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SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF MARICOPA

- - -

REBECCA WHITAKER, AS SURVIVING, MOTHER OF ELIZABETH DAWN WHITAKER (A MINOR), DECEASED,

Plaintiff,

vs.

NAI COMMUNITY HOSPITAL OF PHOENIX, INCORPORATED, ET AL.,

Defendant.

ORIGINAL

No. CV 98-12892

Expert nasopharyngeal tumor

DEPOSITION OF

MARVIN D. NELSON, JR., M.D.

LOS ANGELES, CALIFORNIA

JULY 20, 2000

ATKINSON-BAKER, INC.
COURT REPORTERS
330 North Brand Boulevard, Suite 250
Glendale, California 91203
(818) 551-7300

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Plaintiff,	)	
vs.	)	No. CV 98-12892
NAI COMMUNITY HOSPITAL OF PHOENIX, INCORPORATED, ET AL.,	)	
Defendant.	)	

Deposition of MARVIN D. NELSON, JR., M.D., taken on behalf of Defendants, at 4650 Sunset Boulevard, Los Angeles, California, commencing at 2:25 p.m., Thursday, July 20, 2000, before Martin Spee, CSR 10303.

A P P E A R A N C E S

FOR PLAINTIFF:

HARRIS, PALUMBO, POWERS & CUNNINGHAM
BY: FRANK I. POWERS, ESQ.
361 East Coronado, Suite 101
Phoenix, Arizona 85004

FOR DEFENDANTS JAMES:

DOYLE & WINTHROP
BY: LAWRENCE F. WINTHROP, ESQ.
3300 North Central Avenue, Suite 1600
Phoenix, Arizona 85064

FOR DEFENDANTS LOCNIKAR:

TEILBORG, SANDERS & PARKS
BY: WINN SAMMONS, ESQ.
3030 North 3rd Street, Suite 1310
Phoenix, Arizona 85013

I N D E X

WITNESS: MARVIN D. NELSON, JR., M.D.

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EXHIBITS:

(NONE.)

QUESTIONS WITNESS INSTRUCTED NOT TO ANSWER:

(NONE.)

INFORMATION REQUESTED:

(NONE.)

MARVIN D. NELSON, JR., M.D.,

having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. WINTHROP:

Q. Tell us your name, please.

A. Marvin D. Nelson, Jr.

Q. You are a physician?

A. I am.

Q. Specializing in what?

A. Pediatric neural radiology.

Q. That's a subspecialty of radiology?

A. That's correct.

Q. Since the completion of your fellowship, have you devoted substantially all of your professional time to pediatric neural radiology?

A. That's correct.

Q. Have you ever -- strike that.

You've had your deposition taken before, haven't you?

A. Yes, I have.

Q. You are familiar with the procedure that we are going to go through over the next hour or two?

A. Yes, I am.

Q. If at any time I ask you a quest
unclear and you don't understand, will y
A. Yes, I will.
Q. Prior to this case, have you ever consulted with or provided expert witness services for the law firm of Harris, Palumbo, et al.?
A. Not that I recall.
Q. Do you have any understanding how it is that Mr. Powers obtained your name for consulting purposes?
A. No.
Q. Do you, Dr. Nelson, advertise your services as an expert consultant or witness?
A. I do not.
Q. Have you testified by way of deposition or trial in any Arizona cases in the past?
A. I think I've given one deposition in an Arizona case, and it was about a premature infant that had multiple interventricular hemorrhages. I think the case was called Clentons [sic], and I don't remember who it was against.
It may, actually, be even still ongoing for that matter, but no trial testimony in Arizona.
Q. Who was the physician that retained you in that case? Also, who's the lawyer who retained you?
A. I don't know. I probably can look it up. But

I can't recall the name.

Q. Have you ever given deposition o testimony in the past involving the diagn nasopharyngeal tumors?

A. Brain tumors, yes. Specifically a nasopharyngeal tumor, no.

Q. That would include pediatric patients, as well?

A. Only pediatric patients.

Q. Do you have a file that you maintain in connection with your work in this case?

A. I brought, basically -- I don't have handwritten notes, if that's what you are asking. I have the --

Q. We're going to get there. Let me show you -- in fact, you've got it in front of you -- "Plaintiff's Third Supplemental Disclosure Statement," which references you and your anticipated opinions starting at Page 11.

At the bottom of that page and continuing on to the next, the disclosure identifies those materials which you have been provided for review.

Can you look at that and tell me whether you have reviewed any additional materials not reflected in that list.

MR. POWERS: Can I have the date of that?

THE WITNESS: September '99.

MR. WINTHROP: September 1, '99, is what I have.

MR. POWERS: I can tell you, Larry, that he was been sent Dr. Crammer's deposition, deposition corrections, the films, and dental films, in addition to what was in the initial disclosure.

And I believe right after, in September after this was done, he was sent all the defendants' disclosure statements concerning expert opinions.

MR. WINTHROP: Just to shorten this up, was he provided with a copy of Dr. Diaz' testimony?

MR. POWERS: No.

Q. BY MR. WINTHROP: As you previewed for us, you do not have any handwritten-type notes?

A. I do not.

Q. Have you made any annotations in any of the medical records or depositions that you have been provided?

A. No, I have not.

Q. Have you -- were you provided with -- strike that.

I know you were provided with copies of the various radiology studies in this case, correct?

A. That is correct.

Q. Have you, or any of those studie annotations, markings with a grease penci like that?

A. I have not.

Q. Have you been shown original films or have you been reviewing copies?

A. Copies were sent to me.

Q. Were they sufficient for diagnostic purposes for what you were doing?

A. Yes.

Q. Have you generated any billing statements relative to your work in this case?

A. Yes, I believe I generated one statement regarding my primary review, and relating to the review and signature of this document all as one statement, and I've got that one statement.

Q. How much was that?

A. I don't recall offhand, but it would be less than two hours. Probably for two hours would be the standard fee.

Q. Since you completed that work and up until the present time, how much additional time have you spent on this case?

A. Approximately one hour.

Q. So as we sit here today, you've spent in the

neighborhood of about three hours in connec
this case?

A. That's correct.

Q. And Mr. Powers asked you to travel to Phoenix to testify at trial?

A. Yes.

Q. And you agreed to do so?

A. Yes.

Q. Has a date been set for you to testify?

A. Not that I'm aware of, but my secretary does things on my calendar that I'm often not aware of.

(There was a brief interruption in the proceedings.)

MR. WINTHROP: While we were off the record, I spoke with Dan Yaunch [sic] -- he represents Dr. Bernstein in this case -- who was attempting to patch in here telephonically, but modern technology has failed us.

After speaking with Dan, he has elected to waive his appearance for purposes of this deposition.

Q. Doctor, when you do come over to testify at trial, what will your charges for trial testimony be?

A. 450 an hour for time lost from work.

Q. Is there a minimum charge such as half day or full day for this?

A. No.

Q. So just a straight $450 per hour plus expenses, I assume?

A. Right. So I would imagine it could be possible for me to testify at the lunch break. I can fly in in the morning and testify the same day to keep costs down to a minimum.

MR. POWERS: I appreciate that.

Q. BY MR. WINTHROP: There's the guy you want to talk to, at least initially.

Other than -- strike that.

Is there any correspondence between Mr. Powers or his office and you relative to this case?

A. Yes, there are a few letters, actually. I should have dug those out -- just talking about setting up this deposition today. That's all, nothing of any other information.

MR. WINTHROP: Perhaps, the easiest way to do this faster is ask if your office will provide copies of any correspondence to Dr. Nelson and a copy of the billing statement that you've received?

MR. POWERS: Sure. Just send me a reminder. Actually, send it to Barb, B-a-r-b, my paralegal.

Q. BY MR. WINTHROP: In connection with your evaluation and work in this case, have you reviewed or

relied upon any literature?

A. Well, generally I would say no, but I this little thing on the "Manual of Staging Nasopharyngeal Carcinoma" by Dr. Siegel the other day. He wanted to look at the films before he gave his deposition. I assume he told you so.

And one of the issues we are going to talk about is relating to how these things relate to this staging business. So he, very nicely, gave me the staging criteria.

Q. Is that the staging criteria that's published by the American Joint Committee on Cancer?

A. Yes.

Q. And, specifically, as it relates to the staging of nasopharyngeal cancer?

A. Yes.

Q. Any other literature that you've reviewed or relied upon?

A. No.

Q. Have you yourself published anything concerning the diagnosis of nasopharyngeal tumors in pediatric patients?

A. No.

Q. Other than Dr. Siegel, who you have indicated you did have a conversation with, have you talked to or

consulted with any other physician relative to this case?

A. I have not.

Q. As best you can place it, the conversation with Dr. Siegel was when?

A. Monday or Tuesday.

Q. Of this week?

A. Yes.

Q. Was it here in the hospital?

A. Yes.

Q. In the radiology department?

A. Yes.

Q. Anybody else present?

A. No.

Q. Was that a conference initiated by Dr. Siegel?

A. Yes.

Q. Was Mr. Powers involved in that conference?

A. No.

Q. Did you or Dr. Siegel, to the best of your knowledge, take any notes relative to that conference?

A. No notes were taken.

Q. And the purpose of the conference was to review the films?

A. He just wanted to be familiar, again, with what I saw on the films in relation to the overall aspects of

the case prior to his deposition.

Q. Is that the first time that you had co Dr. Siegel relative to these studies?

A. I think, at the initial time of the consultation back last summer, I had sat down and looked at the films with him, at that time, once in a similar fashion.

No notes were taken, just, "Here are the images. I outlined the tumor for him -- "Here it is on the subsequent films," and that was it.

Q. Was it Dr. Siegel who got you involved in this litigation, or did you get Dr. Siegel involved in this litigation? How did that work?

A. I don't know how he was specifically involved. I think he was involved in the case before I was. Whether or not you got my name from him or not, I don't know.

Q. The initial meeting with Dr. Siegel last summer, was it substantially similar to the meeting you had this week?

A. Yes.

Q. Where the images were put up on a view box and you outlined certain structures or features for him?

A. Yes.

Q. And how long did your meeting this week last

with Dr. Siegel?

A. Ten minutes.

MR. SAMMONS: May I see that handout, Doctor?

THE WITNESS: (Witness complies.)

Q. BY MR. WINTHROP: During the course of that meeting, were any strategies discussed for the upcoming depositions?

A. No.

Q. The last time you practiced as a general radiologist was when, sir?

A. When I was in the Air Force.

Q. In the early '80s?

A. 1982 to 1985. I was paying back a scholarship to medical school.

Q. I know I have your CV, so I apologize for asking, but you completed your fellowship in pediatric neuroradiology when?

A. When I finished my payback time in the Air Force, I went back and did two years in radiology training. The second of which was doing pediatric radiology. And following that I came on staff here in July of 1987.

Q. So since 1989, you've restricted your practice to pediatric neuroradiology?

A. Since 1986, actually.

Q. All right. Was your first involvement in this case a phone conversation with someone?

A. I think so. Well, I think my first involvement in this case was a conversation with Dr. Siegel.

Q. In that conversation, you learned that this particular case involved a nasopharyngeal tumor?

A. Yes.

Q. A tumor that had been missed on CT scan?

A. Yes.

Q. And that the patient had subsequently died?

A. Yes.

Q. And you knew and understood those things before you looked at any films, correct?

A. No. I think I looked at the films first and then was filled in about what happened.

Q. Tell me your understanding of how that occurred. I'm confused.

A. That was from Dr. Siegel.

Q. I understand that, but tell me the sequence of events.

A. In my practice here, I frequently do consults on outside films that the oncologist gets from patients outside and put the film up and we talk about the tumor and where they are and what the progression has been, and they are giving a consult before they come here.

To me, I didn't know this was a medical-legal case or anything. He brought films over and put them up and we talked about them. He put them up. I looked at them. I showed him what I saw, and he told me about the case.

As I recall this, he told me this was a medical-legal case and not just a pediatric consultation.

Q. And you believe that was the first contact you had with this case, as opposed to a conversation with Mr. Powers or his office?

A. Yes.

Q. And Dr. Siegel didn't tell you that this was a missed nasopharyngeal tumor before he put the films up on the view box?

A. No.

Q. Prior to this particular case, Dr. Nelson, how many pediatric nasopharyngeal tumors have you seen in your professional career?

A. In my professional career?

Q. Yes.

A. Somewhere between 10 and 20.

Q. And that dates back to?

A. Starting here in July 1987.

Q. Would you agree that that type of tumor is very

rare in a pediatric patient?

A. I don't know if I would say "very rare." It's not one of the more common ones.

Q. Would you agree it occurs in less than 1 percent of childhood malignancies?

A. I wouldn't venture a statistical number.

Q. In those 10 to 20 cases that you've provided a range or estimate for, would it be fair to assume that as the neuroradiologist, you were not the first person making the diagnosis of the presence of a mass? Do you understand what I'm asking?

A. Yes. In some cases that are referred as already having been identified from the outside because we are a cancer center.

But in other cases, we are the primary-diagnosis facility.

Q. Would you say a majority of the cases in those 10 to 20, when the case was referred to you for a neuroradiology evaluation, that the presence of the mass had already been clinically detected?

A. I would say in the majority of cases, that's probably true. But I know several examples where that's not true, where they were found as incidental findings for studies being done for other reasons.

Q. Do you understand that a nasopharyngeal tumor

in a pediatric patient is considered to be an aggressive tumor?

MR. POWERS: Form.

THE WITNESS: Yes.

Q. BY MR. WINTHROP: And one that has a propensity for early metastatic disease?

MR. POWERS: Form.

THE WITNESS: Yes.

Q. BY MR. WINTHROP: And if, in fact, there is early metastatic disease, that there's a poor prognosis associated with that finding?

MR. POWERS: Form.

THE WITNESS: Yes.

Q. BY MR. WINTHROP: Would you agree, Dr. Nelson, that, generally speaking, it takes six to 12 months after cancer has seated to a bone before that will show up on a bone scan?

MR. POWERS: Form.

THE WITNESS: No, I don't have an opinion on that matter. I don't know how you could possibly prove that.

And you are talking about nuclear medicine bone scan? That's the bone scan you are referring to?

Q. BY MR. WINTHROP: Yes, sir.

A. I'm not a nuclear radiologist, and I don't

routinely read those studies, so I don't have an opinion about that particular aspect of imaging.

Q. Whether or not you've arrived at an opinion on that, have you heard that, in fact, in your profession that, generally speaking, it takes six to 12 months from the point the cancer is seated to the bone before you will see evidence of that on the bone scan?

MR. POWERS: Form.

THE WITNESS: I've never heard a specific number that I can remember. If I had, it would have been all the way back to my radiology residency, and it didn't stick. But that wouldn't surprise me.

Q. BY MR. WINTHROP: All right. Why wouldn't it surprise you?

MR. POWERS: Form.

THE WITNESS: It seems like a logical answer based on the times that bones react. So I wouldn't be surprised at that answer.

Q. BY MR. WINTHROP: As a pediatric neuroradiologist, are you typically involved in the formal staging of the tumor?

A. Well, the staging that can be determined from imaging studies. There are a lot of parts of the staging that don't involve the imaging studies.

Q. With respect to the role of imaging with

respect to staging of the tumor, would I be correct in understanding that one of the roles of radiology is to identify the size and/or dimensions of the primary tumor?

A. That's correct.

Q. And to identify the presence of any lymphadenopathy?

A. That's correct.

Q. Another feature would be to identify any local invasion of surrounding tissues?

A. That's correct.

Q. And to identify the extent of the spread of the disease, as well?

A. That's correct.

Q. Any other categories or factors that imaging is responsible for in staging the tumor?

A. No. You've done your homework.

Q. In your experience, is magnetic resonance imaging a better or more sensitive study for identifying and determining the characteristics of nasopharyngeal tumors?

A. Yes.

Q. Why is that?

A. It's just based on the differences in the physics involved in the imaging studies. The soft

issues are much better delineated and tissue planes are better delineated by MR than CT.

Q. In the field of neuroradiology, as I understand it, is the interpretation of CT and MR studies, isn't it?

A. It's the interpretation of all imaging studies that -- both image studies and procedures that involve the brain and spinal cord.

Q. And that field of neuroradiology is not an exact science, is it?

A. What do you mean by "exact science"?

Q. It's --

A. Medicine is not an exact science.

Q. I'm paraphrasing one of my favorite lawyers, Mr. Powers, who asked this question at some point in the case.

MR. POWERS: Object to form.

Q. BY MR. WINTHROP: In the field of neuroradiology, the interpretation of these studies that you've discussed, it does involve, to some extent, judgment by the physician?

A. Absolutely, judgment and experience.

Q. Without putting too fine a point on it, would you agree that not every neuroradiologist is going to come to the same opinion concerning those

interpretations?

A. Yes, sir.

Q. And sometimes reasonable radiologists or neuroradiologists can disagree about what one can see on a particular scan or study?

MR. POWERS: Form.

Q. BY MR. WINTHROP: True?

A. Yes.

Q. I would like to talk to you about the March 30, 1995 CT scan. Can we do that?

A. Yes.

Q. I assume you have recently reviewed that in preparation for this deposition?

A. Yes.

Q. Probably with Mr. Powers here this afternoon before we came in?

A. Yes.

Q. All right. And you have a copy of that scan or those scans here for your review, don't you?

A. Yes, I do.

Q. If you feel it necessary to refer to the scans themselves, please feel free to do so, Doctor.

A. Thank you.

Q. You have a view box here in the room, don't you?

A. I do.

Q. All right. There is a mass in the pharyngeal -- nasopharyngeal area on that scan, isn't there?

A. Yes.

Q. And describe the location of the mass for us.

A. In the right parapharyngeal space.

Q. So we have the terminology straight, can you define for us, or put in lay terms, what you mean by the right parapharyngeal space?

A. Right side of the neck, lateral to the tonsils and the airway and the oral pharynx, and it is medial and slightly anterior to the carotid sheath and jugular vein, and it is posterior to the nasopharyngeal space, medial and lateral pterygoid muscles. Pterygoid, p-t-y-e-r-g-o-i-d.

Q. That's pretty good. With respect to the mass that you described which is identified on that study, can you tell us what structures that mass touches?

A. What it touches? Well, it certainly involves the medial and lateral pterygoid muscles. There is an appearance on that scan -- it does not include the whole aspect of the tumor.

All it does is gets the -- what appears to be the upper half of the tumor and the scan ends. They

didn't go below to get the lower extent.

Although most masses tend to grow in kind of a sausage shape, so if I were to make a volumetric assumption, the AP diameter is essentially what the cranial caudad is going to be. And you measure the length to get the length.

I would say that is an assumption that it is a round type of tumor.

Q. In fact, in this disclosure statement that purports to set forth your opinions, you have, in fact, set forth an assumption?

A. And that is how I made that assumption, for the record.

Q. We are going to talk about that a little bit more later.

A. Okay.

Q. Other than the medial and lateral pterygoid muscles, what other structures does it touch?

A. It looks like the pterygoid plates -- cannot identify the pterygoid plates. These are the plate-like bony extensions off the body of the sphenoid bone, which is a bone of the skull base to which the medial and lateral pterygoid muscles attach on the skull base. I can't see those plates on that scan.

Now, I do not see active bone structures from

this tumor at the skull base, but the fact that those plates do not appear to be present makes we wonder if they have not either been eroded over time by a pressure effect from the tumor growing, or destroyed by a tumor that I can't see on my scan.

Q. Other than the muscles you've identified for us, are there any other soft-tissue structures that this tumor touches, involves, or displaces?

A. Well, it's pressing up against the adenoidal lymph node tissue and pushing it towards the midline, and it's pushing back the carotid and jugular arteries, but I don't think they appear to be invaded.

They look like they are posteriorly displaced. That's all.

Q. Would you agree that the mass at least abuts the nasal septum?

A. Well, if you are referring to the vomer, the bone, the vomer that separates midline, it looks like it goes up to it, yes.

Q. Would you agree that the mass extends superiorly to the skull base?

A. It appears to come up to the skull base, but does not go through it.

Q. I understand you are telling me you don't see any evidence of bone erosion on these frames, correct?

A. Other than the pterygoid plates that we talked about.

Q. Thank you. I was -- what I was referring to was the base of the skull.

A. The pterygoid plates to me are the base of the skull.

Q. All right. In looking at the March 30 scan, do you see any evidence of reactive sclerosis?

A. No.

Q. That process is a response to the pressure force put on bone by another structure such as a tumor?

A. Maybe or maybe from tumor invasion from -- maybe from infection or a lot of other things.

Q. And what would you expect to see on this film in order to believe that this was some reactive sclerosis?

A. To believe there was reactive sclerosis? Increased density in the bone.

Q. And you don't see that on these films?

A. No, I don't.

Q. It's present on the December study, isn't it?

(There was a brief pause in the proceedings.)

THE WITNESS: Yes.

Q. BY MR. WINTHROP: And the study that you just

looked at would be the MR study?

A. CT.

Q. The CT? Thank you.

Do you feel those two CT scans are sufficiently comparable for you to reasonably say that there's no increased density in the bone on the March 30 scan?

A. I would need to see similar bone as on the first scan.

Q. And those aren't present, are they?

A. No.

Q. I've seen a term referred to in either records or literature which is remodeling of the skull. Is that a term that has meaning to you?

A. Yes.

Q. Does that mean that the shape of the bone has changed in some fashion?

A. Yes.

Q. Do you see any evidence of remodeling of the skull in the March 30 CT?

A. Well, those pterygoid plates may be gone by the process of remodeling rather than tumor structures.

Q. And if that is true, what is the cause of the remodeling, in your opinion?

A. Pressure effect from the tumor.

Q. You mentioned that you felt that the carotid

artery and the jugular vein, I assume on the right, were displaced by the tumor, but not invaded on the March 30 scan, correct?

A. Yes.

Q. Would it be fair to characterize that scan as showing that those structures are actually surrounded by the tumor?

A. It would be easier if I stay back here.

Q. It might be.

A. I don't think I can make a definitive statement like that because no contrast was given on this study that would show me the actual size and particular lumina of the contrast flowing through it.

I can see where they are, and it looks like the tumor comes right up to it. But whether it goes beyond it at that point, I think is a very difficult statement to make.

Q. Your opinion, though, at a minimum, the tumor is displacing those structures?

A. Yes.

Q. And that might explain, at least in part, why this patient had a clinical history of headache?

MR. POWERS: Form.

Q. BY MR. WINTHROP: If you know?

A. I wouldn't venture an opinion there.

Q. Would you agree, sir, that the tumor as reflected on the March 30 study, surrounds the fifth cranial nerve?

A. There are branches of the fifth cranial nerve that go through the mass, but it doesn't surround the whole fifth cranial nerve.

Q. Would you agree that the tumor invades the various branches of the fifth cranial nerve?

A. No, I can't make that statement. The tumor -- the branches of the second and third divisions of the fifth cranial nerve can go through the mass without invading them.

I have no way of knowing about invasion. That would be from a neurologic examination that you would have to discuss that. I can't depict that.

It's in the region of where some of the branches pass. No question. Frequently, masses have nerves that go through them and don't affect their functions itself.

Q. So that would be a clinical determination?

A. Yes, sir.

Q. But based upon the relative position of the nerve as compared -- or the nerves compared to the tumor itself, it's certainly possible that the tumor was invading --

MR. POWERS: Form.

Q. BY MR. WINTHROP: -- branches of the affected cranial nerve?

MR. POWERS: Form.

THE WITNESS: It's possible.

Q. BY MR. WINTHROP: Would the presentation of the mass, as you can see it on the March 30 scan, would you be suspicious that the mass may also invade the paraneural pathways?

MR. POWERS: Form.

THE WITNESS: Well, again, without any contrast, without an MR scan at that time, I couldn't make that determination.

Q. BY MR. WINTHROP: Did it, in your opinion, invade the paraneural pathways in December?

A. I would have to look at the MR scan. I don't recall from my looking at it that I thought that it did.

Q. Could you take a look at those scans --

A. I can tell you no, because the mass is so big that you are not going to see anything tracking up along the nerves.

It goes from the skull base down the neck, so I couldn't tell you that, either.

(There was a brief interruption in the proceedings.)

Q. BY MR. WINTHROP: Based on your understanding of these types of tumors, Doctor, would you agree that they are variable in their growth rates?

A. Well, every tumor is unique, even though they are -- they put a particular histological classification on it. Yes, they have different growth rates.

Q. With respect to nasopharyngeal tumors, does the growth rate slow as the volume increases?

MR. POWERS: Form. I apologize. I have to state that for the record, "form," to make my objection. Go ahead. That's for later on if we go in front of the judge with the question, that I have to state that. That's why I'm doing that, not to interrupt you, and I apologize.

THE WITNESS: Okay. Any tumor, as it grows, when it tends to get bigger, any further increase always looks small because of the overall volume. That doesn't mean it's slowed down growing.

Like blowing up a balloon, you add air and it doesn't seem to get any bigger as quickly -- the same principle.

Q. BY MR. WINTHROP: Okay. Would you defer to an oncologist for further discussion about the growth rates of tumors?

A. And doubling times and tumor volumes and all of

that?

Q. Yes.

A. It depends what you defer.

Q. What I'm trying to find out is if you would agree that, as of March 1995, this nasopharyngeal tumor was in a slow-growth mode?

A. No. I have no way of knowing that with an isolated snapshot in time.

Q. Would you agree that as of March 1995, that this particular tumor involved more than one wall of the nasopharynx?

MR. POWERS: Form.

THE WITNESS: More than one wall of the nasopharynx? I can't imagine how it could involve -- well, I think by direct extent, I would say it involves the lateral wall, and it certainly displaces the roof, but I don't think that I would say that there's direct invasion of the --

If you want to talk about tumor into the mucosa that you could see if you looked up at the roof, I think there's mass effect on the roof, but I don't think I could say that was absolute involvement on that side of the roof.

Q. BY MR. WINTHROP: Would you agree that the tumor invaded more than one subsite of the nasopharynx?

A. Well again, define "subsite" for me.

Q. Doctor, I'm looking at the manual for staging cancer that Dr. Siegel provided to you, on Page 34, under "nascpharynx" in the staging classifications.

You are generally familiar with those, aren't you?

A. I'm generally familiar with that, but I don't routinely stage tumors. That would be the oncologist and the surgeons that assign these stages.

So these definitions on the way they divide it up is worked out between them and are not routine definitions that I use.

Q. Looking at that page under "Nasopharynx," do you recognize that the T1 through 4 classifications actually refer to radiographic findings?

A. Well, they look at a lot of findings that you may see on radiograph or identify at the time of surgery.

Q. And are you -- As you sit here today, are you unable to understand what the authors of this study mean when they are talking about the tumor invading more than one subsite of the nasopharynx?

A. Well, again, I would defer to the oncologist for the staging of the tumor rather than making up my own for you.

I don't have a particular opinion about the staging numbers or classification of the tumor.

Q. All right. Let me ask you this: Wouldn't you agree that more likely than not in the end of March, first part of April 1995, this nasopharyngeal tumor extended beyond the nasal pharynx?

MR. POWERS: Form.

THE WITNESS: Probably.

Q. BY MR. WINTHROP: Now, as you told us before, the March 30 scan is limited in that you cannot see the inferior border of the tumor, correct?

A. That's correct.

Q. And, so you can't provide us with a radiographic dimension of the superior/inferior dimension for that tumor, can you?

A. No, not a definitive number, I cannot.

Q. Have you made some assumptions and arrived at what you think is a reasonable prediction as to what that dimension would be as of that date?

A. Yes. As I mentioned earlier in the deposition, these tumors tend to grow like a sausage so that the AP diameter of the tumor tends to be what the superior/inferior extent of the tumor is.

With that assumption, that's how I made my volumetric determination. And it is a guess.

Q. Sure. I understand that.

Have you made a measurement in the transverse dimension of the tumor in March?

A. Yes.

Q. What did you measure?

A. I don't recall the specific measurement. I can do it again for you.

Q. I'm interested in what you think the transverse AP and superior/inferior dimensions are.

A. Can I borrow your pen for a second?

(There was a brief pause in the proceedings.)

THE WITNESS: The transverse dimension, I think, is about 4.3.

Q. BY MR. WINTHROP: Is that cubic millimeters?

A. No, centimeters. And I think the best maximum AP-like diameter is about 3.8, something like that, something around there. Again, these are relative figures.

Q. In your assumption, based on what you've -- the logic that you've told us about is that the presumed measurement from superior to inferior, or vertically, would be also approximately 3.8?

A. Something in that ballpark.

Q. And it's based upon those measurements that you

arrive at a calculation for volume of the tumor as of the end of March?

A. Something like that.

Q. Is that the 21.2 cubic centimeters reflected in this disclosure statement?

A. That's when I originally measured it, yes.

Q. Has your projection of volume changed since then?

A. No.

Q. Since we are on that topic, you've -- this disclosure statement indicates that the volume in December of 1995 is 46.9 cubic centimeters, true?

A. Yes.

Q. And that's a calculation you made?

A. Yes.

Q. Based upon measurements you utilized or found from reviewing the December films?

A. Yes.

Q. In the December studies, is the inferior border of the lesion identifiable?

A. On the December study?

Q. Yes.

A. I believe so, yes.

Q. Just so we do this completely, what are the measurements in the various dimensions of that lesion as

reflected in December?

(There was a brief pause in the proceedings.)

THE WITNESS: I think lateral, from side to side, it measures 6.2; anteroposterior, 4.2; and superior to inferior, about 4.5.

Q. BY MR. WINTHROP: Looking at that measurement, would you still classify the shape of this lesion as sausage-like?

A. Well, it's an ellipse. It's not equal measurements all the way around, so it's not as sausage-like as it was.

Q. It's not as sausage-like as you presume it was, correct?

A. Well, on the original imaging study, it looks long like this in the cuts that we had. On the follow-up imaging study, it looks much rounder and like that.

So, yeah, it's certainly changed in shape as it's grown, and, of course, it's limited by nasal boundaries and everything else, so it's assuming the space of least resistance.

Q. I know you've characterized the shape as you see it in March as "sausage-like."

Would "lobular" be another term to use for that

shape?

A. Sounds good.

Q. Would you agree, then, in March the inferior border of that mass probably extended into the oral pharynx?

MR. POWERS: Form.

THE WITNESS: Yes.

Q. BY MR. WINTHROP: Based on your experience and training, Doctor, do you have an understanding as to the most common site in the nasopharynx where these types of tumors originate?

A. Well, in my experience, they all pretty much seem to have grown or originated in this space, the parapharyngeal space and the mucosa of the nasopharynx.

Q. Is that your assumption as to where this particular tumor originated in this girl?

A. Yes.

(There was a brief interruption in the proceedings.)

Q. BY MR. WINTHROP: With respect to the March 30 scan, Doctor, because the exact boundaries of the inferior border of the tumor are not known, would you agree that it's at least possible that the volume of the tumor in March, the end of March, was something greater than the 21.2 cubic centimeters you have estimated?

MR. POWERS: Form.

THE WITNESS: It may be.

Q. BY MR. WINTHROP: Would you think that it is probable that the volume of the mass is larger than the 21.2 cubic centimeters?

MR. POWERS: Form.

THE WITNESS: No, I've given you my best probable guess.

Q. BY MR. WINTHROP: Could reasonable radiologists disagree about that?

A. Sure.

Q. Does the presence or absence of contrast in the study affect your ability to accurately determine the size of the mass?

A. I think it would be more accurately sized if you had a nice capsule around it. Yes, the answer is yes.

Q. Such as you can see in the December study?

A. Yes.

Q. Would you agree that the geometric characteristics of the mass affect someone's ability to determine the volume?

A. Yes.

Q. How so?

A. Well, if it's not a perfect sphere, then you

have to apply some kind of formula for an irregular shape.

My volumetric determination was based on an ellipsoid shape.

Q. Ellipsoid is -- I don't want to put words in your mouth. I think it's --

A. Sausage.

Q. Ellipsoid would be sausage shaped?

A. Yes, or lobulated.

Q. I'm ignorant about that.

Is there a mathematical formula that you utilize to do that?

A. Yes.

Q. Can you tell us what that is.

A. I believe I take each of the radii of an ellipsoid, and you divide it in half, and then you cube it and add them together, if I remember correctly.

In fact, at the time, I had to look that up from the Mr. Math internet site to get that because I couldn't remember from my analytic geometry what that was. I would have to go back and confirm that, if you like, but I think that was it.

Q. That wasn't something Mr. Powers did for you?

A. No, no.

A sphere is four-thirds pi R cubed. And,

ellipsoid you take the R cubed and figure out the different axis in that R before you cube it, so it's not just a straight sphere.

Q. Would you agree, Dr. Nelson, that, at least statistically, it's well recognized that a certain percentage of lesions are going to be missed by radiologists who are interpreting studies?

MR. POWERS: Form.

THE WITNESS: A certain percentage?

Q. BY MR. WINTHROP: Yes, sir.

A. Lesions are missed by radiologists, yes, that's true.

Q. And that includes studies such as CT scans or MR studies?

A. Yes.

Q. And it includes tumors of even this size, doesn't it?

A. Not very frequently, but yes, as this case illustrates.

Q. Sure. I mean, you are familiar with some reported studies in the literature about that, aren't you?

A. I've seen some studies that have looked at that.

Q. And those studies reflect instances where

there's missed pathology even where the radiologist is trying to do his or her best job?

MR. POWERS: Form.

THE WITNESS: Yes. Most of the studies I'm aware of are relating to missed coin lesions on chest x-rays, small round lesions in the chest x-ray that some months later come back the size of a grapefruit, and when they look at the previous one, sure enough, it was there.

Q. BY MR. WINTHROP: You don't believe Dr. James was acting maliciously in not diagnosing this tumor?

A. Absolutely not.

Q. It's an unfortunate error that can and does occur once in a while?

MR. POWERS: Form.

THE WITNESS: Yes.

Q. BY MR. WINTHROP: And you read his deposition, didn't you?

A. Yes.

Q. And Dr. James admitted his error in missing that pathology?

A. Yes, he did.

Q. And that's what you expect a reasonable and well-trained radiologist to do when confronted with that sort of mistake?

A. Yes, sir.

Q. The March 30 CT scan is not, in and of itself, diagnostic of pharyngeal cancer, is it?

A. That's correct.

Q. It's diagnostic of a mass?

A. That's correct.

Q. Which might be suspicious for a tumor?

A. That's correct.

Q. And which may or may not be benign?

A. That's correct.

Q. And, so it would require some sort of clinical or diagnostic follow-up?

A. That's correct.

Q. What would you understand such follow-up to involve?

A. Having had that exam done for another reason, if that incidental finding on the lower cuts would have stimulated better imaging studies, I would have recommended an MRI study with adding contrast, first and foremost, and subsequent clinical evaluation and determination needing to be made would be open resected or needle biopsy at that point.

Q. So following the further definitive radiology study, there may or may not be the need for surgical consultation?

A. That's correct.

Q. And depending upon the results of that, there may be some further diagnostic procedure such as a biopsy?

A. That's correct.

Q. And, perhaps, further consultation with subspecialists in oncology and radiology?

A. I think an oncologist would have been involved early on because it looks like a mass, a tumor. So they would have been involved early on.

Q. Are there any other opinions you hold in this case, Doctor, either about Dr. James or with respect to the causation issues in this case that we haven't discussed?

A. No.

Q. I will let Mr. Sammons ask you some questions now.

MR. SAMMONS: With the answer to the last question, I have no other questions.

EXAMINATION

BY MR. POWERS:

Q. I have a couple clarifying questions for you, Doctor, if you would look at the March 30 scan when I'm asking you these questions.

It's my understanding from Dr. Siegel that when he talked with you, you indicated that the March 30 CT scan does not show any evidence that the tumor involved the oral pharynx, that it wasn't breaking through, and the fat plane was intact; is that correct?

MR. WINTHROP: Object to form.

MR. SAMMONS: Join.

THE WITNESS: Again, that depends on what you are saying in terms of what you mean by "involved by."

It's certainly in the nasopharynx as you go down. At what point do you have a junction between nasopharynx and oral pharynx?

I'm sorry. I interrupted you.

Q. BY MR. POWERS: Isn't it true, Doctor, that you cannot tell from the March 30, 1995 CT scan as to whether or not the tumor involved the oral pharynx?

MR. WINTHROP: Object to form.

MR. SAMMONS: Join.

THE WITNESS: I don't see mucosal involvement on the oral pharynx on this scan. I think if you looked into the mouth, you could see a mass effect from it. From that standpoint, you can say there's a mass effect.

But if you're saying there's a direct effect of the oral pharyngeal structures, I can't say that.

Q. BY MR. POWERS: Fair enough. I just wanted to

make sure the record is clear.

There's no definitive evidence on the March 30, 1995 CT scan of any bone erosion; isn't that right?

MR. WINTHROP: Object to form.

THE WITNESS: Again, I don't see the pterygoid plate. There's -- that may be gone by a pressure effect.

I don't see active structures of bone that I could say, "Yes, this is tumor invasion."

Q. BY MR. POWERS: And you don't see active structures of the skull base, do you?

MR. WINTHROP: Object to form.

MR. SAMMONS: Form.

THE WITNESS: To me the pterygoid plates are the skull base. The problem is, and this is where the majority of my time was spent with Dr. Siegel about, do the oncologists, when they make these classifications, count the pterygoid plates as skull base or not?

And I don't know what to do with that, and I'm not sure he does, either.

Q. BY MR. POWERS: Here's my question: If Dr. Siegel stated that he does not consider the pterygoid bones to include the skull base, you wouldn't disagree with that from his oncology perspective?

MR. WINTHROP: Object to form.

MR. SAMMONS: Join.

THE WITNESS: They do the staging. They write the classifications. They write the protocols on who is eligible and who is not eligible, and I would defer to that in that regard.

MR. POWERS: Okay. That's all the questions I have.

Doctor, do you want to read and sign the deposition? We will make arrangements to get you a copy.

THE WITNESS: Whatever you want to do.

MR. POWERS: Just for the record, you are going to send me the original and the signature page and my copy. And I will also take a condensed, four on a page, with a disk.

(Whereupon, the deposition was concluded at 3:37 p.m.)

STATE OF _____)
)
COUNTY OF _____)

I, the undersigned, declare under penalty of perjury that I have read the foregoing transcript, and I have made any corrections, additions or deletions that I was desirous of making; that the foregoing is a true and correct transcript of my testimony contained therein.

EXECUTED this _____ day of _____,
20_____, at _____, _____.

_____
WITNESS

REPORTER'S CERTIFICATE

I, Martin Spee, CSR 10303, Certified Shorthand Reporter, certify that the foregoing proceedings were taken before me at the time and place therein set forth, at which time the witness was duly sworn under oath by me;

That the testimony of the witness, the questions propounded, and all objections and statements made at the time of the examination were recorded stenographically by me and were thereafter transcribed into typewriting under my direction;

That the foregoing is a true and correct transcript of my shorthand notes so taken.

I further certify that I am not a relative or employee of any attorney of the parties, nor financially interested in the action.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated this 27th day of July, 2000.

Martin Spee, CSR 10303