State of Ohio, )
County of Cuyahoga. )

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IN THE COURT OF COMMON PLEAS

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THOMAS S. ORTMAN, et al.,
Plaintiffs,
v.
ROBERT ALBERHASKY, M.D., et al.,
Defendants.

Case No. 317279
Judge
Christopher A. Boyko

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THE DEPOSITION OF ARMIN J. GREEN, M.D.

TUESDAY, DECEMBER 9, 1997

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The deposition of ARMIN J. GREEN, M.D., a Witness herein, called for examination by the Plaintiffs, under the Ohio Rules of Civil Procedure, taken before me, Lauren I. Zigmont-Miller, Registered Professional Reporter and Notary Public in and for the State of Ohio, pursuant to notice, at the offices of Dr. Green, Mentor Medical Park, 8224 Mentor Avenue, Mentor, Ohio, commencing at 5:10 p.m., the day and date above set forth.

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APPEARANCES:

On behalf of the Plaintiffs:

JACK LANDSKRONER, ESQ.
The Landskroner Law Firm
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Suite 1040
Cleveland, Ohio 44113-1904
(216) 241-7000

On behalf of the Defendants:

MARILYN MILLER CRISAFI, ESQ.
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(216) 736-8600

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(Thereupon, Plaintiffs' Exhibits 1, 2 and 3 to the deposition of Armin J. Green, M.D., were marked for purposes of identification.)

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ARMIN J. GREEN, M.D.,

a Witness herein, called for examination by the Plaintiffs, under the Rules, having been first duly sworn, as hereinafter certified, deposed and said as follows:

CROSS-EXAMINATION

BY MR. LANDSKRONER:

Q. Doctor, my name is Jack Landskroner. We've had a chance to briefly meet before the deposition.

Just for the record, we're beginning today at 5:10. This is in the case of Tom Ortman, et al., vs. Robert Alberhasky, et al. We're here for your discovery deposition today.

I'm going to ask you some questions. Please make your responses verbal so the court reporter can take everything down. If you don't understand a question, please stop me and ask me to rephrase it. I want to make sure you understand the question I ask you and answer that. Are those fair instructions?



A. Yes.

Q. Can you state your name for the record.

A. Armin J. Green, M.D.

Q. What is your professional address?

A. 8224, Mentor Avenue, Mentor, Ohio, 44060.

Q. Doctor, I've been provided with a copy of your curriculum vitae, which we've marked as Exhibit 1. Is that an up-to-date copy or version of your CV?

A. Not totally.

Q. Okay. What is absent from this CV?

A. I'm no longer associate medical director of Hospice of the Western Reserve, I am now the assistant medical director of the Lake University Ireland Cancer Center.

Q. Is that affiliated with University Hospital?

A. Yes.

Q. Who is the director of that?

A. The director is pending. We're in the process of moving this office into that center within the next two weeks.

Q. So you'll be the assistant director of the Lake County --

A. It's a joint venture between University and Ireland Cancer Center.

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Q. When did you cease to be involved as the medical director of the Hospice of the Western Reserve?
A. Formally as medical director it was about three years ago.
Q. Are there different versions of your curriculum vitae that you utilize for speaking engagements?
A. No.
Q. Or for writing purposes?
A. No. This just hasn't been updated.
Q. I note you have referenced Board eligibility. Are you a Board certified physician?
A. No.
Q. Can you tell me what it means to be Board eligible.
A. Board eligible at the time of finishing my residency meant that I had eligibility to *take the* Boards in both hematology and internal medicine.
Q. And did you undertake the examinations?
A. I took the examination once.
Q. Did you pass the examination?
A. No.
Q. You have not sat for the examination again?
A. No.

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Q. Is there a Board certification for oncology?
A. Yes.
Q. Have you ever sat for that examination?
A. No.
Q. Do you intend to sit for that examination?
A. No.
Q. Do you intend to retake your Boards for hematology and internal medicine?
A. No.
Q. Can you tell me what the purpose of Board certification is?
A. It's a matter of passing a test.
Q. What does it allow you to do once you're Board certified?
A. Nothing more than I can do without being Board certified.
Q. Does it allow you to hold yourself out as an expert in a certain area beyond what you do presently?
A. Would Board certification allow me to hold myself out any more than I do now?
Q. *Yes.*
A. No.
Q. What are the benefits to being Board certified?
A. For me, none.
Q. What about for doctors in general?
A. For doctors passing the boards was about 40 percent when I took them in 1973. Now today a younger doctor needs the boards in order to be on the staff of certain hospitals. There are grandfather clauses because it was a totally different situation when I took them in 1973.
Q. You are a licensed physician in the State of Ohio?
A. Yes.
Q. Are you licensed in any other states?
A. No.
Q. Have you ever held licensure in any other
A. No.
Q. *Are* you on staff at any hospitals in town?
A. Yes.
Q. Which hospitals?
A. Lake Hospital Systems.
Q. Do you have privileges at any other hospitals?
A. No.

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Q. What are the hospitals that make up Lake Hospital Systems?
A. Lake Hospital West and Lake Hospital East.
Q. With this new venture will you have privileges at University Hospitals?
A. Probably.
Q. Have you ever had your privileges suspended, revoked or diminished in any way from any hospital?
A. No.
Q. Doctor, are you involved in any publications beyond what's referenced in your CV here?
A. No.
Q. None are pending publication?
A. No.
Q. Do either of these publications that you've referenced on your CV have anything to do with the subject matter of the lawsuit?
A. No.
Q. Your practice is in what areas?
A. I'm sorry, I'm not sure I understand.
Q. What areas of medicine do you specialize in?
A. Hematology and oncology.
Q. Can you explain to me what hematology is?

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A. Hematology is the diagnosis and treatment of blood-related disorders and hematological malignancies, which includes lymphomas.
Q. And oncology?
A. Oncology would be the diagnosis, treatment and care of patients with solid tumors, and that encompasses malignancies of a lot of different organs.
Q. I assume that includes testicular regions?
A. That would include testicular regions.
Q. In the course of your practice in hematology and oncology do you receive regular publications or journals in the trade or profession?
A. Yes.
Q. What publications do you receive on a regular basis that you review as part of your practice?
A. Seminars in Hematology, Seminars in Oncology and the journal Oncology.
Q. What about texts that you refer to in the course of your practice?
A. There are textbooks that I own but rarely refer to.
Q. Is there a text that is utilized for purposes of oncology -- and for purposes of this deposition let's deal more with oncology, not necessarily hematology -- texts that you rely on in the

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course of your practice for oncology that you can refer me to?
MS. CRISAFI: Objection.
A. One of the textbooks that I own is Davita's Textbook of Oncology. I rarely refer to it; it's mainly here as a reference source.
Q. Is there an authoritative text out there that sets forth what good practice is and standards are in terms of oncology?
MS. CRISAFI: Objection.
A. The problem with oncology is it is such a rapidly changing field that textbooks rarely can keep up with the changes. They change within months sometimes. So I rely more on literature in the journals that I talked about. The textbook -- I mean, I must tell you that I own these textbooks but probably open them less than one time a year.
Q. The journals then, do you utilize those as authoritative?
A. Yes.
MS. CRISAFI: I missed the last part.
MR. LANDSKRONER: The question was, do you rely on the journals as authoritative, and he said yes.

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MS. CEUSAFI: Is that correct?
THE WITNESS: Yes
A. There are multiple journals and may be multiple opinions. Which one I decide is authoritative is based on reviewing a number of them.
Q. And in terms of reviewing a number, you would assume the authoritative would be the one that takes the majority opinion?
A. I would assume it's the one that takes the majority opinion after a period of time where those opinions could be proven.
Q. Do you teach anywhere?
A. I have a teaching appointment at University Hospitals. At this point in time I'm not actively teaching, but I have over the last 25 years been active in teaching medical students.
Q. In the course of just the practice, your practice at the hospital?
A. Both formerly at the university, formerly at the VA Hospital, formerly in the hospital setting and formerly in this office.
Q. Presently you have no residents that work with you?
A. Not at the present time. This will be

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reinitiated after a hiatus of about ten years with the new center.
Q. You had the opportunity to review a report from a Dr. Sweet?
A. Yes.
Q. Do you know Dr. Sweet?
A. No.
Q. Are you familiar with Dr. Connell?
A. Yes.
Q. In what context do you know Dr. Connell?
A. I've referred patients to her.
Q. Have you socialized with her on any basis?
A. No.
Q. Have you talked to her at any time about the facts of this case?
A. No.
Q. Doctor, have you ever been a plaintiff or a defendant in a lawsuit?
A. Yes.
Q. Can you tell me how many times you've been a defendant in a lawsuit --
MS. CRISAFI: objection.
Q. -- involving medical negligence?
A. How many times have I been involved?
Q. As a defendant named in a case involving

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medical negligence.
MS. CRISAFI: Objection to this whole line.
A. I can't give you the exact number of cases that I've been named in, but probably it's in the range of four to five.
Q. Did any of those cases involve issues similar to the issues that are present in this case?
A. No.
Q. None of those cases involved issues of embryonal carcinoma or seminoma?
A. No.
Q. Were those cases filed in Lake County?
A. Yes. Probably a combination of Lake County, Geauga and Cuyahoga.
Q. Were you deposed in any of those cases?
A. In two of them.
Q. Were those in Lake County?
A. Yes.
Q. Did either of those cases go to trial?
A. No.
Q. Were there settlements involved in either of those two cases?
A. No.
Q. Can you tell me how many times that you've

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been involved in reviewing medical-legal issues as an expert?
A. Many. I can't tell you the exact number.
Q. Can you tell me approximately how many cases you review a year?
A. Ten.
Q. And how many years approximately you've done that for?
A. Twenty-five -- 23.
Q. In the course of those years can you tell me what percentage of those cases you've reviewed for the plaintiff and what percent for the defendant?
A. Ten percent approximately for the plaintiff, 90 percent for the defendant.
Q. In the course of those reviews in the years that you've been involved with this have you testified live in trial?
A. Yes.
Q. Can you tell me the most recent times that you've testified in trial?
A. The last time that I testified in trial was probably four years ago.
Q. Doctor, are you a PIE insured?
A. No.
Q. Have you ever sat on any review boards for

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any insurance companies?
MS. CRISAFI: Objection.
A. I did sit on a peer review board for PIE years ago for one year.
Q. Were you at that time a PIE insured?
A. Yes.
Q. When did you cease to be a PIE insured?
A. September of 1997.
Q. Doctor, at the time you rendered your opinions in this case were you a PIE insured?
A. Well, I would have to check the exact date. Do you want to know the exact time, the exact date? I can tell you that at the time I rendered this opinion, no, I was not.
Q. Do you recall when you were first contacted to review this case?
A. I don't recall, but I may have it written down. I don't have it written down. I do not think it was before September 3rd, which was when my PIE insurance was discontinued and I started with the new company, I suspect it was after that.
Q. Do you know if the new company you're insured by has any involvement with PIE?
A. It's not.
Q. Are you familiar with Dr. Alberhasky?

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A. No.
Q. Dr. Basa?
A. No.
Q. Dr. Sidor?
A. No.
Q. I assume then you've never received any referrals from any of these physicians?
A. No.
Q. If you can, tell me how it is you first became involved in this case.
A. I got a call from Marilyn Miller Crisafi asking me if I would be willing to review a case.
Q. Doctor, let me back up. In the course of your reviewing cases over the years have you ever testified at trial for a plaintiff?
A. Yes.
Q. Do you recall the last time that occurred?
A. That was probably around six years ago.
Q. Do you recall who the attorney was?
A. Paul Kaufman.
Q. Going back to how you were first contacted in this case.
A. I just got a telephone call from Ms. Crisafi asking me if I would be willing to review a case of testicular cancer.

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Q. Do you know how she came across your name?
A. I've done a number of reviews for PIE in the past.
Q. Have you ever worked with Ms. Crisafi before?
A. No.
Q. While you were a PIE insured were you represented by the Jackson, Maynard Law Firm?
MS. CRISAFI: Objection.
A. As an insured, yes.
Q. Doctor, in the course of your practice I assume that you see patients that are referred to you with seminoma?
A. Well, not necessarily seminoma because seminoma is rarely treated with chemotherapy.
Q. Do you see mixed cell tumors?
A. Yes.
Q. Do you see tumors that are embryonal carcinoma?
A. Yes.
Q. Are there occasions that you have seen patients with seminoma?
A. I'm not going to say that there has never been an occasion where I've seen a seminoma maybe to give an opinion. I've never treated a patient with

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Q. Is this something that you reviewed in the course of your review of this case?
A. Yes.
Q. There is a cover letter from Ms. Crisafi which is dated December 1, 1997 -- I'm sorry, cover letter dated October 27th of 1997 from Ms. Crisafi which appears to be an initial letter to you providing records and materials, a copy of which we have marked as Exhibit 3.
A. Correct.
Q. Is that the initial letter you received that provided you the materials?
A. Yes.
Q. There's some handwritten notes here, as well. Are these notes that were generated by you in your review of this case?
A. Yes.
Q. Were those notes, if you can recall, generated at the time you were going through the original records?
MS. CRISAFI: Objection.
A. Yes.
Q. There appears to be a copy of a report that you rendered in this case?
A. Correct.

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pure seminoma.
Q. [illegible] Ms Crisafi [illegible] what was your understanding of what your role was going to be in reviewing this case?
A. I was asked to be an expert with regard to the complications of chemotherapy that the patient was administered and to review the case from the standpoint of damages he could have incurred or been incurred because of the chemotherapy and the radiation therapy that this patient received.
Q. If I can kind of glance at your file for a little bit look through and just see what you reviewed [illegible] doctor, as I review these records I see that there are updated records from O'Connell You had a chance to look at those?
A. Yes.
Q. There is a deposition of Dr. Mitchell Key?
A. Yes.
Q. You've had a chance to read that deposition?
A. Briefly. It was just sent to me within the last 24 hours.
Q. There are some medical literature that you have as part of your file?
A. Yes.

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Q. And a notation for your fees for review and your involvement in this case?
A. Correct.
Q. And your rate for review of literature and records, initial review is what per hour?
A. $300 an hour.
Q. So at $300 at least as of the time of your letter dated November 4th, you had spent five --
A. Five hours on telephone conversations, reviewing literature and dictating the letter.
Q. And that I assume, excludes any time you had in preparation for the deposition today?
A. Correct.
Q. In the course of preparing for the deposition today can you tell me what you reviewed what you specifically reviewed in preparation?
A. Details regarding a number of issues during this patient's care in chemotherapy and follow-up scans, those were from the medical records supplied to me by the attorney, and a number of pieces of medical literature, some of which are in here now.
Q. In reviewing your report -- we've marked a copy of your report as Exhibit 2, is that correct?
A. Yes.
[illegible]ve listed a number of materials that

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you've looked at in that report in preparation for writing your report a review of this case, correct?
A. Yes.
Q. In addition to the information that's listed in that report and that information which we've now viewed from your file, is there anything else that you reviewed related to this case that we haven't talked about?
A. Are you talking about specific books and journals that are not in this file but I might have looked at?
Q. Not yet. I was talking about what you looked at, records and materials related to this case.
A. No, that is complete.
Q. Did you have the opportunity to do any literature searches related to this case in preparation for writing your report?
A. The literature search that I did was on my own, it was not a formal literature search, and it reviewed only journals, textbooks and articles that were available to me on an immediate basis.
Q. Can you tell me what journals, texts or articles that you did review in preparation for writing this report?
A. The journal Oncology and a paperback book

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called Cancer Management - A Multi-Disciplinary Approach.
Q. The Journal of Oncology --
A. The journal is Oncology -- I'm sorry, Seminars in Oncology.
Q. Who is that authored by?
A. It's edited by a number of people and authored per issue.
Q. It's dated April 1992, Volume 19, No. 2, Seminars in Oncology.
Are the articles that you have in your file from this journal?
A. Yes.
Q. And I assume that the articles you thought were pertinent you copied and put into your file?
A. Correct. There was another article that was generated by the library, which came from -- I'm not sure where that came from -- the Lancet.
Anything else or any other journals or materials that you reviewed?
A. No.

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Q. You said this Seminars in Oncology, you said one other publication, what was the other publication?
A. (Indicating).
Q. This is a book entitled, Second Edition, Cancer Management - A Multi-Disciplinary Approach, by Richard Pazdur, P-A-Z-D-U-R, M.D. I'd like to get the cover of that, as well.
MS. CRISAFI: Is that 1998?
MR. LANDSKRONER: That is the 1998 edition, correct.
THE WITNESS: which is unique because we're not in 1988.
BY MR. LANDSKRONER:
Q. Did you copy any of the pertinent materials you found in that book?
A. No.
Q. Is there anything that you reviewed in the last day or so, including the depositions or the recent medical records, which changes your opinion in any way, opinions that you've set forth in your report?
A. No.
Q. Is there anything that you have not had the opportunity to review that you would like to have

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had the opportunity to review related to this case or the records?
A. Not at this time.
Q. Nothing that you thought was necessary for you to get a complete review?
A. That's correct, no.
Q. Doctor, what percentage of your time do you spend in reviewing medical-legal issues?
A. Less than one percent.
Q. Can you break down for me what the remainder of your time consists of?
A. Clinical practice a hundred percent basically. These cases are reviewed at home out of the office.
Q. Did you have the opportunity to discuss this case with any other physicians or experts?
A. Yes.
Q. Who did you discuss it with?
A. I discussed it briefly with Dr. Siminovitch.
Q. And how do you know Dr. Siminovitch?
A. I work with him.
Q. Did Dr. Siminovitch in any way have any involvement with your coming on this case?
A. No.

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Q. Did you have any involvement with Dr. Siminovitch coming on this case?
A. No.
Q. What did that discussion entail between you and him?
A. It was very shortly after I was contacted by Marilyn Crisafi and I was informed that he may be an expert in this case. I just wanted to briefly discuss some of the details with him, which we did very briefly at a social function. That was actually the total extent of the discussions.
Q. What were the issues that you discussed at that time?
A. The issue was that he's a urologist and I was just curious in terms of his urological opinion.
Q. What did he tell you at that time?
A. He did not render an opinion at that time because he had not reviewed the details of the case.
Q. Did you have a chance to express your opinions?
A. I had not received the case at that time; I had been contacted about probably reviewing it.
Q. At no point after that did you have a discussion?
A. At no point afterwards. Dr. Siminovitch

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is in this area and it was a coincidence that he was being used. I see him every day and work with him on a very close basis. The case was a coincidental situation. It was never brought up again other than it was a coincidence that we had been called.
Q. Does Dr. Siminovitch refer you patients?
A. Yes.
Q. Do you refer him patients?
A. Yes.
Q. Your report dated October 27, 1997, were there any drafts of that report that were issued?
A. No.
Q. Were there any changes made to the report at any time?
A. No. When you talk about changes, there were typographical errors before that report was sent to Ms. Crisafi and those changes were taken out before she got it, but there were no changes to the report. That was all done within a period of minutes.
Q. Ms. Crisafi didn't have a copy of the report before the changes were made?
A. No.
Q. In the course of your practice, Doctor, do you treat any patients with any radiation therapy?
A. I don't treat -- I'm not -- I do not

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administer radiation therapy, but I work very, very closely with a radiation therapist and make recommendations for radiation therapy on a regular basis.
Q. Are you familiar with Dr. Laye?
A. Yes. I've worked with him only because I work very closely with East Side Radiology, which is our current radiation therapy unit, and there's a partnership arrangement between East Side Radiology and West Side Radiology. So, when our radiation therapist with whom I deal with on a regular basis is gone, Dr. Laye is there. It's been very infrequent but I have worked with him.
Q. So you would refer patients to him?
A. No. The patient is referred to the radiation therapy center, and in very rare instances where the radiation therapist with whom I work on a regular basis is gone Dr. Laye has been covering. I have not referred directly to Dr. Laye.
Q. I got you. So, while you don't administer radiation therapy, you do prescribe it and then send the patient off to the --
A. I recommend it and then I allow the radiation therapist to make the decision as to how much, how and what.

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Q. In your practice do you hold yourself out as an expert in -- I assume you hold yourself out as an expert in the area of oncology?
A. Yes.
Q. Hematology?
A. Yes.
Q. Any other areas besides that?
A. No.
Q. You do not perform any surgery?
A. No.
Q. Can you tell me how you would determine the appropriate course of therapy for a patient who presented to you with cancer?
A. I mean --
Q. I understand that's a general question.
A. It's a very general question.
Q. I'm trying to get an understanding, if a patient comes to you and has cancer, what do you look for?
A. A general overview of how I take care of this kind of situation?
Q. Yes.
A. First of all, we will not see the patient until we have all the records, slides and path reports in front of us. The patient doesn't get through the

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door without appropriate studies to confirm they have the diagnosis.

Once I have all those, I sit down with the patient in that chair where you are sitting right now and take a complete history, past history, present history, what other problems they have, put it together with the medical reports that I have, do an examination, and then determine the best plan for that patient.

I approach the patient in this office by telling them I don't treat path reports, x-rays and slides, I treat individual patients. My recommendation is going to be based on the total picture of what that patient presents with, what the diagnosis is, what kind of malignancy we're dealing with and we put together a plan based on all those factors.

Q. So, as you stated, you treat the patient as a whole, not just the reports?

A. Right.

Q. If a patient presents to you with seminoma, how do you go about determining the appropriate course of therapy for that patient?

MS. CRISAFI: Objection.

A. I have to be honest and tell you that seminoma patients are generally not referred to a

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medical oncologist because I'm very rarely asked, would rarely be asked to render an opinion in someone with a disease that's either treatable or curable with surgery or radiation therapy. I must tell you that I don't think I've ever *seen* a pure seminoma patient.

Q. Sure. A patient presents to you With a mixed cell tumor, embryonal carcinoma and seminoma, how would you go about determining the appropriate course of treatment for that patient?

A. That treatment would be based on the extent of disease, primarily based on a staging situation.

Q. So the treatment modality is directly affected by the stage of the cancer?

A. Yes.

Q. And determining what the appropriate stage is is imperative to the treatment modality?

A. In any disease.

Q. Can you tell me just in lay terms, what is cancer?

A. Cancer is a generic term for any one of a broad number of malignant processes. They vary from site to site, they vary from aggressive to slow growing, they vary in terms of what they can do.

Some patients who have what appears to

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be very extensive cancer and may be told by some doctors they have several months to live will be alive many, many years later, others will be told they'll be alive many years later and they'll be gone within six months. So, it's a huge number of different processes, which is why there is no single cure for cancer.

Q. A patient presents to you with embryonal carcinoma, again, the appropriate course of treatment would be based on the staging of the tumor?

A. The appropriate treatment would be based on the staging. That's why staging was developed. The reason we stage a patient is in order to determine whether or not, number one, that patient requires one form of therapy over another or no therapy at all.

The reason the staging process came into being in the first place with diseases like Hodgkin's in the 1960s is to try to determine why some patients looked like they were going to do well and didn't and other patients on the surface did lousy and they ended up doing well. We now know that by staging a patient we can determine outlook and prognosis. That's how the staging process came into being in the first place.

Q. What are the consequences of a mixed cell tumor going untreated and undiagnosed?

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MS. CRISAFI: Objection.

A. Death.

Q. Is early di and t tion of mixed ell tumor or t onal ll carcinoma directly orrelative t tl outcome for the ti t?

MS. CRISAFI: Objection.

A. This is what is interesting about cancer of the testicle, which makes it different from virtually all other forms of cancer, and that is that the cure rate for testicular cancer appears to be very, very high even if the disease is not picked up early.

That's not true for other forms of cancer, and that's why it's difficult to equate one form of malignancy with another. The more advanced breast cancer is the more difficult it is to treat. With testicular cancer we have very high success rates even with advanced disease.

Q. Can you tell me in May -- and if at any point in time you need to look at the records, feel free to do so -- in May of 1995 what Mr. Ortman's diagnosis was based on the correct pathology?

A. The correct pathology is a mixed embryonal cell carcinoma, that's what you're telling me?

Q. Correct.

A. We're assuming that that is the correct

pathology as of now. The only way that you could have really known what his stage was was to have done what they call a retroperitoneal lymph node dissection, RLND in the urological literature.

Q. Based on the records that you've reviewed, were you able to make an assumption as to what stage his cancer was?

A. I could tell that the CAT scan --

(Thereupon, there was a brief recess.)

BY MR. LANDSKRONER:

Q. The question was, were you able to make an assumption based on what you reviewed as to what stage his cancer was?

A. I'm not sure you could actually stage a patient with just a CAT scan if you want to be accurate. In other words, the difference it would be between one and two. You know, there are some issues here. We're talking about May of 1996?

Q. '95?

A. '95. I'm not -- the urologist would be in a much better situation to tell you that because, as I say, most of my patients are referred to me with this disease after they've undergone a retroperitoneal lymph node dissection.

Q. Can we agree that the diagnosis of



seminoma in May of 1995 was incorrect?

A. I'm only basing that decision on the records that are in front of me. I have to assume based on the circumstances that developed and the picture that developed after this that it was not a correct -- well, let me rephrase that. The patient was treated as having seminoma and obviously it didn't work; therefore, one must assume that he didn't have seminoma, and in retrospect that appears to be the case.

Q. You've seen the revised pathology from the original slides?

A. I've seen the report. I did not review these records in marked detail with regard to all of that issue.

Q. Your concentration was solely on the chemotherapy and radiation issues in the case?

A. That's correct. I'm not a pathologist and I'm not a urologist. I know who I can trust in my community, and I am not trained to evaluate pathology.

Q. Based on the diagnosis of the report that you read of the revised pathology, radiation was an inappropriate treatment for Mr. Ortman in view of his mixed cell tumor, is that true?

A. I would have to make the statement that in



view of the fact that this was a mixed cell tumor that radiation therapy would not have been the treatment of choice.

Q. ti therapy would have no effe

the mixed cell tumor?

A. It would have had an effect, but it would not have been curative. That's not fair to say it wouldn't have had an effect. There was no questio that on the scan some of the lymph nodes that were present before were not present after. The question is not whether or not it affected it -- you're not going for palliation here when you're dealing with testicular cancer, you're going for cure.

Q. Palliation, can you explain that?

A. In many situations we know we cannot cure the patient, and in those situations all we're trying to do is shrink it down, buy time, improve quality of life. That could mean ten years, that could mean five years, that could mean ten months, that could mean five months.

With an isolated number of diseases we are going for the full-blown treatment to get the patient cured using the word cure. That means the disease will never come back, ever. Testicular cancer, Hodgkin's disease, these are two diseases that we are



attempting to literally cure. So it's not fair to say that radiation didn't do anything because it did, but it didn't cure the man.

Q. And why did the radiation not cure Mr. Ortman?

A. It did not cure him because, in fact, he did not have a seminoma, and the cure rate with radiation of seminoma should approach as close to a hundred percent as you could get.

Q. What is the cure rate with radiation and embryonal carcinoma?

A. Obviously it's probably -- I cannot give you that statistic because one wouldn't radiate an embryonal cell carcinoma. That statistic probably doesn't exist.

Q. That's because it's not radiosensitive?

A. I'm not sure I can make that statement. All I can say is that the literature isn't there to support this because it's not something that one has studies or sees, and chemotherapy for this disease has been around for a long time.

Q. Does the literature indicate that embryonal carcinoma is not radiosensitive?

A. I'm not sure that it docs or doesn't. I'm not willing to say that it does or doesn't. I have to

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believe that it is radiosensitive because some of the lymph nodes did go down. If you look at one of the scans it states that there was improvement in some of the scans, so that has to imply that it is somewhat radiosensitive. But is it curative, no.

Q. This is a mixed cell tumor?

A. Yes.

Q. With both elements of embryonal and seminoma?

A. Yes, which is not uncommon.

Q. Which could mean that the seminoma elements of the cancer were radiated?

A. If you want to look at it that way, that's not an unrealistic way of looking at it. We do see that in other diseases.

Q. I think you've indicated patients with seminoma achieve a cure rate of close to a hundred percent with radiation.

A. Should be.

Q. Is that true when the stage is increased for seminoma?

A. The cure rate should still be very, very high, but it may imply that the patient would need chemotherapy if it's beyond early stage seminoma.

Q. What are the early stages of seminoma?

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A. The early stage of a seminoma would be a testicular mass with no evidence of anything else.

Q. In terms of staging, is it stage one, stage two?

A. Two and three. There are a number of different stages that are used.

Q. Is stage three also early stage?

A. Stage three is the latest stage.

Q. What are the percentages of cure for a patient with a stage two mixed cell tumor?

A. High, about 80 to 85 percent.

Q. What percentage for a patient with a stage three mixed cell tumor or embryonal tumor?

A. Still should be high. The literature is there and the numbers go from study to study. We're still talking about a high chance of cure with chemotherapy in the range of 80 to 85 percent.

When you start talking about stage three there are various levels of stage three. If the patient has brain metastasis he's stage three and his chance of survival is going to be very, very low, probably zero. On the other hand, the patient could have multiple pulmonary metastasis and nothing else, no liver or brain metastasis, and his chance of cure could be close to 95 percent.

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Q. Can you define what recurrence is?

A. Recurrence means that the disease is for all practical purposes gone, completely gone, and that at some later date it comes back. That's what we define as a recurrence.

Q. What about metastasis?

A. Metastasis means it has spread to a distant site from the original area.

Q. Is it your opinion or understanding that in Mr. Ortman's case he had been completely cured of cancer after the radiation therapy or that he had not?

A. No, I think it's my impression that the radiation therapy just did some minimal things to what was already there and didn't affect the disease at all.

Q. I've read in some of the literature that there is a thing called a poor risk germ cell tumor and a good risk tumor. Define those for me.

A. Well, one of the problems with poor risk and good risk is that most of the time with cancer -- and testicular conditions are a little bit different -- we can determine whether or not the tumor is good risk or poor risk by looking at the pathology.

We have ways of analyzing cell proliferation, we have ways of analyzing whether cells are aggressive, whether tumor cells are aggressive or

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not aggressive. We can do this with a technique called flow cytometry, F-L-O-W, C-Y-T-O-M-E-T-R-Y. We use this exclusively now for breast cancer because there's a correlation between what those studies show and how a woman will do with breast cancer.

We know that in certain tumors cells that are poorly differentiated -- which we use that term in lung cancer and colon cancer -- we know those patients have very aggressive disease, and cells that are well differentiated are less aggressive. To determine risk factors based on pathology is what I'm talking about. With testicular cancer it's a lot more difficult. The cells all appear to be the same and look the same.

What we define as good risk and poor risk is based on a staging system that was set up in Indiana, and that staging system doesn't take into account what the cells actually look like, but how extensive the disease is at the time of the first diagnosis. So it's a different type of risk analysis compared to all the other cancer that we'll be talking about.

Q. At the time of Mr. Ortman's orchiectomy was he a good risk cancer patient or a good risk -- how do you phrase it, good risk -- was it a good risk

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tumor --
MS. CRISAFI: Objection.
Q. -- or a bad risk tumor, poor risk tumor?
A. Okay, so --
MS. CRISAFI: Doctor, first, can you answer that question?
A. I think that it was a good risk tumor.
Q. And what are the ramifications of that?
A. Ramifications are that his chances of cure are very high.
Q. Statistically -- let's look back in January of 1996 when he returned to the emergency room. Can you tell me, was Mr. Ortman at that point a poor risk patient or a good risk patient?
A. I still think that he was a good risk patient.
Q. And had his disease advanced over that time period?
A. That's impossible for me to say.
Q. Did you see anything in the medical records that indicated that there was a spread of the disease?
A. The only issue in the medical records that would have reflected a spread of the disease was a very questionable CAT scan dated January 24, 1996. This is

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what we're talking about?
Q. Yes.
A. This CAT scan was read as having -- a CAT scan of the chest dated January 24, 1996 was read as having an eight-millimeter nodule at the medial aspect of the right lung base. The report reads that it probably represents a metastatic lesion. This is a single isolated small -- anything that size, eight millimeters, is small -- lesion. I would have argued that this was a metastatic lesion, although I could never prove that it was or it wasn't without a biopsy.
If the treatment of this patient had been dependent on that lesion representing a metastatic lesion, I would have had it removed and biopsied. I would have had it removed because it probably couldn't be biopsied. This is an issue that I come up with as a medical oncologist. However, since the patient at this point in time was going to require chemotherapy based on the abdominal findings alone and the diagnosis of embryonal cell carcinoma, and since the fact that this was or wasn't a metastatic recurrence had no bearing on his treatment, I would not have pursued it.
But for the purpose of staging, did this represent a metastatic lesion, I would have had a hard time with that because usually we will see a

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number of metastatic lesions in the lung, not just one, and they will be larger than this.
Q. Were there other areas where there was advancement of the disease?
A. In the abdomen there were abnormalities on CT.
Q. Were they present at the prior CT?
A. To be very honest with you, I did not make that comparison.
Q. What were the abnormalities that were present on the CT in January?
A. According to the description on January 24, '96, there were lymph nodes in the pericaval and right paravertebral regions that they say are new since 5-23-95 consistent with metastatic disease. The fact that -- we had discussed this before with regard to his radiation therapy -- the lymph adenopathy or lymph node enlargement that was identified in the lower abdomen and right inguinal region on the previous scan of 5-23-95 is no longer present or evident, this would imply to me that those areas that were receptive to radiation therapy responded and disappeared and that new areas that were not responding appeared.
Q. So was there a spread of this disease?
A. I'm not sure that I would use the term

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"spread." There were new areas that indicated new growth and other areas that involved improvement. If you want -- the term "spread" is not one that I like to use, but are there new areas there, yes.
Q. There's also a mass that was apparent that was 2.5 centimeters by 3.5 centimeters?
A. I see a mass that says 2.5 centimeters, but I don't see the 3.5.
Q. I think there's other records that indicate that it was 2.5 by 3.5.
What is the significance of that mass, if any?
MS. CRISAFI: Objection.
Are you asking him to assume that there's a 2.5 by 3.5 centimeter mass?
A. There is a 2.5 mass, but I don't see the 3.5.
Q. Assume for me that it's 2.5 by 3.5 centimeters, what is the significance of that mass?
MS. CRISAFI: Objection.
A. I can't answer the question, other than that the mass could represent lymph nodes. It most probably represents tumor growth. Usually these are lymph nodes that just appear out of the chain, out of the lymph node chain and are, therefore, interpreted as

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a tumor mass.
Q. What is lobulated soft tissue?
A. That's just a term that the radiologist uses meaning that it doesn't have well-defined sharp edges, and usually goes along with more of a malignant process than a cystic process.
Q. Is there a significance to a disease which develops above the diaphragm as opposed to disease below the diaphragm?
A. Yes.
Q. What is the significance of that?
A. The significance is that it changes the stage to a degree.
Q. What is the distinction in stage between it?
A. It could still be a stage two, but it
[illegible]
Q. In this case, at least at the time that Mr. Ortman presented in January of '96, are you able to make a determination as to what the stage was?
A. Well, if you look at the staging and you assume that -- I mean, I would have to refer to a staging book because I don't generally stage testicular cancer. Do you want me to look at --
Q. If you can, yes.

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A. I can do that.
The Indiana staging system -- which is the one that is considered the easiest to use, because it can get very difficult when you start going into this -- states that minimal disease -- it relates to minimal, moderate and advanced disease -- minimal disease is defined as having an elevated HCG and/or AFP -- which is a tumor marker test -- and having cervical lymph nodes palpable -- which is lymph nodes in the neck area -- with or without lymph nodes in the abdomen and/or unresectable but non-palpable retroperitoneal disease -- that means disease that shows up on a CAT scan but can't be felt, which is the case here -- and -- this is important -- minimal pulmonary metastasis, they still consider this to be minimal disease.
That is defined as fewer than five per lung and the largest being less than two centimeters with or without abdominal involvement. So I mean, we're talking about less than five per lung field and that's still minimal disease, and this guy has an eight-millimeter lesion which is very debatable.
Q. That's for testicular cancer?
A. This is for non-seminomatous testicular cancer.

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Q. And that staged him at what level?
A. That would stage him as having minimal disease.
Q. It doesn't give a stage in terms of --
A. Well, no. If you want to go into the staging situation I would have to get a staging book. We're going into what we call the TNM staging. Again, this changes for every disease. Like I said, I'm usually -- the problem with this is that this staging is very dependent on what a lymph node biopsy dissection shows.
This man did not have it, so we're doing this based on guesswork. Anyone could argue what I say, and I could argue what anyone else says. According to -- there's clinical staging and there's pathological staging. This is what it says -- this is the handbook for staging cancer, this comes from the American Joint Committee on Cancer.
Q. That's what year?
MS. CRISAFI: Note my objection. The doctor stated the patients usually come to him already staged.
A. Right. This is the fourth edition 1993.
Q. Okay.
A. Clinical examination and radical

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orchiectomy are required for clinical stage. Pathological staging, histological evaluation of the radical orchiectomy specimen must be used for classification. Histologic verification is necessary. Stage two would be anything up to metastasis in multiple lymph nodes. Stage three would be distant metastasis, and that would be evidence of metastasis in the lung, liver, bone.
So, on the basis of what we call the TNM staging he would be stage three.
Q. Statically, how long after treatment does a patient with embryonal carcinoma have to wait before they're deemed free and clear for recurrence?
A. The bulk of the -- the majority of recurrences will occur within the first 24 months after treatment. I think that with this disease -- and again, this is different from cancer to cancer, it's not true for other forms of malignancies. If you're going to talk about testicular cancer I would say that they are better than 95 percent -- there's better than a 95 percent chance that they are cured if they are disease free at five years.
But patients who have testicular cancer have a 500 times higher risk of having cancer of the opposite testicle, so they have to be monitored for a

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second new primary just as breast cancer patients who may survive their first breast cancer have to be monitored for the rest of their lives for the opposite breast.

Q. So it' a five year window to be 95 percent sure?

A. I would say it's a five-year window to be 95 percent sure.

Q. Does that **risk** increase or decrease based on the stage of the cancer, if it's testicul c: :e ?

A. Well, obviously -- I mean, you would have to say that the risk changes based on stage, but how significantly does it change depends on how significantly you're talking a stage difference. I'm not sure going from one to two to three makes a difference.

We have to use the Indiana staging system. It takes into account what we call good and poor risk subgroups. If you look at the system very carefully you will see that patients with pulmonary metastasis, which is literally the kiss of death for almost any other malignant process we are aware of, it still puts this patient into a good risk category because the chemotherapy is so good today for this disease.

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are patients that are cured with this disease with simple surgery alone.

Q. So the increase in the stage may affect the aggressiveness of the treatment?

A. Yes. We don't know what stage this man had at the beginning because he didn't have a radical lymph node dissection. There was already evidence of lymph node enlargement on the original CAT scan, so it's probable that he would have needed at least several cycles of chemotherapy.

Q. And when you say several?

A. Two.

Q. Am I correct in ing that embr a inoma a high r is of rence than seminoma?

A. I'm not sure I could make that statement because, again, it all depends on treatment. The cure rate of embryonal carcinoma with chemotherapy should be very high and the treatment of seminoma with radiation therapy should be very high so that the outcome should be very good for both.

Q. or can you tell me to the extent that can, because I know you don't deal with this regularly what the ıpli are from radiation th py

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Q. Is there a significance to vascular and lymphatic invasion with regard to risk of recurrence, does that increase or decrease the risk of recurrence?

A. I think when you're talking about testicular cancer it's not an issue. I don't think it's an issue with this disease. It's very chronic with other diseases. Assuming the patient is going to get chemotherapy.

Q. And so I'm clear, although you've indicated it may not be a significant increase or decrease, if a patient is a higher stage of cancer, that would decrease or increase their **risk** for recurrence in the future?

A. I don't think that's fair. I think that it -- we have to talk about specific diseases. It may be the rule of thumb across the board, but it may not necessarily be true for testicular cancer. It may mean that you have to be more aggressive in treatment, but that doesn't necessarily translate into a change in outcome.

To clarify that, if the patient has early stage disease then radical lymph node dissection may be all that's necessary. If the patient has more aggressive disease at the time of the original diagnosis then they may require chemotherapy. There

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A. I deal with the complications of radiation therapy all the time. These are patients who are followed up in my office after they're long gone from the radiation therapist. The complications are totally dependent on where the radiation therapy is given, and by that I mean not necessarily the center, because we're assuming all of the centers that radiate now today are state of the art. We had many complications in the past before the standard of care became an issue, before the standard of care was standardized. It depends on the location of the radiation therapy and it depends on the type of cancer you're treating and it depends on the amount of treatment that was administered.

Q. In terms of Mr. Ortman's treatment with radiation, did you have a chance to evaluate what the effects of the radiation were upon him?

A. I'm not sure that he had any. I didn't look directly at that. I went -- the major complications that patients have in the short term are nausea, vomiting. If the brain is irradiated there is hair loss and headache; if the chest is irradiated because of lung cancer there will be shortness of breath, difficulty swallowing; if the abdomen is irradiated it's another type of situation; if the groin

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is irradiated, generally you're talking about the possibility of some discomfort in the lower genital region and the intestinal tract. With the newer treatment, I mean since 1994 and up those complications have been fewer and fewer.

Q. What are the long-term effects of radiation in a patient?

A. Again, depending on where it was, depending on what area of the body was irradiated, generally the long-term effects, potential long-term effects -- and again, they'll talk about this -- when he receives radiation therapy would be those symptoms related to the intestinal tract that could have been involved, irradiated diarrhea, radiation colitis, but these are very, very unusual today with this type of treatment. It's very sophisticated and the equipment is three generations beyond what it was in 1980 or 1985.

Q. Are there long-term effects in terms of other conditions that may develop from radiation?

A. That's an issue that has not been confirmed in the medical literature across the board.

Q. Is there a majority opinion on that in the literature?

A. Depends on the type of radiation given.

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Majority of opinions with patients with Hodgkin's disease who have what we call mantle radiation, which involves radiating the whole body, virtually probably they are at an increased risk of having second malignancy. Patients who have had local radiation treatment such as this, it would be very difficult to find any data that confirms that this type of radiation that he received would cause alone a second problem.

Q. Is there literature out there that suggests that radiation in combination with chemotherapy increases risk for second malignancy?

A. The literature is there. The literature that I have shows that that is not by any means confirmed across the board.

Q. Is there a majority opinion on that

A. The majority opinion is that there's no opinion.

Q. Is it true that complications from radiation that are first clinically apparent for many years after the therapy?

A. Absolutely.

Q. What is chemotherapy?

A. Chemotherapy is a broad term for the administration of chemical substances to treat malignant processes. There are hundreds of different

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chemotherapy agents that are used to treat well over a hundred different malignant processes, and the combinations are endless.

Q. How does it work in terms of the body?

A. Well, no one really knows exactly how it works. I mean, what appears to be theoretical in a book or in a test tube doesn't necessarily translate into what really works in the human body.

One of the things we talk to medical students about is that there is a chemotherapeutic agent nitrogen mustard, called mustard gas, found during the second world war to kill normal cells. It became an important chemotherapy agent.

Someone in the early '60s or late '50s felt if they could modify that molecule and make it benign, when the person took it into their system that cancer cells that were rapidly growing, they would take this substance out, metabolize it into its active ingredient and the cancer cells which were growing faster would self-destruct.

It makes a lot of sense. The problem is that that agent called Cytoxan, C-Y-T-O-X-A-N, is actually metabolized by the liver within 20 seconds into its active form. It is still today one of the most important chemotherapy agents that we have, it's

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been around 30 years.

The meaning of this story is that what looks good on paper has absolutely no bearing on what works in the human body. So we don't really k exactly how these things work, although we have some idea as to what they do in terms of cell cycle and cell growth and inhibiting tumor cells, but it doesn't really work that way.

Q. In terms of just the theory behind chemotherapy, my understanding of it was that it breaks the good cells and the bad cells and eliminates [illegible] dy can regenerate g [illegible]lls.

A. That's a very naive way of looking at it. We don't have any better way of doing this, but there are other ways to look at it. I think that's a very -- that's the way that most people think about it.

We are also aware now in 1997 of what we call killer cells and tumor suppressor agents, and the body has all kinds of things going on that cause cells to live or die, and it's possible that some of these chemotherapy agents simply potentiate the killer cells to make them kill tumor cells more readily or immobilize or sometimes inactivate the cancer cells, they're more susceptible to the normal body's processes.

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Someone has to explain why when we give chemotherapy tumor cells may melt away and we don't see terrible destruction of the bone marrow in patients. Most of my patients never step foot in a hospital. I could show you black and white pictures of cancer patients whose x-rays have gone from markedly abnormal to perfectly normal and they never stepped foot in a hospital with a complication.

It's not really destroying the normal cells to any degree. Probably what it's doing is a combination of a lot of things. It's probably allowing these factors we haven't identified in a lot of cases to kill the cancer cells on their own.

We know the cancer cells are developing in the human body all the time and we all aren't dying of cancer. For some reason when this system breaks down cancer cells develop somehow or we actually kill the cells. I don't think it's as straightforward as it appears.

Q. why treat a cancer patient with chemotherapy in a hospital as opposed to treating them on an outpatient basis?

A. Depends on the patient, depends on the insurance and depends on a number of factors. 99 percent of the chemotherapy that I administer is done

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right here in this office.

Q. Does the stage of the cancer affect whether or not you can do it at home?

A. No. It's the treatment, not the stage. Obviously -- well, let me clarify that statement. The more ill a patient is, by that I mean the more debilitated the patient is, the more reasonable it would be to put them in the hospital. But even 85-year-old patients are being treated in this office right next door. I have an effusion center where they come in and are treated as an outpatient.

Q. I've read the term toxicity related to chemotherapy, what does that mean?

A. Toxicity is simply a term that relates to the potential side effects.

Q. In a case such as Mr. Ortman's where you have the drugs that were utilized in treating for testicular embryonal carcinoma, what are the side effects of chemotherapy?

MS. CRISAFI: Objection.

A. The potential side effects of those drugs -- he received drugs that are abbreviated BEP. The B is Bleomycin, the E is Etoposide and P is Platinol, which is platinum. These are standard drugs used on a routine basis. The potential for toxicity is

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very high. Side effects would be nausea, vomiting and hair loss.

There's the potential for pulmonary toxicity with the Bleomycin, which is always possible, but I've never seen it, especially with the dosages that he got. Bleomycin is used in higher dosages for other diseases without problem. The possibility of nerve damage, what we call neurotoxicity, the possibility of kidney damage with the platinum. All of these are acute, I'm not talking about any long-term problems, no.

Q. Is the goal of chemotherapy to treat the patient as best you can with the least amount of toxicity?

A. Yes. But when you're following a protocol -- when you have a disease with a potentia cure, you want to make sure that you follow a standard protocol. There is a standard protocol for testicular cancer, that standard protocol today is abbreviated BEP, that's what this patient got.

That protocol calls for dosages calculated out based on a meter squared dosing calculation. Meter squared is a number calculated from the patient's weight and height. So the dosages are calculated out by formula.

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The toxicity is taken into account in the studies that are done long before this becomes standard therapy in which they've studied varying dosages per meter squared and come up with one that works with the lowest toxicity. It doesn't mean there's no toxicity.

Q. Does chemotherapy have a cumulative effect in the body?

A. Yes.

Q. So with each dose the body is taken to a higher toxic level?

A. With each dose the potential for problems is definitely going to change.

Q. Does it increase?

A. It increases. But it's important to understand that it may not become a factor until you've reached a certain level beyond which there becomes an issue with dosage.

Q. Explain that to me.

A. What I'm explaining to you, what I would tell you is that in the original studies that were done for this disease -- and this is anecdotal and I can't verify this is true -- one conceivable scenario here is they gave patients two, four, six, eight, ten and twelve cycles of therapy.

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In the old days -- and the old days was in the early '80s -- we used to give everybody a year of treatment. Some of the studies might have shown that patients did very well until they received eight cycles and then they started to have all kinds of problems with complications such as infections and pneumonia, but they didn't have any problems when they had two, four, six treatments.

When they did these studies they found that the patients that got four cycles of therapy did just as well as those who got six, eight and ten, but they didn't have the complications, and patients who got two treatments didn't do as well.

So what I'm saying to you is that it's possible, yes, as you get more and more treatment that you will have more and more problems, but it doesn't necessarily follow a straight line. You may have no problems until you have six treatments and then you suddenly get into toxicity. This patient only got four, which has been the standard of care.

Q. Does that vary from patient to patient?

A. Absolutely.

Q. So a patient could have three treatments of chemo and hit that fourth level and be toxic?

A. Absolutely.

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Q. The side effects that you referenced of toxicity, you mentioned infection, what else besides that once the patients reaches that level of toxicity?

A. Significant bone marrow suppression is the thing that we worry about.

Q. What does that mean?

A. The bone marrow is literally destroyed by the chemotherapy and the bone marrow needs to -- you have to treat problems related to bone marrow suppression. By that I mean anemia, which would require red cell transfusions, leukopenia, which means a significant suppression of the white cell count -- to me significant means under 1,000 -- for which we have growth factors that can stimulate that. This patient, as far as I can tell, never received those, and to me that is the major toxicity that we have to worry about.

Also, toxicity to the platelets where the platelet counts drop and the patient will hemorrhage or bleed. Platelet counts normally run between 150,000 and 450,000. Generally we get concerned if it's under 75,000, under 50,000. I never saw that to be a problem here.

Q. Did Mr. Ortman have any of those side effects?

A. He had problems with anemia. What's interesting is that chemotherapy rarely causes problems with the red cells without first causing problems with the whites and platelets. He never had either of those.

I'm not sure that the anemia problem that he was hospitalized for and treated for was a direct consequence of the chemotherapy. I'm not going to deny it might have been indirect, but I can't tell you that it was a direct one.

Q. Did Mr. Ortman have problems with his white count?

A. I never saw a white count that was in the range that required growth factors.

Q. Did he have problems with infection?

A. He had an infection of his finger for which he required a hospitalization.

Q. Is that related to the chemotherapy?

A. I couldn't tell you that it was or wasn't. I would be very hard pressed to say that it was. His white cell count was 10,000. The immunity we're dealing with here is generally one of white cell mediated immunity.

Patients are susceptible to infection because their white counts drop. This is a very common problem with high doses of chemotherapy. His white count according to the records that I reviewed never went to a level that Dr. Connell considered giving him growth factors.

A growth factor is what we call GMCSF. There's two companies that make this. This is a simple shot in the arm that makes the bone marrow produce white cells for patients who have had chemotherapy-induced bone marrow suppression and it's a very -- it's something which is readily available, something which is used on a routine basis for patients getting high doses of chemotherapy.

At no point in time did that patient receive this. That would imply to me that bone marrow suppression was never a major problem here. It could have been, but it wasn't. Now, she may have -- that may be somewhere in these records, but I wasn't aware of it.

Q. Do you know if these developments occurred prior to the fourth treatment or in the fourth treatment?

A. Which developments?

Q. The developments of the infection and the --

A. The infection was after the fourth treatment. I'm not sure of the timing.

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Q. The anemia, did Mr. Ortman have a problem with that after the --
A. Not that I know of, no.
Q. Just as a generality, the opportunity to cure depends on the extent of the disease; is that a true statement?
MS. CRISAFI: Objection.
A. It's a true statement, but I don't want it to be taken out of context. If the disease is in his brain then he's got no chance of cure, if the disease is in his lung and in his abdomen only then he has a chance of cure. Yes, the statement is that based on one scenario being more extensive than the other his chance of cure is diminished. Again, you have to cross a line before that becomes a point.
Q. Is it true that the greater the extent of the disease the greater the risk to the patient?
MS. CRISAFI: Objection.
A. To a point. With testicular cancer you have to cross that line before it becomes a significant point. That line in my opinion would be liver, bone and brain metastasis.
Q. When there is less disease is less treatment required?
MS. CRISAFI: Objection.

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A. I can answer the question, and the answer to that question would be yes because if he had a retroperitoneal lymph node dissection and he had minimal disease in his abdomen it's conceivable that he would not have required chemotherapy. But based on the CAT scan findings, it's almost inevitable that he would have required chemotherapy just based on the CAT scan findings alone.
Q. The extent of the chemotherapy is what's undetermined?
A. Yes, I would have to say yes.
Q. And I think you indicated that depending on the stage of the disease he might have required as little as two chemotherapy treatments.
A. He might have required no chemotherapy if he walked into the doctor's office and said, I have a lump in my testicle, period, and he was found to have nothing other than a lump in his testicle. He would have had stage one, had the testicle removed, he would have gone home and that would have been the end of his problem.
Q. At least as far as we know at the time of the CAT scan it would have ranged between two chemotherapy treatments and four?
A. Yes. That's a very difficult call, but I would have to say that most people who would look at that would probably say, in 1995 we would say it would be reasonable to give this guy what we call adjuvant chemotherapy, and that would have been two treatments.
Q. Can chemotherapy affect memory?
A. There are people who say it does. I got to tell you, I have all kinds of patients who tell me they read about this. I treat a minimum of eight patients a day with chemotherapy four days a week in this office and I can't tell you that I've ever seen it to be a problem, but I will tell you that I hear about this.
Q. How about cold and hot sensitivity?
A. I think there are a number of functional complaints that patients can experience, and my attitude is this, there are a lot of things we know it can do and a lot of things that probably aren't related. I tell patients anything they have now that they didn't have when they started chemotherapy I have to blame it on whether it's psychosomatic or not.
My statement to patients is, two months after the chemotherapy is discontinued any symptoms that you still have are probably not related and four months afterwards I can guarantee that there is no longer a relationship between these symptoms and the

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chemo.
Q. So there's no long-term effects from the chemo, at least in your experience?
A. In my experience, if chemotherapy is given in very high doses to toxic levels there could potentially be nerve damage that will be pertinent, but not with the drugs that he got and the dosages that he got. This patient got standard dosages of a standard protocol of standard drugs, and four courses of therapy should virtually cause no long-term toxicity.
Q. It's clear that the shorter the duration of the treatment for the patient the better it is for the patient?
A. There's no question about that. We're always trying to shorten treatments. For all I know the original therapy for this treatment was something like 12 months and it was shortened to four cycles or two cycles or whatever. We used to give chemotherapy for breast cancer for two years, then one year, then six months.
Q. What is hematocrit?
A. Hematocrit is the red cell count. That refers to the red blood cell count.
Q. And hemolytic?
A. Hemolytic means destructive. Hemolysis

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means destruction of the red blood cells.
Q. What are neutrophils?
A. White blood cells.
Q. How do chemotherapy agents affect the white blood cells?
A. The potential is there for them to be suppressed in the bone marrow and, therefore, not be produced in the right quantities.
Q. And that would lead to infection?
A. Could potentially lead to infection. There's a huge variation between what is normal and abnormal and risk and non-risk for infection.
Q. Did you note that in April of 1996 Mr. Ortman was admitted to the hospital and received some blood transfusions?
A. I was aware of that, yes.
Q. What was the purpose of that?
A. I'm not quite sure looking at the medical records that I could understand why he had that problem. He definitely had a problem and he definitely needed transfusions. The data that I saw referred to something like hemolytic anemia, yet the Coombs test, C-O-O-M-B-S, which is the test for hemolysis, was negative, and there was no confirmed diagnosis of a hemolytic process. The data in that chart is

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unexplained to me in terms of why that blood count dropped.
Q. Would you defer to the treating physician?
A. Absolutely. It never happened before and it never happened again. I really can't evaluate -- I would had to have been right there to see what was going on at that time.
Q. I've read and heard a little bit about bulky disease versus non-bulky disease.
A. It's a generalized term. Bulky generally means larger than a certain number, but it varies from description to description. In general, if it's visible on a CAT scan we talk about it, it could be defined as bulky, but in my opinion bulky means very large, generally greater than five centimeters.
Q. Is there a significance clinically?
A. Yes. Bulky generally means -- again, we're talking about numbers. I would define something as being bulky -- that's usually a radiologist's descriptive term. I consider something bulky if it's over five centimeters. But again, that's an empiric descriptive term a radiologist will use sometimes, it doesn't mean that much to me. There is an oncologist's term for bulky when we refer to these diseases, and generally it means huge amounts of disease.

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Q. Does that mean higher staging?
MS. CRISAFI: Objection.
A. Well, that's interesting because it doesn't necessarily change the stage. We generally --
MS. CRISAFI: objection.
Jack, what was your question again, does it change the stage?
MR. LANDSKRONER: Yes.
A. It doesn't have to change the stage, but it could change the outcome.
Q. So if there's bulky disease is it a greater risk for the patient?
A. If there's bulky disease I would possibly use a different treatment form. I can give you an example.
Q. Please.
A. It's a very important term in Hodgkin's disease because you can have Hodgkin's disease localized just to the chest and if it's bulky disease you would use radiation treatment and chemotherapy, if it's not bulky disease you would use only radiation therapy. So the fact that its stage is the same, because it could still be stage two, the treatment choice would be changed by the definition of bulky.
Now, in this particular disease I'm not

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sure that it carries with it the same implications, and there is literature on bulky disease Hodgkin's, but there isn't literature on bulky disease embryonal cell carcinoma because it's all treatable with the same treatment.
Q. Bulky adenopathy, what is that?
A. That simply means that there are large lymph nodes that the radiologist is describing in his words as bulky. Again, I use the definition of five centimeters or greater, and I don't see that number here. I would have gone to the radiologist and said, show me the scan, let me see what we're talking about here.
Now, the answer to the question, though, that you want is would it have changed my treatment, no.
Q. In terms of prescribing the course of therapy that's appropriate for Mr. Ortman's condition in January of 1996 or in February when Dr. Connell saw him, you've indicated that four treatments of chemotherapy were appropriate at that time.
A. Literature is very unclear about four or three.
Q. What did you rely on in terms of literature to make a determination at least as

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referenced in your report that four was appropriate?
A. The specific piece of literature came from the Lancet August 10th, 1991 showing chemotherapy regimens from 1984 to 1989, because that's when they had the study completed with the exact dosages that this patient received per meter squared at per Dr. Connell's notes, standard therapy four cycles.
Q. This is from 1991 and then in 1995 did you see in the literature more recent --
A. Yes, there is other literature that states that three may be appropriate.
Q. In 1995 can you tell me what the majority opinion was as to how many doses or treatments would have been required for Mr. Ortman as standard?
A. I think that the majority -- I can't give you a majority opinion because I've got literature that says three and four.
Q. In terms of 1995?
A. I think that there is literature that states that these studies were not showing which one was better. Obviously we talked about this before, and you're absolutely correct, the lowest number is the best for the patient, but you have to weigh the risk of the treatment against the potential for cure, and is one more treatment going to cause a problem for the

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patient when you consider the potential for cure versus the potential for risk.
The actual dose of Etoposide -- which is the E in the BEP -- has been calculated out to be maximum 2,000 milligrams per meter squared before any potential risk in terms of long term or short term occurs, that would equal four treatments. So we know that the risk of the fourth treatment in the majority of cases is greatly outweighed by the benefit.
Q. In this case we know that at least after the third treatment Mr. Ortman still had disease present.
A. No. We know that Mr. Ortman had a PET scan, a scan which only University does, a scan which is considered to be experimental because the FDA has not approved it, a scan which nobody has a lot of experience with because nobody has done a lot of them because nobody has had one for a long time that showed a question of residual disease that was interpreted by the treating physician as being residual, and based on that interpretation in her judgment a fourth treatment was administered.
Q. Would you defer again to the treating physician to make that judgment call?
A. Absolutely. I'm not sure that I would

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have made the same judgment call, and I can tell you why, because I wouldn't have done the PET scan, and I wouldn't have done the PET scan because I didn't have it available to give in 1995 sitting in my office in Lake County. No one else had a PET scanner except for Cindy Connell down at University Hospital or a treating physician at University Hospitals, remembering that the vast majority of these seminomas are not treated at University Hospitals, they're treated in the community.
Q. Was it your understanding that when Mr. Ortman began his treatment for chemotherapy he was to have a series of four or three treatments?
A. I could not comment on that.
Q. Again, would you defer to Cindy Connell?
A. I don't have the information, so I don't know.
Q. If she had intended on giving a course of three chemotherapy treatments, would you have disagreed with her decision to do that?
A. No, absolutely not, and I wouldn't have agreed with her decision to give the fourth. She even stated that by giving the fourth treatment she was eliminating the one agent which is the potential for toxicity, which is not uncommon.
Q. The fourth, say that again.

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A. The fourth cycle was not the same as the first three, if I'm not mistaken. Is that correct?
Q. I think that's correct.
A. She eliminated an agent because of the potential for long-term toxicity. That was a judgment call on her part.
Q. Doctor, if a PET scan had showed no potential complications or problems in the way you've indicated to me is that it's unclear and Mr. Ortman appeared to have been cured after three treatments, would you have given the prophylactic fourth treatment as part of a series of chemotherapy into this protocol?
A. If I had been treating him and I thought he was cured after three and the data that I have in front of me shows that three treatments of the dosages that he got were equivalent to four, I would not have given him the fourth treatment because the standard is at least noted in the medical literature that three to four is appropriate.
Q. Did he receive the doses that are recommended within three or within four treatments?
A. He received these doses, and the total cumulative dose below which a problem would occur is what he got in the four. This refers to a total of four.

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MS. CRISAH: I think that answers his question.

A. I will bring up one other factor, and that is that the PET scan that was done after all of his chemotherapy was completed on April 9th -- I'm sorry, on May 2nd, 1996. I have a PET scan dated May 2, 1996. This patient has now received four cycles of chemotherapy and not received any more cycles of chemotherapy.

This PET scan has a report in it that says two foci which are less than one centimeter in size of the right base may be inflammatory, but metastatic disease cannot be excluded. In comparison with the previous study, only a single less than one centimeter focus of uptake was seen. Then it goes on to say that there was improvement overall.

Bottom line, we have a PET scan that is read as the potential for metastatic disease, and we know that he doesn't have it because he's alive and well. I take issue with the other PET scan showing metastatic disease because I don't think that PET scan was definitive enough to make that diagnosis.

My point to you is that if this PET scan done on May 2nd were the one that we were relying on, he would have gotten another course. We have a

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radiologist reading a PET scan shows metastatic disease.

Q. Doctor, to the extent that you treat patients with chemotherapy, do you deal at all with the fear of cancer that's associated with that?

A. Absolutely.

Q. Can you explain to me what type of psychological effects there are to the extent that you can within your expertise for the fear of cancer?

MS. CRISAFI: objection.

*Are* we talking about testicular cancer?

**BY** MR. LANDSKRONER

Q. Actually, just cancer in general.

A. I think that patients who have cancer are always worried that something is going to happen later on; however, some patients worry more than others. It's a variable from one patient to another in terms of what they're going to worry about.

I happen to have an article entitled, the paragraph is entitled The Psychsocial Consequences of Treatment for Germ Cell Tumors. This article is quoted as saying, despite the occurrence and persistence of late toxic events, most patients are not functionally impaired following chemotherapy for germ cell tumors. Ninety percent of these men return to

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employment. In those who do not return to work, factors other than health often play a part. The majority of patients do not have persisting psychological problems. There are four references.

Q. I'll make a copy of that, as well.

MS. CRISAFI: Jack, I'll make a copy of whatever he has.

A. So, to answer your question, yes, the potential is always there. It's variable from patient to patient. This is a study that was done for that purpose.

Q. Doctor, I'm not sure if you noted, but it was referenced to you in the letter Ms. Crisafi wrote to you on October 27, 1997, on February 6, 1997 Mr. Ortman had an elevated HCG most likely secondary to FSH increase.

A. I don't remember that. Go ahead.

Q. What is the significance of the increase of HCG all the way into 1997?

A. What was the HCG, it's still elevated. HCG is a tumor marker which basically translates into a blood test that we use to follow patients with cancer. Certainly cancers have markers that make it reasonable to follow them for progression and other tumors are not -- we can not follow them with a blood test.

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HCG is one test that can be used in certain cases to determine whether a patient has active disease or not. It was assumed that in this particular situation this was a false positive elevation, and tumor markers are really only reliable if they're dramatically elevated and dramatically change with treatment.

Q. What is FSH?

A. Follicle stimulating hormone, which is a hormone produced by the pituitary gland. It has to do with endocrine pathways.

I think what that translates to in terms of what you're concerned about is that it was not related to the testicular cancer but rather related to something physiological in his body.

Q. Is there a hospital protocol at Lake Hospitals that you work at that deals with the number of treatments for any specific type of cancer?

A. Actually, no, but there will be with the new cancer center, because this is coming -- most places don't have standard protocols, they follow what is in the literature. With the new cancer center as we develop it -- this is one of the reasons we're doing this -- there will be clinical pathways that we'll define for each disease what is standard of care. With

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this particular situation it's not an issue because the standard of care is published.
Q. In your report there's a reference to some literature that you referred to, bottom of the paragraph on the second page. Is that the literature that is included in your file?
A. Yes, all of that is here.
Q. Have you seen any recent literature that exi as to t correlation between Etoposide with radiation and increased risk of recurrence?
A. I have that literature.
Q. Is that also included in there?
A. Yes.
Q. Is that something that you agree with, you disagree with or are unsure of?
A. Well, I mean, this is the title of the article, Increased Risk --
MS. CRISAFI: Wait a second. What's the question?
A. I have the article and I disagree that there's a correlation between radiation and Etoposide together.
Q. Did you find any literature out there that suggests that that's inaccurate?
A. Are we talking about Etoposide in

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radiation or chemotherapy in radiation?
Q. Etoposide was part of the chemotherapy radiation.
A. But there are multiple chemotherapies in which the combination of radiation and chemotherapeutic agent is important. I'm talking about specifically Etoposide for testicular cancer, that's a separate isolated specific issue.
Q. For the purpose of this case, at least the Etoposide or any of the medication that Mr. Ortman received?
A. I found no -- well, could you rephrase?
Q. The question is, there's some literature that suggests there may be a correlation between the two. Did you see there is a correlation?
A. There's a correlation between the Etoposide --
Q. And radiation for future problems With recurrence.
A. There is literature to support that Etoposide is potentially an agent that could cause problems. The combination of radiation and Etoposide is not supported by the medical literature as being together an increased factor. He was below the dose of Etoposide required to cause any of the problems that

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are described in the literature according to the study that I have.
Q. Doctor, is it your opinion that the delay in the treatment of Mr. Ortman's embryonal carcinoma in no way lowered his chances for recurrence?
A. My opinion is that the delay had no effect on his chance of a cure.
Q. How about his chance for recurrence?
A. Well, chance of cure means that he's not going to recur, so I'm translating that into the same words.
Q. And it's your opinion that the treatment that Mr. Ortman received was in no way affected by the delay as well?
A. That is a statement I can't make.
Q. Did you note in your review that Mr. Ortman had any problems with his bone marrow?
A. He had a bone marrow biopsy, and I just reviewed that. I know that he had it. I'm not sure that it changed anything. Again, he never required more than red blood cell transfusions. Most of these patients that have that probably routinely we will give them what we call growth factors, he never received that. Even that is something that is taken care of readily.

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Q. What is photopenic?
A. Photopenic?
Q. P-H-O-T-O-P-E-N-I-C.
A. Let me see. Oh, in an x-ray report.
Q. Yes.
A. It means that there's a lack of density -- it means that there's an area that isn't as dark as it should be and that could translate into an abnormal area. But again, this is a PET scan. I don't read PET scans and really have only seen a few reports because we don't really do PET scans on a regular basis. They cost thousands and thousands of dollars and are not covered by insurance for the most part. They have some type of an experimental situation there where they get it covered.
Q. There's an indication in this PET scan dated 4-9-96 that the osseous right hemipelvis is photopenic and doesn't demonstrate the usual marrow uptake seen in a patient undergoing chemotherapy. This is felt to be secondary to prior radiation therapy and lack of functional marrow within these osseous structures.
A. Right. That only means that the radiation therapy probably killed some of the cells in that area of the bone, which is totally irrelevant. It would not

be picked up by anything other than a PET scanner. That would be 1,000th of his bone marrow reserves, and we would see that with any radiation therapy.

There should be no evidence of any residual problem because that area would have no bearing on his health. Again, it's a PET scan finding, and I'm not really familiar enough with PET scans to tell you what -- I could tell you that the implications clinically are meaningless.

MR. LANDSKRONER: Okay, thank you, Doctor. That's all I have. I appreciate your time.

I finished at a couple minutes to 7:00.

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(DEPOSITION CONCLUDED)

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ARMIN J. GREEN, M.D. (Date)





STATE OF OHIO, )
COUNTY OF CUYAHOGA. ) SS:
CERTIFICATE

I, LAUREN I. ZIGMONT-MILLER. Registered Professional Reporter and Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named witness, ARMIN J. GREEN, M.D., was by me first duly sworn to tell the truth, the whole truth and nothing but the truth in the cause aforesaid; that the testimony then given by him was reduced to stenotypy in the presence of said witness, and afterwards transcribed by me through the process of computer-aided transcription, and that the foregoing is a true and correct transcript of the testimony so given by him as aforesaid.

I do further certify that this deposition was taken at the time and place in the foregoing caption specified.

I do further certify that I am not a relative, employee or attorney of either party, or otherwise interested in the event of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Cleveland, Ohio, on this 11th day of December 1997.

_____
Lauren I. Zigmont-Miller, RPR and Notary
Notary Public in and for the State of Ohio.

## LAWYER'S NOTES

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