**	RajFINAL.07
	107:13 Q. And did you consider, when she came to you 107:14 in May of 2015, prescribing a different chemotherapy 107:15 regimen of any sort? 107:16 A. This is a rare cancer, and we do not have 107:17 a lot of treatment options. It's essentially the 107:18 only treatment option that we have. So other than 107:19 experimental clinical trial approaches, there's not 107:20 like any standard of care treatment that's available 107:21 for primary CNS lymphoma.	

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107:22 - 108:2	**Raj, Kavitha 01-08-2019 (00:00:13)** 107:22 Q. And the note goes on to say -- and you 107:23 talked to plaintiffs' counsel about the fact that 107:24 during that treatment of the first time with the 107:25 high-dose methotrexate that she had some acute 108:1 kidney injury; is that right? 108:2 A. Yes.	RajFINAL.98
108:3 - 108:10	**Raj, Kavitha 01-08-2019 (00:00:19)** 108:3 Q. All right. And you were able to see that 108:4 and the doctors were able to see that based on her 108:5 increase in her creatinine level? 108:6 A. Correct. 108:7 Q. And is an increase in creatinine, is that 108:8 a well understood potential side effect of the 108:9 high-dose methotrexate therapy? 108:10 A. Yes, it is.	RajFINAL.99
109:9 - 109:23	**Raj, Kavitha 01-08-2019 (00:00:35)** 109:9 Q. Okay. And in terms of what you said, 109:10 today her kidney function is normal, true? 109:11 A. At least when I saw her December 2017. 109:12 Q. The last time you saw her, about a year 109:13 ago, her kidney function was normal? 109:14 A. Correct. 109:15 Q. And the -- the notes that you have don't 109:16 indicate any permanent kidney damage as a result of 109:17 her acute -- her acute injury in 2015; is that 109:18 right? 109:19 A. Correct. 109:20 Q. And I think you may have discussed this 109:21 with counsel, but you're not aware that she ever had 109:22 to get dialysis or anything like that, right? 109:23 A. I don't think so.	RajFINAL.100
110:16 - 112:1	**Raj, Kavitha 01-08-2019 (00:01:36)** 110:16 Q. At the bottom of your note from December 110:17 the 20th, 2017 -- which is Exhibit 13; is that 110:18 right? 110:19 A. Uh-huh. Yes. 110:20 Q. -- you have a summary of your care and 110:21 treatment of Mrs. Pilliod that you worked with the 110:22 other physicians at Stanford; is that right?	RajFINAL.102

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	110:23 A. Yes.	
	110:24 Q. And it starts off with being diagnosed	RK13.1.5
	110:25 with CNS lymphoma, starting the high-dose	
	111:1 methotrexate, pausing because of the acute renal	
	111:2 failure, like you just said, restarting that	
	111:3 high-dose methotrexate, and then completing the	
	111:4 treatment, that first treatment in -- around	
	111:5 September of 2015; is that right?	
	111:6 A. Yes.	
	111:7 Q. All right. And the third line there in	
	111:8 the summary section that's bolded, it says, "Five	RK13.1.6
	111:9 additional cycles with methotrexate, with dose	
	111:10 reduction, plus Rituxan and Temodar."	
	111:11 Do you see that?	
	111:12 A. Yes.	
	111:13 Q. And then it says, "CR."	
	111:14 Do you see that?	
	111:15 A. Yes.	
	111:16 Q. What is CR?	
	111:17 A. Meaning she went into complete remission.	
	111:18 Q. Okay. And is that complete remission that	
	111:19 she went into in September of '15, is that based on	
	111:20 her brain imaging?	
	111:21 A. Correct.	
	111:22 Q. All right. And describe for me, when you	clear
	111:23 take an MRI of the brain, those abnormalities that	
	111:24 you talked about with counsel in April, they were	
	111:25 gone?	
	112:1 A. Correct.	
112:10 - 112:17	**Raj, Kavitha 01-08-2019 (00:00:15)**	RajFINAL.103
	112:10 Q. And as you discussed with counsel, she had	
	112:11 a recurrence in --	
	112:12 A. Uh-huh.	
	112:13 Q. -- July of 2016; is that right?	
	112:14 A. Yes.	
	112:15 Q. That was about -- about ten months or so	
	112:16 after her complete remission?	
	112:17 A. Correct.	
112:25 - 113:24	**Raj, Kavitha 01-08-2019 (00:00:57)**	RajFINAL.104
	112:25 Q. Is it uncommon for primary CNS lymphoma	

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	113:1 patients to have a recurrence?	
	113:2 A. It's --	
	113:3 Q. In your experience?	
	113:4 A. It's not uncommon. It's very common.	
	113:5 Q. Your notes then go on at the summary to	
	113:6 say that she was further treated at UCSF with the	RK13.1.7
	113:7 methotrexate in about October of 2016.	
	113:8 Do you see that?	
	113:9 A. Uh-huh.	
	113:10 Q. Is that a "yes"?	
	113:11 A. I think so. It says, "MTR." I wonder	
	113:12 whether it's -- it's methotrexate or something else.	
	113:13 But she did receive something at UCSF followed by	
	113:14 the consolidation chemotherapy.	
	113:15 Q. And MTR could be methotrexate, Temodar,	
	113:16 and Rituxan?	
	113:17 A. Correct.	
	113:18 Q. Okay. And that would be consistent with	
	113:19 what she was treated with the first time that put	
	113:20 her into complete remission?	
	113:21 A. Right.	
	113:22 Q. All right. And in terms of the UCF,	
	113:23 that's the treatment with Dr. Rubenstein?	
	113:24 A. Yes.	
113:25 - 114:6	**Raj, Kavitha 01-08-2019 (00:00:14)**	RajFINAL.105
	113:25 Q. And I think you said to counsel previously	
	114:1 that Dr. Rubenstein is an expert in this?	
	114:2 A. Neuro-oncology.	
	114:3 Q. All right. And is he an expert in this	
	114:4 type of lymphoma?	
	114:5 A. He just treats brain cancers and brain	
	114:6 lymphomas.	
115:1 - 115:8	**Raj, Kavitha 01-08-2019 (00:00:19)**	RajFINAL.106
	115:1 And in any event, she was treated at UCSF	
	115:2 and then that methotrexate was -- was continued	
	115:3 until about January of 2017; is that right?	
	115:4 A. That's what it looks like, from looking	
	115:5 through the notes.	RK13.1.8
	115:6 Q. And then she had the consolidation therapy	
	115:7 for the high dose chemotherapy for another month?	

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	115:8 A. Correct.	
115:20 - 116:16	**Raj, Kavitha 01-08-2019 (00:01:07)**	RajFINAL.107
	115:20 Q. So the fact that she was on consolidation 115:21 therapy, you would conclude that she had complete 115:22 remission and response prior to that time? 115:23 A. Yes. 115:24 Q. All right. And so that would have been in 115:25 February or so of 2017? 116:1 A. Possible, yeah. 116:2 Q. And I think you were just looking at -- on 116:3 page 2, your assessment number 1; is that right? 116:4 A. Okay.	
	116:5 Q. And here, in the assessment, about the 116:6 third sentence, it says, "The most recent MRI in 116:7 October of 2017 shows no evidence of disease." 116:8 A. Yes. 116:9 Q. And what does it mean that, again, in 116:10 October of 2017, she's showing no evidence of 116:11 disease? 116:12 A. So she had received that methotrexate, 116:13 Temodar, Rituxan followed by consolidation. And at 116:14 that point, she had been maintained on Revlimid 116:15 maintenance therapy and her MRI brain did not show 116:16 any evidence of active cancer.	RK13.2.1
117:11 - 117:15	**Raj, Kavitha 01-08-2019 (00:00:16)**	RajFINAL.108 clear
	117:11 Q. Okay. And then, as we sit here today, in 117:12 January of 2019, we're almost two years from the 117:13 time that she ended her methotrexate for the second 117:14 time and her consolidation therapy; is that right? 117:15 A. Correct.	
118:2 - 119:1	**Raj, Kavitha 01-08-2019 (00:01:09)**	RajFINAL.109
	118:2 Q. As of the last time you saw Mrs. Pilliod 118:3 in December of 2017 as a patient, was the longer 118:4 time that she went out without a recurrence, would 118:5 that decrease -- that chance of recurrence decrease 118:6 with -- with the time from treatment? 118:7 A. So before I answer that question, I don't 118:8 think she would be alive today. That's how bad this 118:9 cancer was. 118:10 Q. Right.	

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	118:11 A. I was actually surprised that she did 118:12 well, although she had a lot of problems and 118:13 complications with the chemotherapy. She has done 118:14 very well, no doubt about it. 118:15 Anytime when patients go through cancer 118:16 treatment, the longer they are disease free, their 118:17 risk of relapse does go down in terms of very 118:18 aggressive cancers because intuitively we think 118:19 aggressive cancers, even if there's one cell left 118:20 behind, they tend to grow back quickly. So if 118:21 someone has not had any cancer for more than a year 118:22 we think that the risk of cancer is lower. 118:23 Q. And so as of the last time you saw 118:24 Mrs. Pilliod that was a great thing, that she had 118:25 not had a recurrence since? 119:1 A. Yes, of course.	
119:2 - 119:15	**Raj, Kavitha 01-08-2019 (00:00:43)** 119:2 Q. And in terms of your note here, where it 119:3 says, "To return to the clinic as needed," I think 119:4 that's toward the -- the bottom of your 119:5 recommendation and plan, do you have any plans, as 119:6 you sit here today, to see Mrs. Pilliod again as a 119:7 patient? 119:8 A. I don't think so because she was 119:9 followed -- because, you know, she needed that 119:10 expert -- expertise at UCSF with Dr. Rubenstein so 119:11 she's being followed by him. And so I didn't feel 119:12 like it was important for her to follow up with me 119:13 as well. So that's why I said return to clinic as 119:14 needed, assuming and knowing that she's being 119:15 followed very closely at UCSF.	RajFINAL.110 RK13.3.1
119:16 - 120:23	**Raj, Kavitha 01-08-2019 (00:01:22)** 119:16 Q. In terms of the first time that you saw 119:17 Mrs. Pilliod in -- in May of 2015, did you ever ask 119:18 her whether she had used Roundup at any time in 119:19 her -- in -- in her life? Did you ask her that at 119:20 the time that you saw her? 119:21 A. Typically, I would ask someone else, like 119:22 if I'm seeing as an initial oncology consult for 119:23 lymphoma, you know, exposure to toxins, chemicals.	RajFINAL.232

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119:24 In her situation, I think the thing is I
119:25 saw her at a time of distress where she's already
120:1 gotten treatment and had some complications. She
120:2 was there to seek my help to get her through more
120:3 treatment. So I really don't think we actually
120:4 discussed about it at that point.
120:5 Q. And you talked a little bit previously
120:6 with counsel about the potential for environmental
120:7 exposures, and I think you may have even talked
120:8 about pesticides generally.
120:9 Do you remember that?
120:10 A. Yes.
120:11 Q. Would you consider yourself an expert in
120:12 terms of the -- all the data and scientific articles
120:13 and all the publications, peer-reviewed publications
120:14 out there regarding whether pesticides are
120:15 associated with certain types of cancer?
120:16 A. No.
120:17 Q. That's not something you've spent your
120:18 days and weeks studying?
120:19 A. No.
120:20 Q. You're more concerned about caring for
120:21 Mrs. Pilliod and your patients and trying to make
120:22 them better?
120:23 A. Correct.

121:5 - 122:22 **Raj, Kavitha 01-08-2019 (00:02:11)** RajFINAL.228

121:5 Q. And during your care and treatment of
121:6 Mrs. Pilliod, did you ever publish a case report
121:7 related to her care and treatment or -- and/or the
121:8 cause or what you think may have contributed to her
121:9 primary CNS lymphoma?
121:10 Did you publish anything like that?
121:11 A. I don't think so.
121:12 Q. And in your care and treatment of
121:13 Mrs. Pilliod, did you document anywhere that you had
121:14 found something that had caused or contributed to
121:15 her primary CNS lymphoma?
121:16 A. I really don't know. I have to look at
121:17 all of my notes to see that I have said anything.
121:18 But I do remember my conversation with her, like I'd

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	121:19 mentioned earlier, that's the only time I remember 121:20 talking about it. 121:21 Q. Okay. And in terms of your conversation 121:22 with Mrs. Pilliod, can you tell me a little bit 121:23 about that conversation and when it occurred? 121:24 A. I don't know the exact time or date. I -- 121:25 I remember seeing both of them and they've asked 122:1 about what could have caused their cancer. 122:2 Typically, I get that question as the first question 122:3 when I see somebody. But I -- you know, we talked 122:4 about it a little later and I -- we talked about 122:5 possible environmental exposure given both of them 122:6 live in the same household and both of them being 122:7 diagnosed with a similar type of cancer back to 122:8 back. They were concerned. 122:9 And I did tell them it is a possibility 122:10 that chemical exposure could cause lymphoma, and 122:11 they brought up this exposure to some pesticides. 122:12 And they asked me, do I think that that could have 122:13 caused their cancer. I said it's possible but I 122:14 can't tell that for 100 percent sure. That was my 122:15 response to them. But I did tell them that it is 122:16 possible. 122:17 Q. And when you said that chemicals may 122:18 increase the risk of lymphoma, what chemicals were 122:19 you talking about? 122:20 A. Any -- any chemical exposure on a 122:21 consistent basis that could cause cell, you know, 122:22 damage, DNA damage.	
122:23 - 123:2	**Raj, Kavitha 01-08-2019 (00:00:10)** 122:23 Q. And are you -- do you consider yourself an 122:24 expert in whether any of -- any particular chemical 122:25 is related to that or not? Have you looked into any 123:1 of that? 123:2 A. No, I'm not an expert in that.	RajFINAL.112 clear
123:3 - 123:20	**Raj, Kavitha 01-08-2019 (00:00:56)** 123:3 Q. And so it was just your general statement 123:4 of, there are environmental exposures. There could 123:5 be other things that increase the risk of lymphoma? 123:6 A. There are studies that shows that exposure	RajFINAL.233

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	123:7 to chemicals could cause cancer. These are 123:8 epidemiologic studies. So that's the base for my, 123:9 you know, opinion on that, that it's a possibility. 123:10 Q. Right. 123:11 And at any time did you tell Mr. and 123:12 Mrs. Pilliod during this conversation that it was 123:13 your opinion that -- what exactly contributed or 123:14 caused their lymphoma? 123:15 A. I did tell them that I thought it was a 123:16 possibility if they had exposed -- if they had been 123:17 exposed -- if they had been exposed to some 123:18 chemicals on a consistent basis. But I did tell 123:19 them that I can't conclude that's what had caused 123:20 their lymphoma.	
123:21 - 124:20	**Raj, Kavitha 01-08-2019 (00:00:56)** 123:21 Q. Okay. Sort of anything -- anything's 123:22 possible, but you did not come to any opinion as to 123:23 a reasonable degree of medical probability as to 123:24 what -- what exactly may have happened, right? 123:25 A. Can you repeat that? 124:1 Q. Yeah. Sure. 124:2 When we talk about possibilities in 124:3 medicine, lots of things are possible, right? 124:4 A. Yes. 124:5 Q. Okay. But what I'm asking you is, did you 124:6 ever come to a conclusion to a reasonable degree of 124:7 medical certainty or probability as to what may 124:8 have -- what may have contributed to their -- to 124:9 their lymphomas? 124:10 A. So when it comes to cancer, I think we are 124:11 always interested in knowing the etiology so that we 124:12 can prevent it. Right? But there are certain 124:13 cancers we know for sure what is the probable cause 124:14 of that cancer. But most of the cancers, we don't 124:15 know the probable cause. We only know the possible 124:16 etiology. This falls in one of that. 124:17 Q. Lymphoma falls into the possibilities, not 124:18 one of the cancers where we know what may have 124:19 caused it? 124:20 A. For sure, correct.	RajFINAL.114

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126:19 - 128:16	**Raj, Kavitha 01-08-2019 (00:01:51)**	RajFINAL.115

126:19 Q. All right. Doctor, turning your
126:20 exhibit -- attention to Exhibit 13, which is the
126:21 last medical record, at least the last one that
126:22 we've seen today.
126:23 Do you recall that?
126:24 A. Yes.
126:25 Q. Okay. I -- I want to turn to the last
127:1 page. And -- and it talks about the -- that -- I'm
127:2 trying to find out where it said it.
127:3 Do you recall discussing that she was
127:4 taking proactively -- prophylactically Revlimid?
127:5 A. Revlimid.
127:6 Q. Revlimid?
127:7 A. Yes.
127:8 Q. And she was taking that even though she
127:9 was in complete remission?
127:10 A. Correct.
127:11 Q. Why would -- why would that -- why would a
127:12 doctor do that?
127:13 A. Because there's a very high risk for
127:14 cancer to come back. So that's why she was placed
127:15 on that maintenance treatment with Revlimid.
127:16 Q. Are there any side effects to the drug?
127:17 A. It's an oral chemotherapy. It can cause a
127:18 fatigue, low blood count issues.
127:19 Q. Do you know if Dr. Rubenstein has -- has
127:20 continued to treat her with that indefinitely?
127:21 A. I don't know. But at the time when I saw
127:22 her she was on it.
127:23 Q. Even though she had been in remission for
127:24 several months?
127:25 A. Correct. And at -- and at that time the
128:1 plan was to continue it as long as she was doing
128:2 well on it.
128:3 Q. Okay. I understand that in your last
128:4 visit you also have her continued on Effexor.
128:5 Do you see that?
128:6 A. Yes.
128:7 Q. So it'd be fair to say that she was still

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	128:8 clinically depressed at that time? 128:9 A. Her depression was treated with Effexor 128:10 so -- 128:11 Q. Fair enough. She was still being treated 128:12 for depression? 128:13 A. Right. 128:14 Q. Okay. And -- and to the best of your 128:15 knowledge, is that ingestion of that -- that 128:16 medication going to be indefinite?	
128:18 - 128:20	**Raj, Kavitha 01-08-2019 (00:00:06)** 128:18 THE WITNESS: Very likely. We keep people 128:19 on the drug if they are doing well. We don't try to 128:20 wean them off of it.	RajFINAL.116
128:22 - 129:4	**Raj, Kavitha 01-08-2019 (00:00:15)** 128:22 Q. Do you know if Effexor has any side 128:23 effects? 128:24 A. Yes, it does. 128:25 Q. And, in fact, one of the side effects of 129:1 Effexor is actually depression, isn't it? 129:2 A. Yeah, a tendency to commit suicide. 129:3 Q. And are you also aware that Effexor is a 129:4 very difficult drug to come off of?	RajFINAL.117
129:6 - 129:6	**Raj, Kavitha 01-08-2019 (00:00:01)** 129:6 THE WITNESS: In some people, yes.	RajFINAL.118
129:17 - 129:24	**Raj, Kavitha 01-08-2019 (00:00:17)** 129:17 I guess my -- my last question for you, 129:18 Doctor -- and that's always a terrible thing to say 129:19 because your last question is never your last 129:20 question, right? 129:21 But would it be fair to say, based on your 129:22 treatment of Mrs. Pilliod, that she has a fair -- or 129:23 significant chance of having a recurrence in the 129:24 future?	RajFINAL.119
130:1 - 130:2	**Raj, Kavitha 01-08-2019 (00:00:02)** 130:1 THE WITNESS: Yes, she does have a high 130:2 risk of recurrence.	RajFINAL.120
130:9 - 130:13	**Raj, Kavitha 01-08-2019 (00:00:11)** 130:9 Q. And -- and the -- and the fact that she's 130:10 already had one recurrence, from a clinical 130:11 perspective, does that increase her likelihood of	RajFINAL.121

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	130:12 having another?	
	130:13 A. Yes, it does.	
130:23 - 130:25	**Raj, Kavitha 01-08-2019 (00:00:01)**	RajFINAL.122
	130:23 BY MR. WISNER:	
	130:24 Q. Good afternoon, Doctor.	
	130:25 A. Hi.	
131:1 - 131:7	**Raj, Kavitha 01-08-2019 (00:00:10)**	RajFINAL.123
	131:1 Q. So I want to talk to you a little bit	
	131:2 about Alva Pilliod.	
	131:3 Do you recall Mr. Pilliod?	
	131:4 A. Yes.	
	131:5 Q. Do you recall treating him prior to a	
	131:6 cancer diagnosis?	
	131:7 A. Yes.	
131:8 - 131:18	**Raj, Kavitha 01-08-2019 (00:00:29)**	RajFINAL.124
	131:8 Q. What do you recall?	
	131:9 A. I think I was treating him for	
	131:10 hemochromatosis, which is a blood disorder. And	
	131:11 then he developed lymphoma.	
	131:12 Q. What is hemochromatosis?	
	131:13 A. Hemochromatosis is a genetic disorder	
	131:14 where someone cannot metabolize the iron very well	
	131:15 so they accumulated. So we have to do phlebotomy,	
	131:16 meaning removing blood to eliminate the iron from	
	131:17 the blood. And that's the kind of a condition that	
	131:18 he had.	
132:1 - 132:9	**Raj, Kavitha 01-08-2019 (00:00:22)**	RajFINAL.125
	132:1 So you're treating him for this condition.	
	132:2 And at some point, did he present with non-Hodgkin's	
	132:3 lymphoma?	
	132:4 A. I mean, like I mentioned this morning, I	
	132:5 have not looked at the records recently, but I	
	132:6 remember him very well because he -- he presented	
	132:7 with significant pain issues and bone involvement of	
	132:8 lymphoma, if I recall correctly. And that's how he	
	132:9 presented.	
132:10 - 132:18	**Raj, Kavitha 01-08-2019 (00:00:22)**	RajFINAL.127
	132:10 Q. Okay. What do you mean by "pain issues"?	
	132:11 A. Like, he -- I -- I mean, I have to look at	
	132:12 my first consult.	

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	132:13 Q. Just your recollection. I'm going to show 132:14 you the record. 132:15 A. Right. I think he -- he had involvement 132:16 of lymphoma in his spine resulting in pain. And he 132:17 probably had a scan, it showed something, and I 132:18 think that's how he probably came to see me.	
132:24 - 133:1	**Raj, Kavitha 01-08-2019 (00:00:02)** 132:24 Q. I'm handing you Exhibit 14. 132:25 (Whereupon, Exhibit 14 was marked for 133:1 identification.)	RajFINAL.128 RK14.1
133:3 - 133:4	**Raj, Kavitha 01-08-2019 (00:00:04)** 133:3 Q. Do you recognize this document, Doctor? 133:4 A. Yes, it's a dictation done by me.	RajFINAL.129
133:15 - 133:25	**Raj, Kavitha 01-08-2019 (00:00:25)** 133:15 Q. Okay. And the date of this is June 9th, 133:16 2011. Do you see that? 133:17 A. Yes. 133:18 Q. Okay. So I'm going to go through this 133:19 History of Present Illness with you and kind of stop 133:20 and ask questions. 133:21 "This is a 69-old-male who is known to me 133:22 from outpatient services who was sent to the 133:23 emergency room after being evaluated by me in the 133:24 office for worsening right hip pain and new onset 133:25 upper back pain."	RajFINAL.130 RK14.1.1 RK14.1.2
134:1 - 134:5	**Raj, Kavitha 01-08-2019 (00:00:03)** 134:1 Did I read that right? 134:2 A. Yes. 134:3 Q. Is that what you were referring to 134:4 earlier? 134:5 A. Yes.	RajFINAL.132
134:6 - 134:19	**Raj, Kavitha 01-08-2019 (00:00:32)** 134:6 Q. Okay. And what do you recall, if 134:7 anything, about how he presented with with regards 134:8 to this pain? 134:9 A. He was very uncomfortable. That -- that I 134:10 remember very well. Because somebody has to be in a 134:11 lot of pain for me to send them to the hospital 134:12 for -- for their evaluation. Usually this is an 134:13 outpatient evaluation and management. For me to	RajFINAL.133

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	134:14 send him to the hospital, he was in severe pain.	
	134:15 Q. Okay. So to be clear, then, he presented	
	134:16 and you actually said go to the hospital?	
	134:17 A. Correct.	
	134:18 Q. The emergency room specifically?	
	134:19 A. Correct.	
136:6 - 137:16	**Raj, Kavitha 01-08-2019 (00:01:34)**	RajFINAL.134
	136:6 "During this time, he also started	RK14.1.3
	136:7 complaining of pain for which an MRI of the lumbar	
	136:8 spine was done at outside imaging which revealed	
	136:9 questionable" -- "a questionable process involving	
	136:10 the L5 vertebral body."	
	136:11 Did I read that right?	
	136:12 A. Yes.	
	136:13 Q. What is a "questionable process"?	
	136:14 A. Meaning some infiltrative process,	
	136:15 something occupying the L5 vertebral body. That	
	136:16 they were questioning, could there be something on	
	136:17 the L5 vertebral body on the MRI.	
	136:18 Q. And just for our -- well, for my sake,	
	136:19 what is the L5 vertebral body?	
	136:20 A. So L5 is the lumbar spine 5. T12 comes at	
	136:21 the level of the nipple and 1, 2, 3, 4, 5. So it's	
	136:22 like right around the kind of lower back. That's	
	136:23 the L5. Yeah.	
	136:24 Q. Okay.	
	136:25 "This was followed by a CT chest, abdomen,	RK14.1.4
	137:1 and pelvis which was done on March 18th, 2011, which	
	137:2 revealed multiple lytic and blastic lesions	
	137:3 throughout the bony skeleton concerning for	
	137:4 metastatic disease."	
	137:5 Did I read that right?	
	137:6 A. Yes.	
	137:7 Q. What does that mean?	
	137:8 A. That means he had a full body CT scan	
	137:9 which showed multiple spots in the bone. Lytic and	
	137:10 blastic are different ways of lymphoma eating the	
	137:11 bone, causing damage to the bone. And that's what	
	137:12 we saw on that CT scan.	
	137:13 Q. Would it be fair to say, then, in sort of	

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	137:14 layman's terms, the full body CT scan showed 137:15 abnormalities throughout his skeletal body? 137:16 A. Yes.	
137:17 - 137:22	**Raj, Kavitha 01-08-2019 (00:00:10)** 137:17 Q. Okay. It says, "He was also found to have 137:18 additional lytic abnormalities throughout the 137:19 spine." 137:20 Do you see that? 137:21 A. Yes, throughout the bony skeleton. 137:22 Q. Yeah.	RajFINAL.136 RK14.1.5
138:4 - 139:16	**Raj, Kavitha 01-08-2019 (00:01:31)** 138:4 Q. "The largest lytic abnormality was found 138:5 in the right iliac bone measuring 1.8 by 4.3 138:6 centimeters in diameter with a prominent soft tissue 138:7 component measuring 3.1 by 4.6 centimeters." 138:8 Did I read that right? 138:9 A. Yes. 138:10 Q. What does that mean? 138:11 A. That means that he had a large bone lesion 138:12 in the right hip bone. In addition to that, there 138:13 was a tumor growth, like a lymphoma mass, attached 138:14 to it. 138:15 Q. And 1.8 by 4.3 centimeters, that's almost 138:16 like a square inch; is that right? 138:17 A. Yeah. 2.5 centimeter is an inch. So 4.3 138:18 is almost, like, two inches. Yeah. 138:19 Q. Okay. So we're talking about like a 138:20 two-inch by one-inch sort of block in his -- in his 138:21 hip? 138:22 A. Correct. 138:23 Q. Okay. At that time did you think that 138:24 that mass might have contributed to the pain he was 138:25 experiencing? 139:1 A. Yes, certainly. 139:2 Q. Okay. 139:3 "He was also found to have additional 139:4 lytic abnormalities throughout the spine." 139:5 What does that mean? 139:6 A. That means he had additional bone lesions 139:7 throughout the spine.	RajFINAL.137 RK14.1.6

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	139:8 Q. Now, this sort of -- sort of having bone 139:9 lesions throughout the body and the spine, is that 139:10 something that you've seen before in your practice? 139:11 A. Yes. 139:12 Q. Is that indicative of anything to you as a 139:13 physician? 139:14 A. It means it's a pretty aggressive form of 139:15 disease that is involving multiple areas of the 139:16 bone.	
139:17 - 140:10	**Raj, Kavitha 01-08-2019 (00:00:38)** 139:17 Q. Okay. 139:18 "He also underwent a bone scan which 139:19 revealed essentially the same results. A bone scan 139:20 done on the same day also revealed diffuse bony mets 139:21 as seen on the CT." 139:22 What is a "bony met"? 139:23 A. Metastasis is if there is a cancer 139:24 involvement outside, say, if it's a lymphoma, we 139:25 think it is a lymph node organ, bone is outside the 140:1 lymphoma node. So it is a metastasis. And it's 140:2 essentially saying it's diffuse bone involvement. 140:3 Q. Okay. 140:4 A. That's what the bone scan showed. 140:5 Q. Okay. 140:6 "From the above studies, I was not clear 140:7 what is his primary." 140:8 Does that mean you weren't sure what the 140:9 cause of all those lesions were? 140:10 A. Correct.	RajFINAL.138 RK14.1.7 RK14.1.8
140:12 - 141:4	**Raj, Kavitha 01-08-2019 (00:00:55)** 140:12 "He also underwent additional laboratory 140:13 workup, including CEA, PSA, and workup of multiple 140:14 myeloma and serum free light chain assay, serum 140:15 protein electrophoresis, which were all within 140:16 normal limits. He underwent a biopsy of the right 140:17 iliac soft tissue mass which was entirely necrotic 140:18 tissue." 140:19 What -- what does that mean? 140:20 A. So he had workup, including all the blood 140:21 tests that we discussed there, and that two	RajFINAL.139 RK14.1.9

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	140:22 sentences, to see where -- whether this could be a 140:23 colon cancer, prostate cancer, myeloma. That all 140:24 came back negative. 140:25 So we biopsied that mass that had attached 141:1 to that right hip bone, but it showed dead tissue. 141:2 That means that -- that if the cell is dividing very 141:3 fast sometimes we can get to that cancer cell. It 141:4 shows just dead tissue. That's what we saw.	
141:5 - 141:13	**Raj, Kavitha 01-08-2019 (00:00:17)** 141:5 Q. So based on this, you couldn't tell when 141:6 that mass appeared in his -- in his hip? 141:7 A. Yeah, I can't tell. 141:8 Q. Okay. So it could have been there for a 141:9 year or so? 141:10 A. For sure for months. I don't know for 141:11 years. 141:12 Q. Okay. He probably would have felt it? 141:13 A. Yeah.	RajFINAL.140
142:1 - 142:24	**Raj, Kavitha 01-08-2019 (00:00:51)** 142:1 Q. Okay. 142:2 "Meanwhile in the last week, his symptoms 142:3 have been worse. He" -- "he was started on 142:4 MS contin." 142:5 What is that? 142:6 A. That's a longer acting morphine sulfate. 142:7 Q. Okay. Is that a narcotic? 142:8 A. It is. 142:9 Q. Okay. 142:10 "With dose adjustments. Despite that, his 142:11 pain involving the right hip got worse. The patient 142:12 also had lost five pounds of weight in the last two 142:13 weeks with poor appetite." 142:14 Did I read that right? 142:15 A. Yes. 142:16 Q. So what, if any, significance is there to 142:17 the fact that his pain was persisting through a 142:18 narcotic and he was losing weight? 142:19 A. Well, that means that he was in severe 142:20 pain and when there's anytime cancer destroying the 142:21 bone, there's always a tremendous amount of pain.	RajFINAL.141 RK14.1.10

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	142:22 That's probably what he was experiencing. And 142:23 weight loss and loss of appetite are very common 142:24 symptoms of cancer.	
143:1 - 143:8	**Raj, Kavitha 01-08-2019 (00:00:24)** 143:1 "He was also started on antibiotics with 143:2 Augmentin since the right hip mass was enlarged and 143:3 warm. Suspicious for underlying superimposed 143:4 infection versus tumor necrosis." 143:5 What does that mean? 143:6 A. That means maybe I was somewhat concerned 143:7 whether there could be an infection on top of the 143:8 mass so I treated him with antibiotics.	RajFINAL.142 RK14.1.11
143:9 - 144:4	**Raj, Kavitha 01-08-2019 (00:00:39)** 143:9 Q. Okay. 143:10 "To note, his mass did improve in size 143:11 after taking Augmentin for the last three days. 143:12 Today he presented with acute upper back pain and 143:13 worsening hip pain and symptoms of radio" -- how do 143:14 you say that? 143:15 A. Radiculopathy. 143:16 Q. -- "radiculopathy, which he was sent to 143:17 the ER." 143:18 What is radiculopathy? 143:19 A. If there is any nerve impingement from the 143:20 tumor mass involving the spine, it causes radiating 143:21 pain down the legs and nerve symptoms. 143:22 Q. Okay. And so he's presenting here both 143:23 with upper back pain, hip pain, and this sort of 143:24 radiating pain through his body? 143:25 A. Yes. 144:1 Q. Okay. It was so severe, in fact, that you 144:2 had to send him to the ER? 144:3 A. Yes. 144:4 Q. Okay.	RajFINAL.143 RK14.1.12
144:5 - 144:17	**Raj, Kavitha 01-08-2019 (00:00:45)** 144:5 "An MRI of the thoracic spine revealed a 144:6 TF fracture and increased bone marrow signal 144:7 heterogeneity with areas of abnormal bony edema 144:8 particularly in T2, T4, T8, T10, T11, and T12, but 144:9 no evidence of cord compression or spinal canal	RajFINAL.144 RK14.1.13

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	144:10 stenosis."	
	144:11 What does that mean?	
	144:12 A. So he had a thoracic spine 7, T7 fracture	
	144:13 because of the cancer. And he also had cancer	
	144:14 involvement essentially in all his thoracic spine.	
	144:15 But the cancer is not impinging so the spinal cord	
	144:16 is going inside the spine but not impinging the	
	144:17 cord.	
144:18 - 145:5	**Raj, Kavitha 01-08-2019 (00:00:29)**	RajFINAL.146
	144:18 So that's what it means.	
	144:19 Q. Okay. And the thoracic part of the spine,	
	144:20 where is that?	
	144:21 A. Oh, it's in the upper -- upper back.	
	144:22 Q. Okay. And so -- so what you're saying	
	144:23 here is the mass in the -- sorry, the cancer had	
	144:24 actually caused a fracture in one of his -- what do	
	144:25 you call it?	
	145:1 A. Thoracic spine 7, T7.	
	145:2 Q. Okay. And then there was evidence of	
	145:3 cancer throughout the -- essentially the rest of his	
	145:4 thoracic spine?	
	145:5 A. Yes.	
145:20 - 146:8	**Raj, Kavitha 01-08-2019 (00:00:37)**	RajFINAL.147 RK14.1.14
	145:20 Q. His past medical history was that	
	145:21 hemochromatosis. That's the -- the iron disorder we	
	145:22 talked about?	
	145:23 A. Uh-huh.	
	145:24 Q. And then history of recurrent viral	
	145:25 meningitis for which he's on Valtrex	
	146:1 prophylactically.	
	146:2 What is that?	
	146:3 A. He's had history of brain fever, like an	
	146:4 infection, viral infection from long time ago. And	
	146:5 he has had seizures from that and his neurologist	
	146:6 has kept him on this antiviral medication to prevent	
	146:7 this from flaring-up and causing more seizure	
	146:8 issues.	
146:9 - 146:12	**Raj, Kavitha 01-08-2019 (00:00:09)**	RajFINAL.148
	146:9 Q. Okay. And are you aware of any studies	
	146:10 showing that this sort of treatment, this Valtrex	

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	146:11 increases the risk of non-Hodgkin's lymphoma?	
	146:12 A. Valtrex, no.	
146:13 - 148:4	**Raj, Kavitha 01-08-2019 (00:01:36)**	RajFINAL.149
	146:13 Q. And then the next one refers to that	RK14.2.1
	146:14 seizure disorder you mentioned before.	
	146:15 A. Uh-huh.	
	146:16 Q. What is Dilantin?	
	146:17 A. Dilantin is an anti-seizure medication.	
	146:18 Q. Okay. And then number 4 is benign	
	146:19 prostatic hypertrophy?	
	146:20 A. Uh-huh.	
	146:21 Q. What is that?	
	146:22 A. Prostate enlargement.	
	146:23 Q. Is that -- there's no -- there's no issue	
	146:24 with cancer there?	
	146:25 A. No, it's a very common thing noted in men	
	147:1 in their 70s.	
	147:2 Q. Okay. And an ulcerative -- that's ulcers?	
	147:3 A. It is an autoimmune condition involving	
	147:4 the colon.	
	147:5 Q. Okay. Okay. And was he receiving any	
	147:6 treatment for that?	
	147:7 A. I don't recall, but I don't say -- see	
	147:8 anything there -- or looks like he is on some	
	147:9 medication right in the medication list for that.	
	147:10 Q. Okay. What medication here would be	
	147:11 associated with the ulcerative colitis?	
	147:12 A. Asacol.	
	147:13 Q. Okay. And is that an immunosuppressant	
	147:14 drug?	
	147:15 A. I don't think so but I'm not very sure	
	147:16 because I don't treat that condition.	
	147:17 Q. Okay. To the best of your knowledge as an	
	147:18 oncologist, is having this condition associated with	
	147:19 non-Hodgkin's lymphoma?	
	147:20 A. Any autoimmune conditions can increase the	
	147:21 risk of non-Hodgkin's lymphoma.	
	147:22 Q. Okay. Number 6, the history of	
	147:23 superficial skin melanoma resected a few months ago,	
	147:24 do you see that?	

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	147:25 A. Yes. 148:1 Q. What does that refer to? 148:2 A. That means that he had a skin cancer in 148:3 the form of melanoma and he had surgery for that a 148:4 few months before I saw him.	
148:5 - 148:7	**Raj, Kavitha 01-08-2019 (00:00:05)** 148:5 Q. Okay. And is there any reason to believe 148:6 that that might be associated with NHL? 148:7 A. No.	RajFINAL.152
148:17 - 149:4	**Raj, Kavitha 01-08-2019 (00:00:31)** 148:17 Q. So what we have here is Impression and 148:18 Discussion. "A 69-year-old male with a newly 148:19 diagnosed possible metastatic disease pending 148:20 biopsy." 148:21 What does that mean? 148:22 A. Meaning that the scan shows that he has 148:23 cancer involvement in multiple parts of the body. 148:24 We don't know what cancer it is. So that's why I 148:25 said "possible metastatic disease pending biopsy." 149:1 Q. So this is the first sort of serious 149:2 indication that he might be suffering from some sort 149:3 of lymphoma? 149:4 A. Cancer.	RajFINAL.153 RK14.3.1
149:5 - 149:9	**Raj, Kavitha 01-08-2019 (00:00:05)** 149:5 Q. Cancer, I should say. 149:6 A. Right. 149:7 Q. And you are waiting on the biopsy to 149:8 presumably see what type? 149:9 A. Correct.	RajFINAL.154
149:10 - 149:21	**Raj, Kavitha 01-08-2019 (00:00:21)** 149:10 Q. Okay. And it says you have -- you want to 149:11 follow up on the biopsy and in, what, about four 149:12 days from the date of this record; is that right? 149:13 A. I'm sorry? 149:14 Q. It says, "Recommendations." "Await biopsy 149:15 on June 13th, 2011." At the very bottom of 149:16 Recommendations. 149:17 A. Okay. 149:18 Q. So you're -- you're going to follow up 149:19 with him in a few days once you have the results of	RajFINAL.155 RK14.3.2

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	149:20 the biopsy.	
	149:21 A. Probably, yes.	
149:25 - 150:3	**Raj, Kavitha 01-08-2019 (00:00:07)**	RajFINAL.156
	149:25 So to the best of your knowledge, what --	clear
	150:1 what was he ultimately diagnosed with?	
	150:2 A. He was ultimately diagnosed with diffuse	
	150:3 large B-cell lymphoma, stage IV.	
150:4 - 150:6	**Raj, Kavitha 01-08-2019 (00:00:05)**	RajFINAL.157
	150:4 Q. And that is the same type of cancer that	
	150:5 his wife was diagnosed with; is that right?	
	150:6 A. Correct.	
150:9 - 150:9	**Raj, Kavitha 01-08-2019 (00:00:01)**	RajFINAL.158
	150:9 THE WITNESS: But she had a CNS form.	
150:11 - 150:20	**Raj, Kavitha 01-08-2019 (00:00:17)**	RajFINAL.159
	150:11 Q. That's right. And so they're both diffuse	
	150:12 B-cell lymphoma, but hers manifested inside the CNS,	
	150:13 right?	
	150:14 A. Correct.	
	150:15 Q. Whereas, his manifested in, I guess, his	
	150:16 bones?	
	150:17 A. Bones.	
	150:18 Q. And if -- even though it was in his spine,	
	150:19 it was not in the nervous system?	
	150:20 A. Correct.	
150:21 - 151:1	**Raj, Kavitha 01-08-2019 (00:00:11)**	RajFINAL.160
	150:21 Q. Okay. Diffuse B-cell lymphoma is one of	
	150:22 the more common types of non-Hodgkin's lymphoma?	
	150:23 A. Correct.	
	150:24 Q. Is it generally considered an aggressive	
	150:25 or indolent type of cancer?	
	151:1 A. It's an aggressive cancer.	
151:2 - 151:7	**Raj, Kavitha 01-08-2019 (00:00:11)**	RajFINAL.161
	151:2 Q. And what is the sort of -- well, with	
	151:3 regards to Mr. Pilliod, what -- what sort of	
	151:4 treatment did -- would you have prescribed -- did	
	151:5 you prescribe for him to treat his cancer?	
	151:6 A. Essentially it's treated with	
	151:7 chemotherapy.	
151:17 - 151:18	**Raj, Kavitha 01-08-2019**	RajFINAL.162
	151:17 (Whereupon, Exhibit 15 was marked for	

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	151:18 identification.)	
152:3 - 153:6	**Raj, Kavitha 01-08-2019 (00:01:03)**	RajFINAL.163
	152:3 Q. All right. So, Doctor, this is one of	RK15.1.1
	152:4 your records; is that right?	
	152:5 A. Yes.	
	152:6 Q. All right. And this is dated 7/11/2013?	
	152:7 A. Yes.	
	152:8 Q. Okay. And if we read here History of	RK15.1.2
	152:9 Present Illness.	
	152:10 "I had the pleasure of seeing Mr. Pilliod	
	152:11 on a follow-up visit today. He is a very pleasant	
	152:12 71-year-old gentleman."	
	152:13 So the last record, he was 69, so this is	
	152:14 two years later?	
	152:15 A. Yes.	
	152:16 Q. "Who has a history of stage IV diffuse	
	152:17 B-cell lymphoma when he presented with extensive	
	152:18 metastasis to his bones and diffuse	
	152:19 hypermetabolic" -- how do you say that?	
	152:20 A. Lymphadenopathy.	
	152:21 Q. Okay.	
	152:22 -- "in 2011. He underwent six cycles of	
	152:23 R-CHOP from June '11 through October 2011 with	
	152:24 complete metabolic response."	
	152:25 Did I read that right?	
	153:1 A. Yes.	
	153:2 Q. What is R-CHOP?	clear
	153:3 A. R-CHOP is a combination of multiple	
	153:4 chemotherapy drugs, including R for Rituxan, C for	
	153:5 Cytoxan, H is actually the adriamycin, O is for	
	153:6 vincristine, and P for prednisone.	
153:7 - 153:18	**Raj, Kavitha 01-08-2019 (00:00:30)**	RajFINAL.164
	153:7 Q. What are some of the side effects	
	153:8 associated with that combination of chemotherapy?	
	153:9 A. Like any other chemotherapy, people can	
	153:10 experience low energy, nausea, vomiting, hair loss,	
	153:11 low blood count. Those are very common side	
	153:12 effects.	
	153:13 Rare side effects could be cardiomyopathy,	
	153:14 meaning heart muscle damage, or risk of Leukemia,	

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	153:15 things like that. 153:16 Q. Have you ever heard of something called 153:17 chemo brain? 153:18 A. Yes.	
157:18 - 157:20	**Raj, Kavitha 01-08-2019 (00:00:03)** 157:18 Q. Is that something you would defer to a 157:19 neurologist on? 157:20 A. Yes.	RajFINAL.170
158:22 - 159:3	**Raj, Kavitha 01-08-2019 (00:00:12)** 158:22 Q. Okay. And under Recommendation Plan, it 158:23 says, "PET/PT shows clinical remission." 158:24 Do you see that? 158:25 A. Yes. 159:1 Q. Was it your understanding that at this 159:2 time, at least in 2013, he was in remission? 159:3 A. Yes.	RajFINAL.171 RK15.1.3
159:22 - 160:12	**Raj, Kavitha 01-08-2019 (00:00:29)** 159:22 Q. Okay. And are you currently treating 159:23 Mr. Pilliod? 159:24 A. Yes, I am. 159:25 Q. Okay. Do you recall the last time you 160:1 gave him a scan? 160:2 A. I -- I think the last time I saw him was a 160:3 scan follow-up, if I remember right. Because he was 160:4 having some symptoms that were -- we were not sure 160:5 entirely what was causing those. So I think he did 160:6 have a scan. I don't remember, though -- 160:7 Q. Okay. 160:8 A. -- for sure. 160:9 Q. Do you recall if he's had any relapse or 160:10 recurrence? 160:11 A. For sure, he did not have any relapse. I 160:12 know that he is in remission.	RajFINAL.172 clear
162:5 - 162:8	**Raj, Kavitha 01-08-2019 (00:00:08)** 162:5 Q. And again, I may be going over a few 162:6 documents that we have gone over previously and -- 162:7 but hopefully, I won't be too repetitive. Okay? 162:8 A. Okay.	RajFINAL.173
162:14 - 162:20	**Raj, Kavitha 01-08-2019 (00:00:16)** 162:14 Q. I'm going to mark as Exhibit 16 a note	RajFINAL.174 RK16.1.1

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	162:15 from March the 15th, 2011, which I believe is your	
	162:16 first consultation with Mr. Pilliod.	
	162:17 Do you recognize this exhibit?	
	162:18 A. Yes.	
	162:19 Q. And this is your note and your signature?	
	162:20 A. Yes.	
163:11 - 164:9	**Raj, Kavitha 01-08-2019 (00:01:01)**	RajFINAL.175
	163:11 Q. And so this first time that you saw him in	
	163:12 March of 2011 was really just to get to the bottom	
	163:13 of this high iron issue?	
	163:14 A. Correct.	
	163:15 Q. All right. And under the Past Medical	RK16.1.2
	163:16 History, it appears that you noted that he had a	
	163:17 history of ulcerative colitis; is that right?	
	163:18 A. Yes.	
	163:19 Q. And this history of ulcerative colitis for	
	163:20 Mr. Pilliod obviously predates his diffuse large	
	163:21 B-cell lymphoma diagnosis; is that right?	
	163:22 A. Correct.	
	163:23 Q. And if we say "diffuse large B-cell	
	163:24 lymphoma," if we say "DLBCL," are we on the same	
	163:25 page there?	
	164:1 A. Yes.	
	164:2 Q. Okay. And I think you told counsel before	
	164:3 that ulcerative colitis is an autoimmune disease?	
	164:4 A. Correct.	
	164:5 Q. And did you also say that -- if I heard	
	164:6 you right, that -- that any autoimmune condition can	
	164:7 increase the risk of non-Hodgkin's lymphoma like	
	164:8 DLBCL?	
	164:9 A. It's possible.	
164:14 - 165:4	**Raj, Kavitha 01-08-2019 (00:00:37)**	RajFINAL.176
	164:14 Q. All right. You next note in his past	
	164:15 medical history a seizure disorder since 1978.	RK16.1.3
	164:16 Do you see that?	
	164:17 A. Yes.	
	164:18 Q. And obviously, his seizure disorder would	
	164:19 predate his cancer diagnosis, right?	
	164:20 A. Correct.	
	164:21 Q. And at this time did you have any	clear

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	164:22 understanding at this time what the -- what the 164:23 etiology or what the cause of his seizure disorder 164:24 was? 164:25 A. So at that time, from what he told me that 165:1 he -- he was diagnosed with a viral meningitis 165:2 around the same time, and that's when he was 165:3 diagnosed with seizure disorder. So he told me that 165:4 was kind of related to each other.	
165:16 - 166:4	**Raj, Kavitha 01-08-2019 (00:00:30)** 165:16 Q. Okay. And you did not diagnose him with 165:17 lymphoma or any type of cancer at this first 165:18 meeting, correct? 165:19 A. Correct. 165:20 Q. And why is it that if you're not treating 165:21 him for cancer and you're not diagnosing him with 165:22 cancer at this time why he would be coming to you 165:23 for this high iron level? 165:24 A. Because I'm a hematologist so I take care 165:25 of high iron levels. That's a hematology problem. 166:1 Q. Okay. So your -- your specialty includes 166:2 not only treating people for cancer but other blood 166:3 disorders as well? 166:4 A. Correct.	RajFINAL.177
171:6 - 174:24	**Raj, Kavitha 01-08-2019 (00:03:45)** 171:6 Q. All right. And then if we come back to 171:7 Exhibit 14. 171:8 A. Uh-huh. 171:9 Q. Which is the June -- June 2011 note. 171:10 Are you there? 171:11 A. Me? Yes. 171:12 Q. Yes. 171:13 And so we can see that toward the top of 171:14 this note, it talks about the fact, oh, six lines 171:15 down or so, that he started complaining of pain for 171:16 which an MRI was done. 171:17 A. Uh-huh. 171:18 Q. And then this was followed. You ordered a 171:19 CT of the chest, the abdomen, and the pelvis, and 171:20 that was done about a week later. 171:21 Do you see that?	RajFINAL.178 RK14.1.15

171:22 A. Yes.
171:23 Q. And all of those testings on Mr. Pilliod
171:24 gave you a heightened concern that there was some
171:25 other process going on?
172:1 A. Correct.
172:2 Q. Okay. And -- and that -- that heightened
172:3 process that you were concerned about was a
172:4 metastatic cancer?
172:5 A. Correct.
172:6 Q. And you state below, and you talked with
172:7 counsel, that from those MRIs and all of that RK14.1.16
172:8 additional investigation, you were not clear on,
172:9 quote, what his primary was.
172:10 Do you --
172:11 A. Yes.
172:12 Q. Do you remember writing that?
172:13 A. Yes.
172:14 Q. And what does that mean? clear
172:15 A. What that means is there is cancer
172:16 involving multiple areas of the bone. But the
172:17 question is, where is it coming from? Is it a colon
172:18 cancer going to the bone, prostate cancer, or is it
172:19 a lymphoma?
172:20 So that's what it means.
172:21 Q. And from those imaging, like you said, you
172:22 could not tell, number one, what type of cancer he
172:23 had; is that right?
172:24 A. Correct.
172:25 Q. Nor could you tell what the potential
173:1 cause or contributing factors to that cancer were;
173:2 is that right?
173:3 A. Correct.
173:4 Q. And it looks like that you recommended
173:5 a -- a biopsy of his right hip?
173:6 A. Looks like, yes, I did.
173:7 Q. And unfortunately, the cells and the
173:8 pathology, et cetera, that you got back for that
173:9 didn't -- didn't lead to any further conclusions as
173:10 to what his issues were, right?
173:11 A. Correct.

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	173:12 Q. And so you went to the next step of, okay,	
	173:13 I'm going to biopsy a different area, and you went	
	173:14 to his left side and that was scheduled for a few	
	173:15 days from -- from then?	
	173:16 A. Maybe in one of the vertebral bodies, yes.	
	173:17 A. few days from then, yes.	
	173:18 Q. All right. So you were going to continue	
	173:19 to investigate to try to figure out what the -- what	
	173:20 type of cancer he might have because that was your	
	173:21 concern?	
	173:22 A. Yes.	
	173:23 Q. And then you went through and did another	
	173:24 past medical history, which is kind of where we	
	173:25 started, and you said you had a little bit more	
	174:1 information here than you had in March when you	
	174:2 first saw him.	
	174:3 Do you remember that?	
	174:4 A. Looks -- I mean, just from looking through	
	174:5 the notes, I have more information on the past	
	174:6 medical history here.	
	174:7 Q. And the first part of the past medical	RK14.1.14
	174:8 history you talk about his hemochromatosis, right?	
	174:9 A. Yes.	
	174:10 Q. And the second part, which you went over	
	174:11 with counsel, said that he had a history of	
	174:12 recurrent viral meningitis for which he is on	
	174:13 Valtrex prophylactically.	
	174:14 Do you see that?	
	174:15 A. Yes.	
	174:16 Q. And -- and what was your understanding	
	174:17 when you write "recurrent viral meningitis?" What	
	174:18 is that, for the jury?	
	174:19 A. This is by history, so I don't have any	
	174:20 documentation to say what exactly his symptoms were.	
	174:21 He told me that he would get these	
	174:22 episodes of seizures or severe headaches, and he was	
	174:23 treated with the antiviral medication to prevent	
	174:24 this, from having these attacks.	
175:4 - 175:11	**Raj, Kavitha 01-08-2019 (00:00:20)**	RajFINAL.179
	175:4 Q. Was this history important to you in -- in	clear

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	175:5 his care and treatment in any particular way?	
	175:6 A. Not really. But we -- we asked questions	
	175:7 about any chronic viral infections and lymphomas.	
	175:8 So that's maybe pertinent.	
	175:9 Q. Can that suggest to you that there may be	
	175:10 some weakened immune system that he has?	
	175:11 A. Possibly.	
176:4 - 176:20	**Raj, Kavitha 01-08-2019 (00:00:54)**	RajFINAL.180
	176:4 Q. In connection with your treatment of	
	176:5 Mr. Pilliod today, is it relevant to you that he had	
	176:6 a long history of recurrent viral meningitis?	
	176:7 A. So any type of chronic viral infections	
	176:8 can predispose someone to get a lymphoma. But	
	176:9 there -- there are certain viral infections, not	
	176:10 like the one that causes meningitis, something	
	176:11 called Epstein-Barr virus would cause it. I would	
	176:12 be more interested in that. But you always wonder	
	176:13 when someone has any type of chronic inflammation,	
	176:14 anything like that that -- could that be a possible	
	176:15 factor in?	
	176:16 Q. Okay. And when you go on to his past	
	176:17 medical history to the next page, you again note	RK14.2.2
	176:18 that he has a history of seizure disorder and he's	
	176:19 being treated with Dilantin?	
	176:20 A. Yes.	
176:25 - 176:25	**Raj, Kavitha 01-08-2019 (00:00:02)**	RajFINAL.181
	176:25 Q. And then we -- if we go down to number 5,	RK14.2.3
177:1 - 178:23	**Raj, Kavitha 01-08-2019 (00:01:51)**	RajFINAL.182
	177:1 is the history of ulcerative colitis; is that right?	
	177:2 A. Yes.	
	177:3 Q. And we talked about that just -- just a	
	177:4 minute ago?	
	177:5 A. Yes.	
	177:6 Q. And then number 6 is a history of	RK14.2.4
	177:7 superficial skin melanoma resected a few months ago.	
	177:8 Do you see that?	
	177:9 A. Yes.	
	177:10 Q. And what -- is -- is melanoma a type of	
	177:11 cancer?	
	177:12 A. Yes, it is.	

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	177:13 Q. And what -- can you explain what type of 177:14 cancer it is? 177:15 A. It is a skin cancer mostly due to 177:16 excessive skin -- sun exposure. 177:17 Q. And so at the time that you were 177:18 investigating the -- the issues with -- that you 177:19 were seeing on the imaging, back in June of 2011, 177:20 you understood that several months ago he had at 177:21 least a prior history of some type of cancer? 177:22 A. Yes. 177:23 Q. And was that information, this prior 177:24 history of melanoma, important to you in any way in 177:25 your care and treatment of Mr. Pilliod? 178:1 A. Yeah, at that time it was important 178:2 because I was worried, could this be a melanoma 178:3 spreading to his bones? 178:4 Q. Uh-huh. 178:5 A. So, yes, that was pertinent at that time, 178:6 before the biopsy results. 178:7 Q. And I think you talked with counsel and he 178:8 asked you whether melanoma was associated with an 178:9 increased risk of lymphoma. 178:10 Do you remember talking about that with 178:11 counsel and you said you weren't aware of it? 178:12 A. I don't think there is any increased risk, 178:13 not that I know of. 178:14 Q. And I guess my only question is, have you 178:15 done an exhaustive literature search on that 178:16 recently? 178:17 A. Not recently. 178:18 Q. Okay. Were you aware at this time, in 178:19 June of 2011, that Mr. Pilliod had had other prior 178:20 skin cancers other than melanoma? 178:21 A. I can't remember if he had told me. I 178:22 don't see it in my notes. I can only go with my 178:23 notes from seven years ago.	clear
178:24 - 179:17	**Raj, Kavitha 01-08-2019 (00:00:44)** 178:24 Q. Fair enough. 178:25 And -- but -- but what we do know is that 179:1 ultimately, at the end of this workup, you were	RajFINAL.183

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	179:2 going to await a further biopsy that was scheduled	
	179:3 for a few days from then to biopsy a different area	
	179:4 so you could figure out, if you could, what type of	
	179:5 cancer or other process was going on?	
	179:6 A. So I think what -- what -- what had	
	179:7 happened was that biopsy was already scheduled but	
	179:8 he ended up having that compression fracture from	
	179:9 the lymphoma so he developed that acute pain. So we	
	179:10 had to admit him. And then we already knew that he	
	179:11 was scheduled for a biopsy in a couple days.	
	179:12 Q. Okay.	
	179:13 A. Yeah.	
	179:14 Q. So you were going to manage his pain along	
	179:15 with his potential infection and then await the	
	179:16 biopsy in a few days?	
	179:17 A. Correct.	
180:7 - 181:14	**Raj, Kavitha 01-08-2019 (00:01:28)**	RajFINAL.184
	180:7 Q. All right. And with respect to	
	180:8 Exhibit 18, the first surgical pathology report, do	RK18.1
	180:9 you see that underneath the final diagnosis, it	
	180:10 talks about the -- the biopsy to the left iliac.	RK18.1.1
	180:11 Do you see that?	
	180:12 A. Yes.	
	180:13 Q. And then in the line below that, at the	RK18.1.2
	180:14 end, it says, "Final diagnosis pending	
	180:15 consultation."	
	180:16 Do you see that?	
	180:17 A. Yes.	
	180:18 Q. And then immediately below that, it talks	
	180:19 about the pathologist's comment, and then it says,	RK18.1.3
	180:20 "Report called to Dr. Raj on June 14, 2011."	
	180:21 Do you see that?	
	180:22 A. Yes.	
	180:23 Q. And so you would have been aware that --	
	180:24 this is -- this is what the pathology report was as	
	180:25 of this day, but it's being sent out for another	
	181:1 review?	
	181:2 A. Correct.	
	181:3 Q. Okay. And then Exhibit 19, that's the	RK19.1
	181:4 review from other hematopathologists at Stanford; is	

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	181:5 that right?	
	181:6 A. Correct.	
	181:7 Q. Okay. And were you aware of this	
	181:8 pathology report when you were treating Mr. Pilliod?	
	181:9 A. Yes.	
	181:10 Q. Okay. And would you have seen -- do you	
	181:11 think would you have seen this pathology report	
	181:12 probably on June 17th when it came in or	
	181:13 thereabouts?	
	181:14 A. Yes, I -- I would think so.	
182:14 - 183:8	**Raj, Kavitha 01-08-2019 (00:00:41)**	RajFINAL.185
	182:14 Q. When you reviewed this pathology report --	clear
	182:15 A. Okay.	
	182:16 Q. -- and you're trying to figure out what to	
	182:17 do in terms of your care and treatment of	
	182:18 Mr. Pilliod, what did this all mean to you?	
	182:19 A. Okay. Well, we had a definitive diagnosis	
	182:20 that it is a diffuse large B-cell lymphoma. I	
	182:21 didn't have any questions about it so I knew that we	
	182:22 have a diagnosis and then we have to treat him.	
	182:23 Q. Okay. And are those results that it's a	
	182:24 DLBCL, are those important to your care and	
	182:25 treatment?	
	183:1 A. Very important.	
	183:2 Q. And why is that?	
	183:3 A. Because different types of lymphoma is	
	183:4 treated very differently. So it is important to	
	183:5 know the subtype of lymphoma.	
	183:6 Q. Okay. So how many -- how many different	
	183:7 subtypes of lymphoma are there?	
	183:8 A. There are about, like, a hundred types.	
183:10 - 183:24	**Raj, Kavitha 01-08-2019 (00:00:32)**	RajFINAL.187
	183:10 A. But in general we talk about low grade,	
	183:11 high grade, and very high grade. And this is high	
	183:12 grade.	
	183:13 Q. I see. So there's hundreds of	
	183:14 different -- let me -- when you're thinking about	
	183:15 how to care for Mr. Pilliod, there's hundreds of	
	183:16 types of different -- hundreds of different types of	
	183:17 lymphoma out there, but you have to know the exact	

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	183:18 type to know how to treat it because they can be 183:19 treated all very differently? 183:20 A. We pretty much pile in three groups, like 183:21 I said, low grade, high grade, or very high grade. 183:22 We kind of pile those different types of lymphomas 183:23 in three groups and we treat -- treat these three 183:24 groups separately, yes.	
184:7 - 184:20	**Raj, Kavitha 01-08-2019 (00:00:32)** 184:7 Q. In terms of your care and treatment of 184:8 Mr. Pilliod, to give him an accurate diagnosis, an 184:9 accurate treatment plan, and an accurate prognosis, 184:10 do you have to know the exact subtype of lymphoma 184:11 that you're talking about? 184:12 A. Yes. 184:13 Q. And does it matter? Do the details in 184:14 that regard matter? 184:15 A. Details of subtype of lymphoma does 184:16 matter. 184:17 Q. Do you try to make evidence-based 184:18 decisions when you're treating Mr. Pilliod and your 184:19 patients? 184:20 A. All the time.	RajFINAL.188
185:11 - 185:16	**Raj, Kavitha 01-08-2019 (00:00:16)** 185:11 Q. Okay. If you come back to Exhibit 19, 185:12 the -- the consultation pathology report from 185:13 Stanford, and you go to the second page, it's a 185:14 little bit -- it's a bit little hard to read, but do 185:15 you see there's a chart in the top middle? 185:16 A. Yes.	RajFINAL.190 RK19.2 RAJ19.2.1
185:17 - 186:10	**Raj, Kavitha 01-08-2019 (00:00:59)** 185:17 Q. And you mentioned before, I think, 185:18 Epstein-Barr virus and that that was important to 185:19 you? 185:20 A. Correct. 185:21 Q. Is -- was Mr. Pilliod's tissue tested for 185:22 Epstein-Barr? 185:23 A. I think we're talking about two different 185:24 things. Epstein-Barr virus, we would all have 185:25 Epstein-Barr virus infection very likely, very 186:1 common viral infection. There are -- we talked	RajFINAL.191

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	186:2 about, I think, causality of lymphomas, Epstein-Barr 186:3 virus. This is more trying to look at stains to see 186:4 that in terms of prognosis. There was some studies 186:5 which say that EBV status can be used as 186:6 prognosticator in certain types of lymphoma. 186:7 So in my opinion, I don't think that added 186:8 any more information to me. But the other two tests 186:9 makes more -- like, adds more information to treat 186:10 him.	
186:11 - 186:21	**Raj, Kavitha 01-08-2019 (00:00:26)** 186:11 Q. And what did those -- so what did those 186:12 tests add to you, if you can just quickly tell me? 186:13 A. Sure. 186:14 The BCL1 being negative rules out a very 186:15 aggressive, like we talked about low grade, high 186:16 grade, very high grade, it rules out a very high 186:17 grade lymphoma. 186:18 Ki-67 also speaks for the aggressiveness 186:19 of the cancer. It shows it is high, but it is not 186:20 like super high, like 80 percent. It is high as 186:21 20 percent. So it's high.	RajFINAL.192 RAJ19.2.2
187:8 - 187:24	**Raj, Kavitha 01-08-2019 (00:00:36)** 187:8 Q. Okay. Hi, Dr. Raj, we're back on the 187:9 record. And I think when we left off you were 187:10 talking about the fact that this testing for BCL1 187:11 was important because a positive result there may 187:12 indicate some type of aggressive tumor; is that 187:13 right? 187:14 A. Correct. 187:15 Q. All right. And you also said that the -- 187:16 the Ki-67 is another test for the, for lack of a 187:17 better word, aggressiveness of the tumor? 187:18 A. Correct. 187:19 Q. And then in terms of the Epstein-Barr, do 187:20 you see where the results are equivocal? 187:21 A. Correct. 187:22 Q. And what did that mean to you? 187:23 A. It means we can't say whether it's 187:24 negative or positive.	RajFINAL.193 RAJ19.2.3
187:25 - 188:6	**Raj, Kavitha 01-08-2019 (00:00:19)**	RajFINAL.194

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	187:25 Q. Were there any thoughts that you know of	clear
	188:1 or can remember about testing this tissue for any	
	188:2 other viruses like HIV or anything like that?	
	188:3 A. Usually, anybody with lymphoma we test	
	188:4 them for HIV. That's a very standard protocol.	
	188:5 Hepatitis and HIV. It was tested. And he was	
	188:6 negative.	
188:7 - 188:10	**Raj, Kavitha 01-08-2019 (00:00:08)**	RajFINAL.195
	188:7 Q. Okay. And at the end of the day, like you	
	188:8 said, all of this testing told you that he had a	
	188:9 DLBCL type lymphoma?	
	188:10 A. Correct.	
188:11 - 188:17	**Raj, Kavitha 01-08-2019 (00:00:21)**	RajFINAL.196
	188:11 Q. And were you able to tell, based on your	
	188:12 care and treatment of Mr. Pilliod and the -- the	
	188:13 pathology, how quickly that lymphoma developed in	
	188:14 his body? When did it start?	
	188:15 A. I mean, this is a question I get asked all	
	188:16 the time. It's really hard to predict that. We can	
	188:17 only guess.	
189:2 - 189:15	**Raj, Kavitha 01-08-2019 (00:00:42)**	RajFINAL.197
	189:2 Q. Did Mr. Pilliod ask you when it started?	
	189:3 A. I don't remember if he had asked me. But	
	189:4 the majority of patients ask me that question.	
	189:5 Q. And in your habit and practice, if	
	189:6 Mr. Pilliod had asked you, what would you have told	
	189:7 him, based on all your findings here?	
	189:8 A. Like I said, it's hard to exactly say how	
	189:9 long it's been going on, but I would have told him	
	189:10 we're probably going on for months now.	
	189:11 (Whereupon, a brief discussion off the	
	189:12 record.)	
	189:13 BY MR. TOMASELLI:	
	189:14 Q. Months, not years?	
	189:15 A. Correct.	
189:21 - 190:4	**Raj, Kavitha 01-08-2019 (00:00:28)**	RajFINAL.198
	189:21 But was there any -- anything in the	
	189:22 biopsy or histopathology or any of the -- any of the	
	189:23 testing that was done, imaging, whether it was CT or	
	189:24 MRI or PET scans, was there any diagnostic test of	

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	189:25 any kind that suggested to you that Roundup or some 190:1 pesticide was the cause or contributed to this 190:2 particular DLBCL? 190:3 A. Like I mentioned before, we don't 190:4 specifically test for anything like that.	
190:23 - 191:20	**Raj, Kavitha 01-08-2019 (00:00:57)** 190:23 I marked as Exhibit 20 a note from 190:24 August 22nd of 2017. 190:25 Q. Do you see that? 191:1 A. Yes. 191:2 Q. This is indeed your note and your 191:3 follow-up with Mr. Pilliod; is that right? 191:4 A. Yes. 191:5 Q. And I think this is the last one we have 191:6 for you treating Mr. Pilliod. But are you aware, as 191:7 you sit here today, of any later visits? 191:8 A. I mean, I know that I've seen him a few 191:9 months ago but -- I mean, so this must be the most 191:10 recent. 191:11 Q. Your recollection is consistent with this 191:12 potentially being the last time you saw him? 191:13 A. Yes. 191:14 Q. Okay. And again, it looks like in the 191:15 history of present illness, this now, Mr. Pilliod is 191:16 "a 76-year-old gentleman who has a history of 191:17 stage IV diffuse large B-cell lymphoma and 191:18 hemochromatosis." And he's here for follow-up. 191:19 Do you see that? 191:20 A. Yes.	RajFINAL.199 RK20.1.1 RK20.1.2
192:5 - 193:9	**Raj, Kavitha 01-08-2019 (00:01:03)** 192:5 Next thing you write is, "He underwent six 192:6 cycles of R-CHOP from June 2011 to October 2011 with 192:7 complete metabolic response." 192:8 Do you see that? 192:9 A. Yes. 192:10 Q. And as you noted with counsel, R-CHOP is 192:11 a -- a type of chemotherapy? 192:12 A. Yes. 192:13 Q. And with respect to Mr. Pilliod, it was 192:14 the standard of care for treating his DLBCL?	RajFINAL.200 RK20.1.3

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	192:15 A. Correct. 192:16 Q. But it's not necessarily the standard of 192:17 care for every single lymphoma? 192:18 A. Correct. 192:19 Q. All right. And did you actually prescribe 192:20 the R-CHOP for Mr. Pilliod? 192:21 A. Yes. 192:22 Q. All right. And do you recall where he 192:23 would have undertaken his chemotherapy? 192:24 A. In this office. 192:25 Q. Okay. Do you recall changing his 193:1 chemotherapy regimen at any time to something else? 193:2 A. I don't recall any changes. 193:3 And also my notes says that he has 193:4 received six cycles of R-CHOP. I would think that 193:5 I -- I would have noted it if I had changed 193:6 anything. 193:7 Q. If you did change it, it would likely be 193:8 noted in these records? 193:9 A. Right.	clear
194:12 - 194:17	**Raj, Kavitha 01-08-2019 (00:00:10)** 194:12 Q. All right. We discussed previously that 194:13 you noted in your records that Mr. Pilliod had a 194:14 seizure disorder prior to seeing you for the first 194:15 time. 194:16 Do you remember that? 194:17 A. Yes.	RajFINAL.201
194:21 - 194:24	**Raj, Kavitha 01-08-2019 (00:00:06)** 194:21 Q. Did -- did his seizure disorder in any way 194:22 impede your thought process to actually treating him 194:23 with chemotherapy? 194:24 A. No.	RajFINAL.202
195:3 - 196:2	**Raj, Kavitha 01-08-2019 (00:01:09)** 195:3 Q. Yeah, did you have document, as far as you 195:4 can recall, whether Mr. Pilliod suffered any 195:5 seizures during his R-CHOP therapy in 2011? 195:6 A. I don't recall him having active seizures 195:7 during treatment. 195:8 Q. Did you ever -- do you recall ever 195:9 stopping Mr. Pilliod's R-CHOP chemotherapy because	RajFINAL.203

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	195:10 of any seizure or seizure disorder?	
	195:11 A. I don't recall anything like that.	
	195:12 Q. Did you were document, that you recall,	
	195:13 that you felt Mr. Pilliod's R-CHOP therapy somehow	
	195:14 exacerbated his seizure disorder or made it worse?	
	195:15 Do you recall documenting that?	
	195:16 A. I don't recall that.	
	195:17 Q. In this Exhibit 20, the second paragraph	
	195:18 under History of Present Illness, you talk about	
	195:19 that, "He continues to experience seizures and is	RK20.1.4
	195:20 being followed."	
	195:21 Do you see that?	
	195:22 A. Uh-huh. Yes.	
	195:23 Q. And the next -- the next sentence says	
	195:24 that, "He has had worsening aphasia, difficulty with	
	195:25 nouns and numbers since late 2017."	
	196:1 Do you see that?	
	196:2 A. Yes.	
196:15 - 196:24	**Raj, Kavitha 01-08-2019 (00:00:19)**	RajFINAL.204
	196:15 You note that he had a complete metabolic	RK20.1.5
	196:16 response.	
	196:17 Do you remember that?	
	196:18 A. Yes.	
	196:19 Q. All right. And when you say that -- in	
	196:20 this note, that Mr. Pilliod had a complete metabolic	
	196:21 response from his R-CHOP therapy in 2011, what do	
	196:22 you mean?	
	196:23 A. That he had a complete response or	
	196:24 complete remission.	
198:2 - 199:11	**Raj, Kavitha 01-08-2019 (00:01:25)**	RajFINAL.205
	198:2 Q. Now, to the second page where you have	
	198:3 your assessment, there's number 1, under Assessment,	RK20.2.3
	198:4 where you note that he had a PET scan in -- looks	
	198:5 like March of '18.	
	198:6 Do you see that?	
	198:7 A. Yes.	
	198:8 Q. And it showed some findings that I won't	
	198:9 try to pronounce. But it appears that in number 7,	
	198:10 you say that the "PET/CT showed no evidence of	
	198:11 disease."	

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	198:12 Do you see that?	
	198:13 A. In the first paragraph of my assessment?	
	198:14 Q. Right. So in the first paragraph of the	
	198:15 assessment you talk about a PET scan in March of '18	
	198:16 that had several findings to it.	
	198:17 Do you see that?	
	198:18 A. Right.	
	198:19 Q. Then in number 7 below --	
	198:20 A. Uh-huh.	
	198:21 Q. -- in your assessment, you say, "PET/CT	
	198:22 shows no evidence of disease."	
	198:23 Do you see that?	
	198:24 A. Yes.	
	198:25 Q. And my question to you is, in your care	
	199:1 and treatment of Mr. Pilliod, whatever has come up	
	199:2 on that March 2018 in terms of those findings --	
	199:3 A. Uh-huh.	
	199:4 Q. -- that did -- did that suggest to you	
	199:5 that there was active cancer?	
	199:6 A. No.	
	199:7 Q. Okay. And so even with those findings in	
	199:8 2018, you're still of the opinion at this point in	
	199:9 your care and treatment of Mr. Pilliod that he's in	
	199:10 complete remission?	
	199:11 A. Correct.	
200:3 - 200:6	**Raj, Kavitha 01-08-2019 (00:00:10)**	RajFINAL.206
	200:3 Q. Okay. Since Mr. Pilliod completed his	clear
	200:4 chemotherapy in 2011, has Mr. Pilliod ever	
	200:5 experienced a recurrence of lymphoma?	
	200:6 A. No.	
200:11 - 200:24	**Raj, Kavitha 01-08-2019 (00:00:35)**	RajFINAL.207
	200:11 Q. And in your care and treatment, I assume	
	200:12 that some of your patients, including Mr. Pilliod,	
	200:13 may ask you what his prognosis is, how he's going to	
	200:14 do in the future; is that right?	
	200:15 A. Yes.	
	200:16 Q. And obviously, people can have things like	
	200:17 skin cancer and encephalitis and high cholesterol or	
	200:18 other things that can impact their life in terms of	
	200:19 morbidity or mortality.	

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	200:20 But from a lymphoma standpoint, what is 200:21 Mr. Pilliod's prognosis as of the last time you saw 200:22 him in 2018, considering he has not had a recurrence 200:23 of his DLBCL in seven-plus years? 200:24 A. Very good.	
201:9 - 201:17	**Raj, Kavitha 01-08-2019 (00:00:25)** 201:9 Q. In this note from August 22nd of 2018, 201:10 Exhibit 20, do you see any note in here that he 201:11 suffered from chemo brain at any time? 201:12 A. I mean, he has had multiple neurologic 201:13 symptoms, but I don't see that I have documented any 201:14 chemo brain in here. 201:15 Q. I guess that's my question. 201:16 Did you diagnose him with chemo brain? 201:17 A. I don't recall it.	RajFINAL.208
202:24 - 203:5	**Raj, Kavitha 01-08-2019 (00:00:15)** 202:24 Q. But I want to be very clear that there's 202:25 nothing that you've seen today, that's been put in 203:1 front of you, that suggests that you actually 203:2 diagnosed Mr. Pilliod with chemo brain; is that 203:3 fair? 203:4 A. I don't see anything on the notes that has 203:5 been provided to me. Yeah.	RajFINAL.211
204:17 - 206:2	**Raj, Kavitha 01-08-2019 (00:01:43)** 204:17 Q. You talked with plaintiffs' counsel 204:18 earlier about how Mr. and Mrs. Pilliod were both 204:19 diagnosed with a subtype of lymphoma; is that right? 204:20 A. Correct. 204:21 Q. His was a systemic DLBCL; is that right? 204:22 A. Correct. 204:23 Q. Hers, on the other hand, was a primary CNS 204:24 lymphoma that was limited to the brain; is that 204:25 right? 205:1 A. Yes. 205:2 Q. Obviously Mr. and Mrs. Pilliod lived 205:3 together for many years prior to their lymphoma 205:4 diagnoses in 2011 and 2015, respectively, right? 205:5 A. Yes. 205:6 Q. And in each case, in each of them, they 205:7 actually had a personal history of cancer prior to	RajFINAL.212

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	205:8 their diagnosis with lymphoma, right? 205:9 A. Yes. 205:10 Q. Mr. Pilliod had skin cancer, right? 205:11 A. Yes. 205:12 Q. And then ultimately had the lymphoma in 205:13 his bones and his lymph nodes, right? 205:14 A. Yes. 205:15 Q. On the other hand, Mrs. Pilliod had 205:16 bladder cancer, right? 205:17 A. Yes. 205:18 Q. And then she's had a cancer that was 205:19 limited to her brain, correct? 205:20 A. Yes. 205:21 Q. So just in terms of the spots of cancer in 205:22 their bodies, they did not overlap, true? 205:23 A. Meaning? It is one cancer related to 205:24 other cancer; is that the question? 205:25 Q. Well, in terms of where the tumors were 206:1 located that were on imaging, they did not overlap? 206:2 A. They're two different types of cancers.	
206:12 - 206:20	**Raj, Kavitha 01-08-2019 (00:00:16)** 206:12 Q. With respect to Mr. Pilliod and 206:13 Mrs. Pilliod, they're both at risk for additional 206:14 cancers as they age; is that right? 206:15 A. Yes, age is an important respecter for all 206:16 cancers. 206:17 Q. The longer you live, the greater chance 206:18 you have of getting cancer of any type in some part 206:19 of the body, right? 206:20 A. Yes.	RajFINAL.213
207:5 - 207:10	**Raj, Kavitha 01-08-2019 (00:00:08)** 207:5 Q. Dr. Raj, a couple of follow-up questions 207:6 from opposing counsel's questioning. 207:7 The first, there was some questions about 207:8 ulcerative colitis. 207:9 Do you recall that? 207:10 A. Yes.	RajFINAL.214
207:18 - 209:3	**Raj, Kavitha 01-08-2019 (00:01:22)** 207:18 Q. Was it a concern for you -- well, in your 207:19 treatment of Mr. and Mrs. Pilliod -- sorry -- of	RajFINAL.215

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	207:20 Mr. Pilliod, his ulcerative colitis, was that	
	207:21 something that you considered to have been a cause	
	207:22 of his non-Hodgkin's lymphoma?	
	207:23 A. I did not consider that at that time. Now	
	207:24 we're talking about the causality, like so much.	
	207:25 I'm just saying like any autoimmune disease could	
	208:1 make risk for lymphoma. I'm not, like, very aware	
	208:2 of the statistics of what is the risk for ulcerative	
	208:3 colitis or whatnot.	
	208:4 Q. Sure.	
	208:5 A. I don't know. I'm not aware of that.	
	208:6 Q. You are aware of other types of autoimmune	
	208:7 diseases that are generally associated with	
	208:8 non-Hodgkin's lymphoma?	
	208:9 A. Yes.	
	208:10 Q. Rheumatoid arthritis?	
	208:11 A. Correct.	
	208:12 Q. But -- and you've looked at literature	
	208:13 that relates to that, I'm sure?	
	208:14 A. At some point, I should have -- I must	
	208:15 have looked at it. I mean, I haven't looked at it	
	208:16 recently.	
	208:17 Q. Okay. And in your treatment of	
	208:18 Mr. Pilliod, did you research whether or not	
	208:19 ulcer- -- ulcerative colitis was a potential risk	
	208:20 factor for NHL?	
	208:21 A. I don't think I researched it. We usually	
	208:22 worry about when someone is on immunosuppressive	
	208:23 therapy for autoimmune disease more than if they	
	208:24 have autoimmune disease. So it was not a red flag	
	208:25 for me at that time.	
	209:1 Q. And have you seen any evidence in your	
	209:2 review of Mr. Pilliod's medical records that he was	
	209:3 receiving an autoimmune therapy?	
209:7 - 210:22	**Raj, Kavitha 01-08-2019 (00:01:30)**	RajFINAL.216
	209:7 Q. Yeah. Immunosuppressant therapy.	
	209:8 A. Not that I know of.	
	209:9 Q. Okay. There was questions about	
	209:10 meningitis.	
	209:11 Do you recall that?	

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	209:12 A. Yes.	
	209:13 Q. You've been treating Mr. Pilliod for,	
	209:14 gosh, over seven years now?	
	209:15 A. Yes.	
	209:16 Q. And in your entire time treating	
	209:17 Mr. Pilliod have you ever seen him experience	
	209:18 meningitis?	
	209:19 A. I don't think I have seen him have any	
	209:20 meningitis. This was all history from before.	
	209:21 Q. Yeah. And in discussion of the history of	
	209:22 his medicine did he ever say that he had had a	
	209:23 recurrence of it in the months leading up to his	
	209:24 diagnosis of NHL?	
	209:25 A. I think the most recent time when I saw	
	210:1 him, that's when he had his new symptoms of not able	
	210:2 to speak. He had, like, very pronounced neurologic	
	210:3 symptoms on exam. And that's why he was seen by	
	210:4 neurology at UCSF. And he was going -- undergoing	
	210:5 workup for that. So I don't know whether that's	
	210:6 related to any of his previous brain damage from any	
	210:7 of those infections.	
	210:8 But other than that, I am not aware of any	
	210:9 other history.	
	210:10 Q. Okay. So to be clear, then, in your	
	210:11 treatment of Mr. Pilliod, you never observed him	
	210:12 suffering from a flare-up of meningitis?	
	210:13 A. Correct.	
	210:14 Q. Okay. And so your understanding of his	
	210:15 meningitis history is based upon him telling you he	
	210:16 got it in the '70s and it had come back a couple	
	210:17 times?	
	210:18 A. Yes.	
	210:19 Q. Okay. Do you believe that Mr. Pilliod's	
	210:20 melanoma in any way was associated with the lymphoma	
	210:21 found in his bones?	
	210:22 A. No.	
210:25 - 211:1	**Raj, Kavitha 01-08-2019 (00:00:02)**	RajFINAL.217
	210:25 Q. Can you turn to Exhibit 20.	RK20.1
	211:1 A. Yes.	
213:25 - 214:17	**Raj, Kavitha 01-08-2019 (00:00:37)**	RajFINAL.218

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	213:25 Q. Okay. And then if you go down to 214:1 number 7, opposing could asked you about this, 214:2 "right-sided paravertebral pain"? 214:3 A. Uh-huh. 214:4 Q. If I recall correctly, he -- he had 214:5 significant lesions in his spine, right? 214:6 A. At the time of diagnosis, yes. 214:7 Q. And in -- and, in fact, you testified that 214:8 that -- that the cancer actually eats away at the 214:9 bone? 214:10 A. It does. 214:11 Q. And it can leave scarring? 214:12 A. Yes. 214:13 Q. Is there any reason to think that this 214:14 pain in his back could be associated with the cancer 214:15 he had in his back? 214:16 A. It's hard to say for sure, but it's 214:17 possible.	RK20.2.4
214:21 - 215:21	**Raj, Kavitha 01-08-2019 (00:01:02)** 214:21 At the beginning of your treatment of 214:22 Mr. Pilliod, he did not have any aphasia, did he? 214:23 A. Correct. He did not. 214:24 Q. And that's, you know, difficulty with 214:25 speaking, nouns, and reading, right? 215:1 A. Correct. 215:2 Q. And he does have that phenomena after 215:3 having received chemo? 215:4 A. I mean, several years after he received 215:5 chemo. 215:6 Q. Sure. 215:7 He also -- have you spoken to him about 215:8 the -- the -- the nature of his seizures or physical 215:9 ailments following chemotherapy? 215:10 A. I don't recall speaking about his 215:11 seizures. I mean, we do address side effects of 215:12 chemotherapy, you know, fatigue and things like 215:13 that, pain, yes. I remember talking about those 215:14 things, but I don't remember talking about seizures. 215:15 Q. Now, I understand you have some evidence 215:16 here that he may have, in fact, suffered a -- a	RajFINAL.224 clear

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	215:17 minor stroke?	
	215:18 A. Correct.	
	215:19 Q. My understanding of chemotherapy is that	
	215:20 it puts an incredible strain on your cardiovascular	
	215:21 system; is that right?	
215:23 - 215:24	**Raj, Kavitha 01-08-2019 (00:00:02)**	RajFINAL.219
	215:23 THE WITNESS: It does. It can cause	
	215:24 damage to the heart muscle.	
216:18 - 217:13	**Raj, Kavitha 01-08-2019 (00:00:46)**	RajFINAL.222
	216:18 Q. The right person to ask about how his	
	216:19 brain has been affected or not affected by	
	216:20 chemotherapy, the person to ask would be	
	216:21 Mr. Pilliod?	
	216:22 A. His symptoms -- he would be able to tell	
	216:23 us more about his symptoms than anybody else. A lot	
	216:24 of times when you talk about neurologic disorders,	
	216:25 there's more subjective, like, symptoms than what we	
	217:1 can elicit in, like, scans and whatnot. So, yes,	
	217:2 usually patients tell us more.	
	217:3 Q. Okay. There was some questions about	
	217:4 Mr. Pilliod and even Mrs. Pilliod's prior history of	
	217:5 cancer.	
	217:6 Do you recall that?	
	217:7 A. Yes.	
	217:8 Q. And Mrs. Pilliod had a prior history of	
	217:9 bladder cancer; is that right?	
	217:10 A. Yes.	
	217:11 Q. Mr. Pilliod had a prior history of skin	
	217:12 cancer?	
	217:13 A. Yes.	
217:21 - 218:7	**Raj, Kavitha 01-08-2019 (00:00:23)**	RajFINAL.223
	217:21 Q. Let's start with Mrs. Pilliod.	
	217:22 Was her bladder cancer that she had in	
	217:23 2010 the same type of cancer as she got in her brain	
	217:24 in 2015?	
	217:25 A. No.	
	218:1 Q. Was -- was the kind of cancer that	
	218:2 Mr. Pilliod had on his skin the same type of cancer	
	218:3 that infected his -- his spinal system and bones?	
	218:4 A. No.	

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218:5 Q. Okay. Do you believe that those cancers
218:6 had anything to do with their lymphoma?
218:7 A. No.

[redacted]

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