IN THE CIRCUIT COURT OF HARRISON COUNTY

WEST VIRGINIA

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The Estate of Dennis Cowan, et al.,	)	
Plaintiffs,	)	Civil Action No. 98C-554-2
vs.	)	Judge Thomas A. Bedell
Ahmed Husari, M.D., et al.,	)	
Defendants.	)	

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THE DEPOSITION OF NATHAN LEVITAN, M.D.

MONDAY, SEPTEMBER 25, 2000

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The deposition of NATHAN LEVITAN, M.D., a witness, called for examination by the Plaintiffs, under the West Virginia Rules of Civil Procedure, taken before me, Michelle R. Hordinski, Registered Merit Reporter and Notary Public in and for the State of Ohio, pursuant to agreement, at the Hilton Hotel, 3663 Park East Drive, Beachwood, Ohio, commencing at 5:30 p.m., the day and date above set forth.

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APPEARANCES:

On behalf of the Plaintiffs:
MICHAEL M. DJORDJEVIC, ESQ.
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AND

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On behalf of the Defendants:

STEPHEN R. BROOKS, ESQ.
Flaherty, Sensabaugh & Bonasso
7000 Hampton Center
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Morgantown, West Virginia 26505

NATHAN LEVITAN, M.D.
a witness, 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. DJORDJEVIC

Q. Doctor, as I told you. my name is Mike Djordjevic. I'm one of the attorneys in this case that represents the estate of Dennis Cowan, deceased.

What I'm going to be doing here this evening, hopefully over not too protracted a period of time, is to ask you some questions under oath as if on cross-examination.

You've been identified on behalf of the Defendant as an expert, and that entitles me to examine you relative to the issues of this case. I'm going to ask that you follow two simple rules during the course of the deposition.

First, I need you to make all of your answers to my questions verbal and out loud. Michelle, as good a court reporter as she is, can't take down an uh-huh or an uh-uh or a yeah or a nah, a shake or nod of the head, so you're going to have to speak up, okay?

A. Yes.

Q. Secondly, I'm going to ask that you answer my questions only if you understood them and can give me the correct response.

We work under a premise at these proceedings that, if I pose a question, and you answer it, that you understood the question you gave me, and you gave me the correct answer.

So if for whatever reason you're confused by a question, or you don't know what the question's significance is, please stop me so that we can get that hashed out before we go further.

Fair enough?

A. Yes.

Q. All right, Doctor, why don't we start by having you state your full name and spell your last name for the record?

MR. BROOKS: Mike, if I may, as I indicated before we got on the record, I would, with your permission, like to articulate the opinions that Dr. Levitan will be asked to render at trial.

MR. DJORDJEVIC: Fine.

MR. BROOKS: Our disclosures aren't always as precise as they

need to be. The hopes is two-fold. One is to make sure we have a record of what everybody is going to ask. And two is to help you focus your questioning a little bit more.

First, Dr. Levitan will opine that, because of Mr. Cowan's other pulmonary and cardiac concerns, Dr. Husari recognized that there are many benign etiologies that can be recognized and can be visualized on x-rays.

Second, Dr. Levitan will opine that it is within the standard of care for Dr. Husari to have followed this patient with serial x-rays rather than CT scan from September of 1994 -- or actually from early 1995 when Mr. Cowan first became a patient of Dr. Husari's.

And third, in the overall management of this patient, considering everything, Dr. Levitan has absolutely no problem supporting that Dr. Husari did not deviate from the appropriate standard of care in treating and following Mr. Cowan.

MR. DJORDJEVIC: Anything

else?
MR. BROOKS: That's it.
MR. DJORDJEVIC: No proximate cause opinions?
MR. BROOKS: No proximate cause opinions.
MR. DJORDJEVIC: All right, very good.
BY MR. DJORDJEVIC:
Q. All right, Dr. Levitan, let's begin very briefly with your training, education, and background.
I understand that you went to Brandeis University from 1972 to 1975, is that correct?
A. Correct.
Q. And apparently you graduated from Brandeis with a B.A. in 1976?
A. Correct.
Q. And which area of study did you study at Brandeis?
A. Neareastern studies.
Q. That would be a liberal arts degree, basically?
A. Correct.
Q. And from Brandeis, then, you went to the Jewish Theological Seminary of America in New York, New York, from '75 to '76, is that correct?
A Correct.

Q. I take it that was not a degreed course of study at that point?
A. Actually, it is an academic institution, and some of those credits were applied to my B.A.
Q. Was it your goal at that point in time to go into Rabinical studies. or what was your goal?
A. I had already been sccepted io medical school, and that was simply an interim here.
Q. Is there a reason why you were accepted to -- was there a year's waiting period for medical school, or explain to me what happened?
A. No. That was simply my senior year in college.
Q. I see.
So your senior year at Brandeis, you took training at the Jewish Theological Seminary of America?
A. Correct.
Q. And then the course work that you did at the Jewish Theological Seminary transferred and was used as credit for Brandeis in awarding your baccalaureate degree?
A. Correct.
Q. Okay.
You started, then, at Tufts University School of Medicine in Boston in 1976, if I'm reading this

correctly?
A. Correct.
Q. And graduated with an M.D. degree in 1980?
A. Correct.
Q. Would you tell me, Doctor, about your postgraduate education starting with your PGY 1 and go forward in time from there?
A. I spent three years as an internal medicine intern and resident at the Boston Veterans Administration Medical Center.
Q. All right, so PGY 1, 2, and 3 would be internal medicine internship, junior residency, and senior residency?
A. Correct.
Q. All right.
What did you do next?
A. Then I began a hematology oncology fellowship at the same institution.
And then when my mentor, who ran the fellowship, was recruited to M.D. Anderson in Houston, I switched to a different program at U. Mass. Medical Center for my second and third year of hematology oncology fellowship.
And during the course of that time I also became board eligible in blood banking.

Q. Who was your mentor that went down to the Anderson?
A. A fellow named Ki Hong.
Q. Could you spell that for me?
A. H-O-N-G, first name is K-I.
Q. And Dr. Hong is what?
A. He's the director of head. neck, and thoracic oncology at M.D. Anderson.
Q. Do you have any idea why Dr. Hong went to M.D. Anderson from -- where was it, Massachusetts Medical Center?
A. He was offered this very prestigious position, and therefore took advantage of it.
Q. We can agree that the M.D. Anderson is one of the most prestigious cancer hospitals in the United States, I would assume?
A. Correct.
Q. And we can agree, you and I, that arguably it's the top medical cancer center in the United States?
A. It's among the best in the United States.
Q. You know Dr. Clifton Mountain, or you know of him by reputation?
A. Yes, I know of him by reputation.
Q. Do you know what his position was at Anderson?
A. No.

Q. Do you know if Dr. Mountain was at the Anderson when Dr. Hong transferred or moved to the Anderson?
A. Idonot.
Q. Again, I'm not sure I understood.
What happened to you in your education when Dr. Hong left to go to the Anderson?
A. Well, he offered me the opportunity to move to Houston with him, but for family reasons I declined. And with his departure, I thought that the quality of the fellowship program could be in jeopardy, and therefore sought a different program to finish my training.
Q. And where did you ultimately wind up?
A. At University of Massachusetts Medical Center.
Q. Which year would have found you first at University of Massachusetts Medical Center?
A. I'm sorry?
Q. Which would be your first year, calendar year, at Massachusetts?
A. 1984-'85.
Q. Okay.
And that's when you were, according to your CV, in a clinical and research fellowship in blood banking and immunohematology, is that correct?

is that what you did?
A. Correct,
Q. Then in 1985-'86, you were in a clinical fellowship in hematology oncology at the University of Massachusetts Medical Center, is that correct?
A. Correct.
Q. And then did you have any additional postgraduate medical training following 1985 to 1986?
A. No.
Q. What did you do then professionally, Doctor?
A. I assumed a staff position as a hematologist oncologist at the Lahey Clinic Medical Center in Massachusetts.
Q. How long were you at the Lahey Clinic?
A. Five years.
Q. Which would bring you up to what, 1989, 1990 or so, 1991?
A. Correct.
Q. What did you do then?
A. I was recruited by the director of the Ireland Cancer Center to come here and develop a lung cancer research program.
Q. And you've been here ever since?
A. Correct.

Q. All right.
You are not, if I am reading your CV correctly, a surgical oncologist, are you?
A. Correct.
Q. You're not a cardiothoracic or thoracic surgeon?
A. Correct.
Q. You and I can agree, I presume, that you've never resected a lung?
A. Correct.
Q. All right.
And you and I can agree that you've never performed any type of intrathoracic surgery for a non-small cell lung carcinoma?
A. Correct.
Q. You've provided us with a copy of the AJCC Cancer Staging Handbook. That goes through the various stage groupings, and you have written or someone has written in the margin certain numbers in parenthesis?
A. Correct.
Q. Are those your numbers?
A. Those are numbers that I have written down as being representative of the approximate five-year survival for patients with stage 1 through 4 non-small cell lung cancer.

Q. That's what I presumed them to be.
So you and I can agree -- I don't -- it appears to me, Doctor, as if your survival statistics start with stage 1B?
A. No, that's not correct.
Q. All right.
Although they're not written in rows straight across, the first set of numbers, 60 to 70, would be stage 1?
A. 1A.
Q. Allright.
So it's your belief that the survival for five years of a non-small cell lung carcinoma is 60 to 70 percent?
A. Yes.
And all of those numbers are give or take five or ten percent in either direction. There is some variation in the literature. But those are a representative ball park figure.
Q. It's your belief that stage 1B is 40 to 50 percent?
A. Correct.
Q. Your belief that stage 2A is 30 to 40 percent?
A. Correct.
Q. Stage 2B is 20 to 30 percent?

A. Correct.
Q. I wonder, Doctor, if you could tell me where you got those numbers?
A. Those numbers represent my fund of knowledge concerning lung cancer.
Q. Well, I want to talk specifically about non-small .cell lung cancer.
You and I can agree that there's a world of difference between survival figures for non-small cell lung cancer and small cell lung cancer, can't we?
A. And those figures pertain to non-small cell lung cancer.
Q. That's what I'm asking you.
Could you tell me where you got these? I'm familiar with most of the major studies, and I can't recall these numbers being cited by any of them.
I wonder if you could give me a citation?
A. I do not carry those citations in my memory, but I read hundreds of articles every month, and those are representative figures.
Q. We can agree, then, you and I, that, if in this case -- well, let's see if we can develop some points of agreement.

We can agree that Mr. Cowan's cancer was a non-small cell lung cancer?
A. Correct.
Q. We can agree, therefore, as a non-small cell lung cancer, had he been diagnosed and resected as a stage 1A, the likelihood is more likely than not that he would still be alive after five years'?
A. Correct.
Q. And we can agree that none of your profession consider a five-year survival rate to be the same as cure in cancer statistics?
A. A five-year disease-fret survival rate would be tantamount to cure under most circumstances.
Q. We c3n agree that, if Mr. Cowan would have been diagnosed at a stage where -- at a point in time where he was stage 1A, more likely than not he would have been cured by surgical resection, can we not?
A. Correct.
Q. Sir, do you have an opinion as to when Mr. Cowan, in this case, went from stage 1A to a stage 1B?
MR. BROOKS: Excuse me, I'm going to object only because that's not among the opinions that he will be asked at trial. But I certainly don't want to imply

that you're certainly not welcome to inquire on those lines.
MR. DJORDJEVIC: Right.
MR. BROOKS: Once you inquire along those lines, it's certainly an opinion that you have discovered.
MR. DJORDJEVIC: No question about it. If I ask a question, I hear the answer, I've discovered it.
MR. BROOKS: That's right.
A. You know, in preparing for this deposition, knowing that I was not going to be asked about proximate cause, I did not focus on trying to back date in detail what stage this tumor was likely to be at particular points in time.
It was my understanding that the focus of the questioning would be on standard of care.
Q. Let's see if we can establish some other general points.
The statistics that you and I have just discussed relative to survivability for stage 1A is dependent on the TNM staging of the cancer, am I correct?
A. Every stage has a particular array of TNM categories that either do or do not fit into that

stage.
Q. What I'm trying to -- what I'm trying to establish with you, and I think we can agree, that those TNM categories are exclusive of grade of cancer, that grade of cancer is subsumed within the TNM categories?
Can we agree?
A. I'm not quite sure what you mean by the grade is subsumed within the categories.
But it is correct that these staging categories do not differ based on whether a tumor is well, moderately, or poorly differentiated.
Q. Right.
Let me ask the question in this way. If a patient with a non-small cell lung cancer -- as we've agreed Mr. Cowan had in this case, correct?
A. Correct.
Q. All right.
If a patient with a non-small cell lung cancer is treated surgically at such time when the cancer is stage 1A, the probable outcome is that patient will be cured of his cancer, regardless of the grade of cancer at time of surgery.
Can we agree?

A. Well, it's important for me to clarify, since I know in legal parlance, when you talk about probably, or more likely than not, you're referring to the 50 percent threshold.
Q. That's correct.
A. It's certainly worth stressing that, even for patients with 1-A lung cancer, there is a substantial risk that those patients will develop metastatic disease and die.
But if you use the 50 percent rule, it is more likely than not that a patient with 1A non-small cell lung cancer will be cured, despite the substantial risk that he or she could die.
Q. And again, despite whatever the grade of the underlying tumor might be, correct?
If a patient has a poorly differentiated stage 1A cancer, it's still more likely than not, if that patient is resected at such time as the TNM stage still dictates a 1A, that that patient, more than 50 percent, will survive and be cured, isn't that right?
A. Well, I've actually never seen a specific break down of patients with stage 1A disease where those well, moderately, and poorly differentiated cancers are assigned different five-year survivals. I

don't know if those data exist.
Q. You and I can therefore clearly agree that the data that you've seen supports the premise, and it's your opinion in this case, that, regardless of what the grade of the cancer is -- and you have seen no data that distinguished between grade -- regardless of what the grade of the cancer is, if the cancer is diagnosed at a point uhere it's a stage 1A, more likely than not surgical resection will be curative, right?
A. There's a greater than 50 percent chance that that will be the case, yes.
Q. Okay.
And we agree to that, right?
A. Yes.
Q. Okay.
You have no opinion in this case as we sit here today when this gentleman's cancer went from a stage 1A to a stage 1B, is that right?
A. It's not an issue that I have given consideration to.
As we have discussed, I certainly have opinions about the natural history of non-small cell lung cancer and over what period of time it is likely to grow. Though I don't know if that discussion is

germane to the contribution I'll be making in this case (Indicating).
Q. Well, I guess what I -- let me ask it in a more general way.
What is your understanding as to the clinical parameters or radiological parameters that have to be demonstrated for a cancer to go from stage 1A to stage 1B?
What has to happen?
A. Well, we can refer to the staging matrix for simplicity's sake. And when a cancer moves from a 1A to a 1B, it moves from a T1 to a T2. And there is a whole variety of characteristics that render a tumor T2, which I'd be glad to read through, if that would be helpful.
Q. T2 tumor would be a tumor that's greater than three centimeters in its largest dimension?
A. Or it can involve the main stem bronchus. It can be involving the visceral pleura. It can be associated with atelectasis or obstructive pneumonia extending to the hilar region, but not the entire lung.
Q. You and I, I presume, can agree that, in this particular case, we see no evidence that Mr. Cowan's non-small cell lung cancer was ever a stage

1B, isn't that right?
A. I'm not sure I understand your question.
Q. All right.
Do you see anywhere in the records that you've reviewed that any of the tumor criteria in the TNM nomenclature were met in order for this cancer to be a 1B cancer as opposed to a 1A cancer?
Let's go through them one at a time. Was his cancer ever greater than three centimeters?
A. Well. we know at the time of chest CT on April 9th of 1998 his tumor measured 2.5 centimeters. And to my knowledge. that is the largest primary tumor size that has ever been visualized.
Q. So in as late as 1998, under the measurement criteria, this is still a T1 lesion, correct?
A. Correct.
Q. Let's go through the other criteria on the work sheet, on the matrix.
A. I understand your question now, and I would agree with you that at no point, to my knowledge, was there radiographic evidence that this tumor was a T2 or greater.
Q. Allright.
So you and I can agree that, at any time up until 1998, had this cancer been resected

surgically, the probability is that it would have been cured, can't we, more likely than not, greater than 50 percent?
A. I'm afraid I can't agree with that statement.
Q. All right.
Why don't you tell me why not?
A. Because of the issue of lymph node involvement.
Q. Okay.
A. We know that, in April of 1998, this cancer was locally advanced, that is to say there was extensive mediastinal adenopathy rendering this cancer surgically unresectable.
When a tumor is associated with extensive mediastinal adenopathy, it is surgically unresectable not because it's impossible to get those nodes out, but because of the certainty that there's microscopic metastatic disease and that the surgical procedure won't help that patient.
Q. No question once there was mediastinal metastasis this patient was no longer curable through surgery. My question, sir, is, would the patient be curable when there was positive hilar adenopathy as opposed to mediastinal adenopathy?
A. Well, a patient with hilar adenopathy is by definition a patient with stage 2 non-small cell

lung cancer.
And a small percentage of these patients is curable. Using your 50 percent threshold, it is more likely than not, once a patient has hilar lymph node involvement, that he or she would not be surgically cured.
Q. Do you see hilar involvement on any of the x-rays at any time or any of the imaging studies in this case?
A. Well, the first CAT scan that we have, as I said, is in April of 1998. And plain chest x-rays are not a sensitive instrument for detecting hilar adenopathy.
Q. So my question is. do you see hilar adenopathy at any time, or don't you?
A. Well, you don't, although one cannot conclude anything about its absence because the necessary study to detect it wasn't performed.
Q. And the necessary study to detect it would be CT scanning?
A. Correct.
Q. The truth of the matter is, we don't know in this case when this cancer went from a stage 1A to a stage 1B, because never was the proper test, a CT scan, ordered, isn't that the truth?

A. Well, there's a value judgment in your statement that I wouldn't agree with.
I would agree factually that no CAT scan of the chest was performed prior to April 9th of 1998. I wouldn't agree with the implicit criticism regarding the standard of care compliance of the physicians that is inherent in your statement.
Q. I'm not sure that I offered any criticism. I'm asking you simply, we don't know when there was hilar involvement, because the test that would be specific enough to demonstrate hilar involvement, CT scanning of the chest, was never ordered, isn't that true from a factual point of view?
A. It is true that a CAT scan was not ordered prior to April 9th, 1998.
Q. So we know, Doctor, you and I, that sometime by April of 1998 there was involvement of the mediastinal nodes, is that right?
A. Your statement is that, sometime prior to April 9th, 1998, the nodes became involved with the mediastinum? I would agree with that, yes.
Q. Right.
We don't know exactly when that happened, correct?
A. Correct.

Q. And you have no opinion when that happened,, correct?
A. Well, again, I want to be careful how I answer that.
It is my belief that lung cancer grows very slowly over a period of many years, and that the process of spread to other nodes likely occurred well prior to 1998.
This cancer was old at the time of diagnosis. And spread to sites outside of the lung itself likely occurred years before the April, 1998 time of diagnosis.
Q. Sure.
So this was an old cancer, regardless of the grade of cancer, isn't that the truth?
A. Correct.
Q. Okay.
And we know that this cancer, in your opinion, was present to some extent for years, is the term that you used?
A. Correct.
Q. Five years?
A. That is possible.
Q. Is that likely?
Is the probability that the primary lung cancer

was present for five years?
A. I believe so.
Q. Okay.
A. I don't believe necessarily that it was radiographically detectable.
Q. I understand.
A. But I believe it was likely present at least in microscopic form.
Q. We can agree, you and I, that this cancer was certainly present. And again, whether or not it was radiographically detectable is something you and I will spend some more time with. But it was certainly radiographically detectable in 1993, wasn't it, Doctor?
A. Again, and please excuse my ignorance about the rules of these proceedings. This line of questioning clearly pertains to proximate cause, and I just want to make sure that it's permissible for me to continue to answer these questions.
I'm comfortable doing it.
MR. BROOKS: It's certainly permissible. The understanding is, at the outset of this deposition, there was a clearly defined area in which I intended to ask your opinions at trial.

He's permitted to ask you about anything he wants to with the understanding that it will be evidence at trial because he's opened it up if I choose to use it or if he chooses to use it.
So yes, you can answer.
BY MR. DJORDJEVIC:
Q. So there's no question this cancer was present?
Whether or not it was diagnosable radiographically, it was present, certainly, in 1993, wasn't it, Doctor?
A. I believe, more likely than not, that it was.
Q. And again, it was present regardless of the histopathology or the grade of the cancer. isn't that true?
A. I believe that is likely.
Q. Sometime along the line, I presume that this cancer went from a solitary primary nodule in the lung to involve the hilar nodes, is that right?
Would that be the normal -- you used the term the natural history of the disease.
Is that the natural history of non-small cell lung cancer as you understand it?
A. The spread of non-small cell lung cancer through the lymphaticus tends to occur in a sequential fashion from hilar to mediastinal nodes.
Spread to the blood stream occurs through a different mechanism and can occur very early on.
Q. Do you have any opinions as to when, in this particular case, the hilar nodes first became involved?
A. It's hard for me to hazard a guess.
And again, I haven't taken the time to clearly think through the dates. I wasn't anticipating this line of questioning. So I, at this moment, don't feel comfortable trying to answer that question without some careful forethought.
Q. You and I can therefore agree that, as you sit here at least today, you have no opinion as to when this cancer went from a stage 1 to a stage 2 cancer, right?
A. That is true.
THE WITNESS: Again, a question for Mr. Brooks. If this line of questioning opens up at trial, and I re-focus my attention on this case and the chronology, I could probably come up with a rough opinion in that regard.
But I'm not prepared today to offer that.

BY MR. DJORDJEVIC:
Q. By the way, this AJCC method of staging, is this the method of staging that was initially described by Dr. Mountain at the Anderson, Dr. Clifton Mountain?
A. Dr. Mountain has been principally involved in recent revisions to this staging system.
Q. In 19971
A. Correct.
Q. All right.
Along with Dr. Lipschitz from the Anderson?
A. I believe so.
Q. Okay, all right.
You and I can agree that, at least in 1997, the 1997 revisions to both the American and the International Cancer Staging Handbook, are primarily the work of Dr. Clifton Mountain?
A. I know that he was involved in this. I can't tell you who else was. But he is certainly credited with major involvement.
Q. Doctor, in reviewing your CV, I note that you are not board certified in pulmonology?
A. That is correct.
Q. Are you board eligible in pulmonology?
A. No.

Q. Are you credited by any hospital to practice pulmonology?
A. No.
Q. Have you ever been credentialed by any hospital to practice pulmonology?
A. No.
Q. Have you ever sought to be credentialed by any hospital to practice pulmonology?
A. No, sir.
Q. But it's your testimony in this case that you're familiar with the standards of care that apply to pulmonologists?
A. I am quite familiar with the standards of care pertaining to the diagnosis, screening, and treatment of lung cancer.
Q. That's a little different than my question.
My question to you, sir, is, despite the fact that you're not board certified, presumably not board eligible, and never have been credentialed at any institution to practice pulmonology, are you familiar with the standards of care that apply to the practice of clinical pulmonology?
A. Regarding the procedures that should be carried out in evaluating abnormal chest x-rays that could signify the presence of lung cancer, I am

extensively experienced in that area, work closely with pulmonologists, do this kind of work myself as an internist and an oncologist.
I feel quite capable of rendering opinions in that regard.
Q. Doctor. can you and I agree that, when you -- well, let me ask you open-endedly.
Have you. during the course of your practice, mads the diagnosis of a stage 1 or a stage 2 non-small cell lung cancer?
A. Many, many times.
Q. What do you do when you make that diagnosis'?
Do you refer them to a cardiothoracic surgeon?
A. At our institution, we take a multi-disciplinary approach to the treatment and diagnosis of lung cancer. And therefore, we work as a team with pulmonologists, radiologists, thoracic surgeon, medical oncologist, radiation oncologist. So we continue to work together in the care of those patients.
Q. All right.
So in a hypothetical patient in whom you've made the diagnosis of stage 1 non-small cell carcinoma, how is that patient treated?
What is the appropriate therapy for that

patient?
A. In most cases, that patient would undergo surgical resection.
Q. Same question, hypothetical patient of yours with the diagnosis of a stage 2 non-small cell lung cancer, how is that patient treated?
A. We have an experimental protocol in which some of these patients are offered preoperative chemotherapy. But ultimately those patients undergo surgical resection in most cases.
Q. All right.
Your use of the word preoperative chemotherapy was kind of a tip off to where you were going.
There's no mystery. Stage 1 and stage 2 patients get operated on, right?
A. In most cases, that's correct.
Q. And that's how you treat your patients where you make this diagnosis, is that correct?
A. Correct.
Q. Now, you and I can certainly agree, sir, I think, that the diagnosis of non-small cell lung cancer is not made from x-rays, is it?
A. If you're asking whether histologic confirmation is necessary to make the diagnosis of cancer, the answer is, of course.

Q. Ofcourse.
What would happen, so you and I are communicating, is somebody will generally see something on an x-ray that will either make them suspicious or not suspicious of a lung cancer, correct?
A. Correct.
Q. Then, depending on the level of the index of suspicion, if the level of suspicion is high enough, then there has to be a histological pathological analysis of that tissue to see whether, in fact, it is lung cancer, correct?
A. Correct.
Q. Lung cancer is neither ruled in nor ruled out on the basis of radiographs alone, is it, Doctor?
You need to have some kind of a pathological study done, don't you?
A. Well, it certainly isn't ruled in by radiographs alone. Though as far as it being ruled out, we don't -- we don't go and perform surgical procedures willy-nilly on patients with x-ray findings that are not sufficiently suggestive to justify an invasive procedure.
Q. I'm not suggesting that you do.
There is a threshold that you and I, I suspect,

will have a disagreement on what that threshold is. But in concept, the way it works is there's a threshold of suspicion at which point it's the obligation of the treating physician to do a definitive pathological study to see firstly whether the questionable finding on the radiographs is cancerous, and secondly, what the histopathology of the cancer is, should it prove to be cancerous.

Is that how it works?

A. That's fair.

Q. Okay.

And the question that we're discussing in this case is, when is that threshold met, correct?

Is that your understanding of this particular case?

A. Correct.

Although the term threshold, I think, is potentially misleading, in that, you know, in the general population, especially those with chronic obstructive pulmonary disease, radiographic abnormalities are ubiquitous. And rather than calling it a threshold point, I'd say that the physician has to use clinical judgment in determining when an abnormality is sufficiently

concerning to merit an invasive procedure.

And the radiologist is particularly helpful in making those recommendations combined with the patient's clinical situation.

Q. All right.

Ultimately. the physician that makes the decision as to whether or not additional testing by way of histopathology needs to be done on a particular patient is the patient's treating physician, am I right'?

A. That's right.

Although when it comes to s-ray interpretation, most clinicians are not also boarded in radiology. So therefore, they need to rely heavily on the expertise of the reading radiologist.

Q. Well, you've told me that you're familiar with the diagnosis of cancers of the lung based on x-rays, haven't you?

A. Correct.

And although I read x-rays all the time, I never assume that my interpretation supersedes that of the radiologist.

Q. Do you know what pulmonologists do?

A. I know what the pulmonologists at the two institutions -- actually, I've worked at more than

two institutions.

But at all of the institutions where I have worked closely with pulmonologists, they may look at x-rays, as do I, but they ultimately rely on the expertise of those who are specifically trained in radiology, i.e. radiologists.

Q. Well, aren't pulmonologists specifically trained to deal with diseases and problems of the chest and lungs?

A. They are, but they're not radiologists.

Q. And you, as a medical oncologist, you deal with cancers throughout the body, don't you?

A. Although I have a particular subspecialty expertise in cancers of the lung.

Q. Small cell or non-small cell cancers of the lung?

A. I don't follow your question.

Q. Allright.

Is your expertise in the area of small cell lung cancer or non-small cell lung cancer?

A. Lung cancers in general, thoracic malignancies in general.

Q. I've noticed some publications in your CV, Doctor, and I need -- I'll be honest with you. I kind of breezed through it quickly.

I've noticed that you've had some publications

on small cell carcinoma of the lung. As a matter of fact, publication article 1 is, "Staging of small cell carcinoma of the lung."

Have you ever published anything on non-small cell carcinoma of the lung?

A. Well, many things.

Q. Okay, why don't you -- can you point them out?

Do you have a copy of that, Doctor?

A. This is my copy here (Indicating).

Q. Oh, that's your copy? Why don't you just refer to them by nurnber?

A. Sure. We'll start at the bottom.

Q. Page -- which page?

A. On page 11.

Q. I don't have a page 11. I have a page 10. Article 22, is that how -- or publication 22?

A. It's number 23 on my version of this CV.

What is your CV dated?

Q. My CV, sir, is dated December the 2nd of 1999.

A. Okay. This is a more recent version.

Q. Okay.

So there should be a publication 23?

A. 23 pertains to non-small cell lung cancer.

Q. What's the title of that publication?

A. "Phase II and Pharmacokinetic Trial of

9-Aminocamptothecin Colloidal Dispersion 120-Hour continuous Intravenous Infusion in Advanced Non-Small Cell Lung Cancer."

Q. That was going to be my guess.

When you're talking about advanced non-small cell lung cancer, presumably those are patients that have either failed surgery or have had a time of diagnosis when their stage was too advanced to have surgery as their primary mode of treatment?

A. That's correct.

Q. You see these patients generally in one of two ways, either they fail surgery or they're diagnosed at a time where they are already worse than a stage 2?

Is that a fair way to put it?

A. No, that's not true.

Q. Okay.

A. I'm involved in the initial diagnosis of patients with lung cancer, as well, including patients with stage 1 and 2 disease.

Q. All right, so article 23.

Let's go through the rest of your articles.

A, On page 11, number 21 pertains to largely patients with non-small cell lung cancer.

Q. Okay, allright.

And again we're talking about advanced cancer?

A. Correct.

Q. When you're talking of advanced cancer, is that a term of art for distant metastasis?

A. Either locally advanced or distant metastasis.

Q. Okay, fine.

A. Now, because I suspect you're going to make this point on each article, my publications pertain largely to patients with locally advanced and metastatic disease.

My clinical experience pertains equally to patients with all stages of cancer.

Q. All right.

A. But I will state at the outset, since you seem to be interested in this in particular, that, in fact, most of my publications do pertain to advanced disease.

Q. Allright.

And by that we would -- would nodal involvement, in your nomenclature, be advanced disease?

A. The term "Advanced Disease" is not that precise. It could refer to mediastinal node involvement.

But it's not a -- it's not a precise term.

Q. All right, hilar nodal involvement, is **hilar** nodal involvement, in your nomenclature, advanced disease?

A. I don't generally think of it as such.

Q. Let me, then, re-focus my questions so we don't spend a lot of time on this.

I'd like you, sir, to point out to me any articles that you've authored that deal with non-advanced non-small cell lung cancer.

A. I don't believe that I have published specifically on stage 1 and 2 non-small cell lung cancer, though probably more than half of these publications deal with non-small cell lung cancer.

Q. Okay, very good. That kind of shortens that up, Doctor, thank you.

I'm curious, and maybe you could explain to me how it comes to pass that a medical oncologist originally, or in the first instance, makes the diagnosis of lung cancer.

How does that happen?

A. Patients are referred to me with abnormal chest x-rays that could conceivably represent cancer. And I'm asked to clarify whether, in fact, there is cancer present, help to make the diagnosis of

cancer.

Q. So patients are referred to you by their primary doctors?

A. Correct.

Q. Because the primary doctor sees something on the patient's s-rays that causes his or her to be suspicious of what's going on in the lung, is that right?

A. Correct.

Or patients may be self-referred.

Q. And then that particular primary care physician asks you to rule in or rule out lung cancer as *the* cause of whatever the finding on film may be, is that how it works?

A. Correct.

Q. And how do you do that, sir?

How do you either rule in or rule out lung cancer as the cause of what you see on the x-rays?

A. Well, I would utilize the radiologist's expertise heavily in determining whether an abnormality on a single chest x-ray, for instance, is sufficiently concerning.

A frequent modality is to obtain serial chest x-rays and look for stability or normalization of

an x-ray, look for stability or resolution of a questionable abnormality.

If the radiology expert, my radiology colleague, opines that the abnormality on chest x-ray is sufficiently concerning to merit a CT scan, then I would get a CAT scan.

Q. Do you ever, in your exercise of your medical obligation to the patient, decide whether or not the patient should get a CT scan?

A. I generally work closely with the radiologists in making that determination.

Q. And I'm going to make sure that I understand what's going on here.

The patient comes in on referral from a primary care physician. Can we agree that that's the bulk of the way it happens?

A. Well, I work at a national cancer institute designated comprehensive cancer center where a great many of our patients are self-referred through discovering us on the internet or seeing advertisements.

So I wouldn't say the bulk. I'd say the two sources of patient referrals are either physician directed or self-referral.

Q. All right.

And when the patient comes in to see you initially, you're serving as a consultant either to the patient who is self-referred or to the physician that sends the patient to you for evaluation. am I correct? Am I right'?

A. Correct.

Q. All right.

Now, when the patient comes in, the patient generally probably almost 100 percent of the rime already has chest films, is that right'?

That's what prompts the consultation with you?

A. Unless the patient comes in because he or she is coughing up blood or has some other symptom that might be suggestive of cancer. But you're correct. Abnormal chest films are certainly the most common finding.

Q. The most common finding is a patient comes in with a film or more films, and you are then charged with the responsibility of deciding whether the lesion or the structure shown on film is womsome or not womsome, right?

A. That's correct.

Q. Now, when you're in the process of doing that, you've told me that you will consult with

radiologists, is that right?

A. Correct.

Q. Do you call up the radiologists that originally interpreted the film for the patient, or do you avail yourself of other consulting radiologists that work at the Ireland Cancer Center?

A. The latter.

Q. Allright.

So that there's no confusion on the record, when a patient comes in with the film that you believe or films that you believe are suspicious of something, what you do is you **will** consult with a third radiologist or another radiologist here at the Ireland Cancer Center, is that right?

A. That's right, unless the patient has come from my own institution. And if the films were read by radiologists at my own institution, or at one of the University Hospitals Health System institutions -- and there are nine hospitals that are part of our system -- then I would rely on the expertise of those radiologists.

Q. And how do you do that?

Do you take the films and you go see the radiologist, or you make an appointment with the radiologist, or you call the radiologist on the

phone?

How do you do that?

A. Well, very often, if I'm comfortable with the expertise of the radiologist who has rendered the original reading, I'll have his or her report in front of me, and I'll have the films, and I'll simply read the report and look at the films.

Q. And then you're done at that point'?

A. Yes, unless there's some reason that additional clarification is needed. But usually I would rely on the expertise of the radiologist.

Q. What I'm failing to understand, Doctor, is if that's the case, what function are you serving?

Why doesn't the primary physician simply ask the radiologist, or why doesn't the patient simply ask the radiologist?

Why are you in the link? Why are you in the chain?

A. Well, there are many components to the diagnosis of lung cancer other than the radiographs. There are other symptoms involved. There are invasive tests that may be needed.

But you're only focussing on the interpretation of a questionably abnormal radiograph. And my job as a medical oncologist is to assemble all of the

appropriate data, of which the radiograph is only one component.

Q. Would the pulmonologist treating the same patient have the same job, to assemble all the relevant data?

A, Yes.

I think in regard to this piece of the diagnosis of lung cancer, there is overlap between what I do and what the pulmonologist does. I don't do bronchoscopies. The pulmonologist does.

But in terms of making this kind of assessment, there is considerable overlap.

Q. And that really hones in on the difference between the role of the radiologist and the role of either you or the pulmonologist as the primary care physician.

The radiologist is looking at films at discreet points in time, correct, and it's your obligation, or the treating pulmonologist's obligation, to, as you put it, and we can have the court reporter read it back, put together all the information and decide what to do next?

A. That's correct, although, again, I mean, I'm not ,sure where you're going with that.

If I understand your question, if a patient has

multiple films that have been read by multiple radiologists, you're asking whether there is a need to assemble all those films and have them read by a single radiologist?

Q. Well, I think you told me that there's a need for somebody, and you said in the case where you're the physician who is doing the consultation. it's your obligation to put together all the information to see what needs to be nest.

Do you remember your testimony to me along those lines?

A. I do.

Q. All right, and --

A. I think, though, that you need to remember the real world. and you need to -- you need to consider not just what things look like in hindsight, but how things really happen. And you need to remember that, among patients with a cigarette smoking history, or a history of chronic obstructive pulmonary disease, the frequency of abnormalities on chest x-ray is great.

One particular study using CAT scans showed that, among smokers, 25 percent of those patients had abnormal nodules on their CAT scan. And only a tiny percentage of those actually had cancer.

So I think it's easy for you as an attorney to look back and say, well, you know, this or that should have been done. But when you're faced with a subtle abnormality on x-ray, it's analogous to a breast surgeon being faced with a breast lump.

A small number of breast lumps, in fact, are breast cancer. And what one has to do is follow a breast lump over time. And you don't take them all out and disfigure women.

Similarly, you don't biopsy or even CAT scan all abnormalities on chest x-ray. You have to consider, over time, whether the abnormalities appear to either stabilize or recede.

Q. All right, are you finished? I don't want to cut you off.

A. Yes.

Q. And I appreciate your answer. I'm not sure it was responsive to my question. I don't think I'm quite to the point in my questioning that you are in your answers. And let me tell you what my question is designed to do.

My question isn't designed to obtain from you your opinions as to what the standard of care requires that the pulmonologists do. My question is designed to elicit from you whether it's the

pulmonologist's responsibility to do it as opposed to the radiologist's responsibility to do it.

I think you've already told me, and maybe we can harken back to Harry Truman where he says, "The buck stops here."

The buck stops with somebody in these cases. doesn't it, Doctor?

A. Well, you know, I might have an easier time answering thst question if we become less theoretical and actually look at the chronology in this particular case.

Q. Well, let's do that.

What would be helpful to you in the chronology in this case?

A. Well, if we look at the x-rays that were obtained in the case of this patient, and we see that, in August of 1991 --

Q. Doctor, you're looking at something now as you are testifying, right?

Can you identify what you're looking at? Are those your notes?

A. Yes.

I'm looking at my summary of some of the key x-ray findings.

Q. And I know that that summary has been provided to

me. I just want to see if I can find it while you're testifying. So if you'll --

MR. LOUCAS: The doctor has it now.

BY MR. DJORDJEVIC:

Q. Do you only have one copy of the summary?

A. Only one copy.

Q. Do you know, can we get a copy of that?

(Thereupon, a short recess was taken.)

Q. Doctor, while we're waiting, let's just go to some general matters in terms of your background in testifying.

How was it that you were contacted in this case?

A. I have no idea how this law firm found my name.

Q. Qkay.

Do you advertise your services at all?

A. Absolutely not.

Q. Are you a member of any service organization that provides --

A. No.

Q. -- expert testimony?

A. No.

Q. . Have you testified in cases other than this case?

A. Yes.

Q. And give me an idea of how frequently you do that.

A. I probably review six or eight cases a year. sometimes less.

Q. And how long have you done that?

A. About four years.

Q. I understand we're talking ball park. but six to eight for four years would be somewhere between. what. 24 and 32 cases that you've reviewed?

A. I think that's fair.

Q. Of those 34 to 32 cases, what percentage of those cases would be on behalf of Plaintiffs or patients?

A. About 20 percent are on behalf of the Plaintiff, and about 80 percent are on behalf of :he physician.

Q. Have you ever testified as to standard of care for a pulmonologist prior to this case?

A. I don't specifically recall, though I certainly have testified pertaining to the standard of care in the work up and diagnosis of lung cancer.

Q. Allright.

Let's talk about the work up and diagnosis of lung cancer as performed by a pulmonologist.

Have you ever done that before?

A. I don't specifically recall. But as I made clear a few minutes ago, the function of a pulmonologist and a medical oncologist in this regard has a great deal of overlap.

Q. I understand that, but we can agree, you and I, to the best of your recollection, this would be the first case where you've ever given standard of care testimony as to what the standard of care is for a pulmonologist, right?

A. I don't believe that I said that. I said that I can't recall either way.

Q. Well, that's my question. To the best of your recollection, this would be the first -- do you recall it, or don't you?

A. I think it's entirely possible that I have. I simply don't recall the specifics of those prior cases.

But I wouldn't agree with you that we can conclude, therefore, that I have not testified to that effect.

(Thereupon, a discussion was had off the record.)

BY MR. DJORDJEVIC:

Q. You think maybe you've testified as to the standard of care for a pulmonologist, but you can't recall?

A. I don't recall the specifics to that degree of derail.

Q. All right.

Relative to giving testimony at trial or by video tape to be played at trial, have you ever testified at trial or videotaped to be played at trial on behalf of a Plaintiff?

.i. Yes. once.

Q. And car, you tell me what issues those were involved in that case, Doctor?

A. As I recall, that pertained to a delay in diagnosis of lung cancer.

Q. And what was your testimony in that case?

A. Well. I don't recall the details, but my testimony was in support of the fact that a delay in diagnosis contributed to the patient's demise.

Q. And I would guess, given my limited knowledge about lung cancers, that that would be a non-small cell lung cancer?

A. I believe that ***was.***

Q. So the only time that you can recall testifying for a trial by tape or by trial testimony for a Plaintiff or a patient, you took the position that delay in diagnosis of non-small cell lung cancer materially altered the outcome for that patient,

right?
A. Correct.
The details of that case were quite different from the details of this case.
Q. Where was that case filed, do you know?
A. Well, the trial was in Dayton, Ohio.
Q. Do you recall any of the attorneys involved in that case?
A. I don't recall their names.
Q. And you don't recall who was defending the case, either, I take it?
A. No.
Q. In the 24 to 32 cases in which you've testified, can you give me an approximation as to the cases in which you've testified on behalf -- or in regards, I guess, to the standard of care issue as opposed to the proximate cause issue?
MR. BROOKS: Objection to form. I think he said he reviewed 24 to 32. I'm not sure he said he's testified.
MR. DJORDJEVIC: Fine. I'll withdraw that and ask you the same way as counsel has indicated.
BY MR. DJORDJEVIC:
Q. In the 24 to 32 cases that you've reviewed, what

reports."
Q. You're right. I'm a little bit dyslexic.
Did you look at any original x-rays in this case?
A. Not that I remember.
Q. Did you look at any copies of x-rays?
A. Again, I'm fairly conscientious about making notes of what I review, so I must conclude, because I didn't write it down, that I have not reviewed x-rays in this case.
Q. So the truth of the matter is, Doctor, that you don't know, as a matter of fact, from your own review, what any of the x-rays actually show?
A. You're asking whether I have personally interpreted any of these x-rays?
Q. Right.
A. I don't consider myself a radiologist, so I believe that I have a sense of what they show based on the expertise of the reading radiologists.
Q. Well, you know that these expert radiologists settled out of this case, don't you? Don't you, Doctor?
A. Well, I'm not sure how that is relevant.
Q. Does that indicate to you as to whether or not their interpretations were correct or incorrect?

percentage of those cases involved elicitation of your opinions on the cause issue as opposed to the care issue?
A. I'm afraid I couldn't hazard a guess in that regard.
Q All right.
And in the Dayton case where you testified at trial for the Plaintiff patient, do you recall the patient's name, or the Plaintiff's name?
A. I'm afraid I don't.
Q. How recently was that, Doctor?
A. That was about a year ago.
Q. And did you go down to Montgomery County to testify live?
A. Yes.
Q. Do you recall what the verdict was in that case. or what the outcome was?
A. I believe that the outcome was in favor of the Plaintiff.
Q. Do you know what the amount of the award was?
A. I don't.
Q. Doctor, before we get to your chronology, you say in your records, reviewed multiple x-rays. That's the first thing that you list, correct?
A. I believe I listed, "Reviewed multiple x-ray

A. It doesn't indicate to me either way.
Q. It doesn't matter either way to you?
A. I'm not following your point.
Q. Well, I'm asking you, does it matter to you whether or not the radiologists in this case settled out'? You re willing to assume their interprerations at face value'?
A. I'm afraid I don't understand this line of questioning.
Q. Well, you don't need to.
I guess my question, sir, to you is, and let me ask it in a very simple manner, do you know -- and this question can be answered by a simple yes or no -- whether the radiologists in this particular case settled out of court?
A. I was informed of that moments before the deposition began, and you have stated that yourself.
Q. And I take it, being aware that they settled out, you have no idea why they settled out of court, do you, Doctor?
A. Correct.
Q. Does it stand to reason to you that they settled out of court because their interpretations of the films were incorrect?

A. I have no basis on which to make such a judgment.
Q. And since you've never looked at the films, you don't know as a matter of fact whether or not their interpretations were correct or incorrect, do you?
A. Well, even if I looked at the films, not being a radiologist, it wouldn't be appropriate for me to declare their readings to be incorrect.
Q. So you will defer to the expertise of the radiologists in this case as to what the correct interpretation of each specific film would be, is that right?
A. Well, I don't know for a fact how many expert radiologists are going to be brought into the case and whether or not they're disagreeing with one another.
As a practicing doctor, I can tell you that I do not consider myself to be a radiologist. And therefore I rely on the expertise of my radiology colleagues in managing patients.
Q. All right.
My question, sir, is you aren't going to be rendering any opinions in this case as to what any of these films show at any point in time?
A. Other than the information that has been provided

by reading radiologists.
Q. All right, well, that's what I'm asking you.
Is it going to be your position. sir, in this case, that the interpretation of the reading radiologist for any particular film was correct?
MR. BROOKS: I'll represent no. I don't intend to have him even look at the films.
BY MR. DJORDJEVIC:
Q. You're not going to vouch for the correctness of any of these interpretations?
A. No.
I think I've been very clear over the last hour: stated multiple times, that I'm not a radiologisr and therefore don't feel appropriately trained to render an official reading of an x-ray.
Q. And can you and I agree that, if any of these interpretations are incorrect, that may or may not alter your opinions in this case, correct?
A. Well, in view of the fact that I am testifying largely regarding standard of care, and in view of the fact that Dr. Husari made his clinical judgments based on the x-ray readings available to him at that time, those being the same readings

that I had available when I reviewed this case, if, in fact, one of those x-ray readings was incorrect, in retrospect, Dr. Husari had no way of knowing that. So therefore, that type of information is not likely to alter my opinion regarding whether or not Dr. Husari complied with the standard of care.
Q. Explain to me how Dr. Husari wouldn't know if one of the interpretations was correct simply by looking at the film.
Couldn't he simply look at the film and know whether the interpretation was correct or incorrect?
A. Well, I think we've covered this ground a few minutes ago, and that is I've been very clear in stating that Dr. Husari, like myself, is not a radiologist. And therefore, he must rely on the expertise of the radiologists regarding the interpretation of these films.
So there's no way that I would expect Dr. Husari to overrule a radiologist in rhe interpretation of a film.
Q. Despite the fact that Dr. Husari is a pulmonologist and these are specifically films of the chest, it's your position that he has no obligation to look at

those things?
A. The training program for pulmonologists is not the same as the training program for radiologists.
And to my knowledge, Dr. Husari is not boarded in radiology.
Q. I'm not sure that answers my question.
My question to you is. is it your position. sir. in this case, that a pulmonologist, or a chest doctor, has no obligation to look at the chest x-rays of his patient?
A I don't believe that I said that
Q It's a question
A I look at the chest x-rays of most of my patients. and I believe -- not all of them, but in many cases, when there's a particularly striking abnormally identified by the radiologist, I will pull out those films and look at them.
But I would expect that a pulmonologist would look at x-rays with a similar frequency to my own, which means that a pulmonologist will rely on the radiologist for his or her interpretation of those films.
Q. Well, let me ask you in a very straight forward, open-ended manner.
Does the pulmonologist have an obligation to

look at chest x-rays done on the pulmonologist's patient, or does the pulmonologist have no obligation to look at the chest x-rays done on his or her patient?

A. So you're asking whether the pulmonologist has to look at every x-ray that he or she orders, or whether I, as a thoracic oncologist -- I'm also a general oncologist -- but in my practice as a thoracic oncologist, whether I'm obligated to look at every single x-ray that I order?

Q. Well, let me make my question very specific.

I have no interest at all in learning whether a thoracic oncologist or a medical oncologist has an obligation to look at x-rays. My sole interest is whether a pulmonologist has an obligation to look at the x-rays, and that's my question.

Is it your testimony in this case that a pulmonologist has no obligation to look at chest x-rays that he or she orders for his patients?

A. It is my testimony that, in the course of his or her work day, a pulmonologist probably orders x-rays on most of the patients who walk in the door, as do I.

So there is considerable similarities between what they do and what I do. And there is no

obligation that the pulmonologist would review, for instance, a normal film, or a resolving pneumonia, when an expert radiologist has rendered an opinion on that film.

Q. So the answer to my question is, there's no obligation on the part of the pulmonologist?

A. I think it depends upon the situation, on the patient, on the abnormality involved.

But as far as a rigid statement that he or she has to look at all films, I think, in the real world, that's absurd.

Q. And what's your factual understanding of the case here?

Did Dr. Husari in this case personally review any of these x-rays?

A. I don't know.

Q. Maybe he did, maybe he didn't?

A. I don't recall specifically if that question was asked in his deposition.

Q. And it doesn't matter to you whether he did or he didn't, because he conformed with the standard of care either way, right?

A. Correct.

Q. Okay.

Well, did someone have the obligation, Doctor,

to make a determination, in this particular case involving Mr. Cowan, as to whether additional follow-up studies should be done, or is that another thing, it's okay if they did, it's okay if they didn't?

A. Well, it might be easier to answer your question if we do what we started to do before the break, and that is to go through the chronology. I think that can answer your question more clearly.

Q. Why don't you do whatever you think would be helpful?

A. Okay. Let's start back in August of 1991 where we started before. And a chest x-ray is obtained on August 28th, which shows opacification anteriorly seen on the lateral view. It's thought to represent most likely a pericardiac pleural reflection.

There's a slight increased opacity on this film at the left lung base, not a striking abnormality, but something that is called attention to nonetheless. And therefore, just a couple of weeks later, an x-ray is repeated, and this abnormality seems to have resolved. The only abnormality that remains is thought to represent a fat pad.

The conclusion is, "No evidence of acute

cardiopulmonary disease." So again, that's great in terms of standard of care.

Q. Let me stop you there for a moment.

What would be within the differential diagnosis of that opacification in August and September of 1991?

A. Well, that's the kind of thing that I would rely on a radiologist for.

A radioiogist can tell me what he or she thinks that is likely to represent. If this radioiogist concludes that it's a pericardial fat pad, I have to rely on that radiology report.

Q. Well, is there anything about either of those radiology reports, August or September of 1991. that, in your mind's eye, rules out neoplasm in this case'?

A. Well, the fact rhat we look over time, and in January of '92 there is no active disease. And in October of '93, no acute change. In October of '93, again, no active disease. January, '94, normal.

So we have 1, 2, 3, 4, 5, 6 serial chest x-rays. The early ones raise a little question, and then all the rest confirm and confirm and confirm that it's normal.

Q. Well, is there any opacification that is visible on the 1-25-92 film, Doctor?
A. The conclusion of the radiologist is no active cardiopulmonary disease.
Q. Does that say anything about an opacification?
A. I don't have the full text of that report in front of me.-Perhaps, if that's important, we could look at it.
Q. Well, why don't we?
Do you have it in the materials that you brought with you?
MS. LOUCAS: Which x-ray?
MR. BROOKS: 1-25-92.
MR. DJORDJEVIC: 1-25-92.
THE WITNESS: If you can find it more quickly, I'll look at your copy.
BY MR. DJORDJEVIC:
Q. While we're looking, Doctor, are these your notes, these typewritten notes?
A. Yes, sir.
Q. And how did you prepare these, sir?
A. I went through the records, again, over the last few days, and pulled out what I felt to be the important x-rays.

Q. Allright.
And were there some x-rays that you felt were unimportant and some x-rays that you felt were important'?
A. Well. I think that most of the films that I came across in reading the records have been included in this list. I might have inadvertently missed one or two, but I think that most of them are here.
Q. And at the top of your notes, it says Flaherty, Sensabaugh, et cetera.
What's that there for?
A. Well, that simply identifies the law firm that contacted me and asked me to do this review.
Q. You're just making a notation that -- were you requested to draw this up by that law Firm'?
A. No.
Q. You drew it up on your own?
A. Yes.
Q. And just placed their name on it as a reminder to yourself that they're the ones that are advancing your opinions in this case?
A. Ofcourse.
Q. Okay, all right.
So the '92 film, does it say anything about an opacity one way or the other, the interpretation?

A. It reads, "A single frontal portable view of the chest dated 1-25-92 shows heart, lungs, and mediastinum to be within normal limits. Cardiac, no active cardiopulmonary process is seen."
So there's no reference to any type of infiltrate.
Q. We don't know whether there's an opacity there in '92, do we, one way or the other?
A. Well, if I'm not mistaken, these films were all taken at the same institution and read by the same group of radiologists.
So it is my assumption that these films were compared with prior films when they were read.
Q. That's your assumption in this case?
A. Yes.
Q. Okay.
How about the 10-25-93 interpretation?
A. The conclusion there is no acute changes.
Q. And again, does that say anything about the opacity that's referred to in the '91 films?
A. No. They see nothing wrong here at all.
Q. So what does that mean, that there is no opacity?
Is that your interpretation?
A. It means there is no opacity as far as the radiologist could determine in this film. It looks

like a normal film.
Q. What film are we up to now, the 10-28-93 film?
A. Correct.
Q. How about that one?
A. They identify scarring or atelectasis in the left lower lung zone. The lungs otherwise appear clear. The heart size is within normal limits, and there is no evidence of interstitial edema. The lungs are mildly hyperinflated.
Impression, hyperinflation without other evidence of active pulmonary disease.
Q. So there's no mention of the opacification at that time'?
A. It's another normal x-ray.
Q. And again, you're relying on the interpretation of the radiologist as being correct in making that conclusion, right?
A. Ofcourse.
Q. The next film that you have is what?
A. January 1, 1994.
And the impression here is normal chest.
Q. Again, no reference to opacity one way or the other?
A. If you understand how radiologists work, there would be no reason to do that. This is a normal

chest.
Q. Well, let's talk about if I understand the way radiologists should work as opposed to the way they do work.
Does that make more sense?
A. I'm not sure what you're referring to.
Q. That's the way radiologists should work. They should report an opacity if they see it, right?
A. I'm not sure what you're driving at. I look at this report, and I see the radiologist has looked at this film and concluded there are no abnormalities.
Q. But we don't know whether he's correct in that conclusion or not, do we, because you never looked at the film?
A. Well, even if I did look at the film, I'm not a radiologist, sir.
Q. So you wouldn't know whether any of these interpretations are correct or incorrect?
A. As I said, I would rely on the radiologist's expertise since he or she alone is boarded in radiology.
Q. Please listen to my question. We'll get out of here sooner.
Would you know, Doctor, whether any of these

radiographic interpretations were correct or incorrect?
Could you interpret any of these films for us?

you rely on the radiologist's interpretation?
A. I think, when one is treating a patient. working up a lung mass and so forth, it's important to have a visual image of what one is dealing with.

I certainly don't look at all my patient's films. I wouldn't have time to do my work.
Q. How do you know whether or not there's anything sufficiently abnormal without looking at the films?
A. Based on the radiologist's report.
Q. So when you look at films in your practice, the only time you look at films is if the radiologist has suggested that there's something sufficiently abnormal in the film, is that how it works?
A. In general, I wouldn't be so rigid as to say the only time, but that is generally what will lead me to do that.
Q. When the radiologist reports an opacification, is that important enough for you to look at?
A. If the radiologist tells me that's just a fat pad, I certainly don't see the need to take 20 minutes out of my day and go down and look at the film.
Q. And if he says that it's -- what else here - a pericardial reflecbon, not important enough for you to take 20 minutes out of your day to look at it?
A. Absolutely.
Q. What does he have to report to you for it to be important enough for you to take 20 minutes to look

at the film?
A. Well, you know, again, we're getting into kind of absurd theoretical discussions here.
Perhaps since what you're most interested in is whether I believe that Dr Husan complied with the standard of care, I d be happy to tell you at each step of the way here whether I believe it was incumbent upon Dr Husari to look at any particular chest film
Q Well, let's see if we can cut to the chase
It's your belief in this case that it was never Dr Husan's obligation to look at any of these films?
A Based on the fact that every abnormality that is potentially -- let me restate that. Every finding that potentially represents an abnormality is so conscientiously followed up with senal films all along the course of this patient's treatment, and in each instance, these films normalize such that there is no enduring abnormality identified by the radiologist.
Given that fact, there is no instance in this chronology where Dr. Husan deviated from the standard of care in not looking at those films.
Q. Did there come a time when the cancer diagnosis was

made in this case, Doctor?
A. You're asking when the actual diagnosis of cancer was made here?
Q. Sure.
A. Yes.
In April of 1998, a discreet mass for the first time is identified on the x-ray dated April 6. And a CT scan is obtained three days later and confirms the presence of this mass as we've discussed earlier with mediastinal adenopathy.
Q. And is there something about a discreet mass that's important?
A. Well, if this is what you're asking, the x-ray report by the radiologist on April 6th, 1998, clearly identified, unequivocally described this as an abnormality in need of follow up. And at this point in time, appropriate follow-up studies were done which lead to the diagnosis.
Q. So in this particular case involving Mr. Cowan, Dr. Husari, the managing pulmonologist, had no obligation to do anything with the films until the radiologist told him that it was time to do something, is that right?
A. Well, until the radiologist identified an abnormality that was clearly suggestive of

malignancy, I think that what Dr. Husari was obligated to do was obtain follow-up films, which he did with great care.
Q. So he had no obligation to do anything to work up what was seen on the film until the radiologist told him that that's what he should do.
Q. Well, the findings that were identified earlier on were quite subtle. And in every instance, they resolved over time.
So given that fact, there was no indication to do anything else.
Q. Didn't the radiologist suggest to Dr. Husari following the November 21st, 1995 film that a CT scan be done?
A. Let me see. On that film, he identifies irregular nodule in the left second anterior interspace, recommend comparison film. If this is not -- comparison with prior films. If this is not possible, CT scan of the chest is recommended.
So the very next day, Dr. Husari obtains a PA and lateral. And, as recommended, it is compared with the prior film. So this is precisely following the recommendation of the radiologist.
And the report reads, "PA and lateral projections compared with 3-30-95 demonstrate

chronic interstitial changes but no acute infiltrates or effusions. No interval changes seen when compared to the prior study. The previously suspected left upper lung infiltrate is now less well seen and may be obscured by overlying rib shadows. If further evaluation is deemed clinically necessary for the assessment of any left upper lung lesion, apical lordotic film may be of benefit, fluoroscopy, CT, et cetera."
And then in follow up of this, a few weeks later, Dr. Husari orders yet another chest x-ray which describes an ill-defined area of increased density in the left upper lung essentially unchanged from the prior films dating all the way back to September of 1994.
And the radiologist then concludes this is, in all likelihood, fibrosis. No acute changes, chronic changes, as described. So here again, there's a questionable abnormality and very careful follow up with two serial films.
Q. Isn't the recommendation of 11-22-95 to do apical lordotic films, a chest fluoroscopy, or CT?
Isn't that what the radiologists suggest Dr. Husari do?
A. Well, he says, if further evaluation is deemed

clinically necessary. And I would assume that, if the patient were symptomatic, that would constitute clinical necessity.
But for an asymptomatic patient, where this film was compared and shows no interval change compared to the prior study, I think that's sufficient.
Q. Doctor, the truth of the matter is, on the November 21st, 1995 film, the radiologist suggested a CT scan, right?
A. Well, his first recommendation is comparison to prior films. And only if this is not possible is a CT scan recommended.
Q. Did Dr. Husari do that?
Did Dr. Husari follow the radiologist's recommendation, get the prior films and compare them?
A. The recommendation is not specifically that Dr. Husari do this, but that this be done.
And the answer to your question is yes. Because, on 11-22-95, that x-ray is compared with the 3-30-95 films. So yes, the recommendation of the radiologist is carried out precisely.
Q. But it just wasn't done by Dr. Husari, it was done by someone else?

A. It was done by someone better than Dr. Husari, because Dr. Husari is not a radiologist.
Q. And then when the comparison of the films is done, that somebody better than Dr. Husari recommends that apical lordotic films, CT scan, or chest fluoroscopy be done, right?
A. . Well, no, that's not true.
Q. No? Okay.
A. That expert says no interval changes seen when compared to the prior study. The previously suspected left upper lung infiltrate is now less well seen.
So cancer doesn't go away. And he says, "If further evaluation is deemed clinically necessary," that's what he says. And to my knowledge, this patient was asymptomatic and therefore didn't have clinical indications to obtain further studies.
So again, I believe that he follows the letter of the recommendation.
Q. What are the clinical symptoms of a stage 1 non-small cell lung cancer?
A. Well, a patient with stage 1 disease, depending upon the location, a 2.8 or two and a half centimeter tumor could cause airway obstruction,

could cause chronic cough, could cause a post-obstructive pneumonia, could cause hemoptysis. Those are all possible in association with a stage 1.
Q. Was this a 2.8 or 2.5 lesion in November of '95, Doctor?
A. Oh, even a smaller ission could potentially cause cough or hemoptysis.
Q. isn't ths truth that most stage 1 non-small cell lung carcinomas are asymptomatic'?
A. That's usually the case. Not always, but that's usually the case.
Q. And there is nothing on the interpretation of the radiologists in November of 1995 or thereafter that rules out non-small cell lung carcinoma as the cause of what they're seeing on those films, isn't that right?
A. You know, again, you're using what we call a retrospectoscope in medicine, which is to say it's very easy to look back and say, what about this, and what about that, and why didn't you do this.
In fact, in the course of taking care of patients day to day, and in the course of looking at little ditzels on the x-rays of patients who are smokers, when following a multitude of patients

with these symptoms, you have to have sufficient abnormality over time to justify invasive or extensive work ups.
And again, in the real world, it's unfair to look back with this approach and this perspective and criticize Dr. Husari.
The number of x-rays that he got was indicative of how cautious he was in following this patient. And in every instance, the questionable abnormality that was identified improved or resolved before he let go of it.
Q. Well, that's not my question.
My question is, Doctor, is there anything in the interpretations of the November 21st or November 22nd, 1995 films that rules out non-small cell lung cancer as the explanation for that lesion?
We don't need to have a retrospectoscope to answer that question. Do you see anything that rules it out?
A. Well, the fact that it is not well seen and the fact that the subsequent x-ray done 12 months later is also read as normal is very powerful in telling us that it is unlikely that there was an abnormality that was diagnosable at that point on

chest x-ray.
Q. You're the one that's using the retrospectoscope, aren't you, Doctor? You're the one that's looking at the next film. I'm not asking you about '96. I'm asking you about '95.
A. So you want to know whether there is anything here that absolutely rules out lung cancer?
Q. That's what I want to know.
A. You could ask me that question about even; x-ray that was ever done on this patient, and ths answer would be the same. No.
Q. Nothing on any of these films ever rules out lung cancer as the explanation for the irregularity described, is that right'?
A. You know, the fact that the irregularity continues to improve or resolve in these series of films grouped together as we've discussed them, the 11-95 to 11 -- excuse me, 11-21-95 and then 12-96 -- this is, again, in the real world, in the functioning of a clinician evaluating a patient, there is insufficient evidence of malignancy to have required further testing.
Q. In your opinion?
A. Correct.
Q. Do you have an opinion as to what a CT scan would

have shown had it been done in November of 1995?
A. I think it's impossible to know.
Q. Do you have an opinion as to what chest fluoroscopy would have shown had it been done in 1995?
A. Likewise, there's no way to know that.
Q. Or what an apical lordotic film would have shown in 1995?
A. The same response.
Q. But we do know that, in April of – I'm sorry, in November of 1995, it is your opinion, more likely than not, there was a cancer already present in this gentleman's lung, right?
A. Correct, though not necessarily radiographically detectable.
Q. So the only question is -- it was there. The only question is, would a CT scan, would chest fluoroscopy, or would have an apical lordotic film picked it up had it been ordered?
A. Correct.
And then if it had been picked up, would it have made any difference? I need to cite, for instance, all of the studies that have looked at the efficacy of screening chest x-rays in smokers to improve survival. I don't know if you're familiar with this literature.

Q. I'm very familiar with it.
A. Basically what these studies show is that you can do x-rays every six months or every year in a smoker to try to pick up a cancer when it's smaller. And even when you do this, the outcome of that patient is not improved.
And the reason for that is most likely because microscopic metastatic disease has occurred early.
Q. Well, the counterpart to that, Doctor, and we've already agreed that, if the diagnosis is made as a stage 1A cancer, the likelihood is that the patient is going to survive, right?
A. Well, because you're not asking me to testify regarding proximate cause, I don't know that we need to get into that. But I think that your conclusion isn't necessarily correct.
And the screening studies show that very possibly, when you find a cancer earlier, all you're doing is introducing what we call a lead time. But, in fact, you're not impacting that patient's outcome.
Q. Doctor, I'm taking the survival figures from your own handwriting on your own note.
A. That's correct.

Q. And your survival statistics in your handwriting on your note are, more likely than not, these people will survive five years or more and be cured if the diagnosis is made at stage 1A.
A. That's right.
Q. And you and I agree -- we can't agree whether the AP -- or whether a CT scan or fluoroscopy or anything else would have been diagnostic in '95, but we can agree that, if it was diagnostic in '95, this would have been a stage 1A cancer, wouldn't it?
A. You know, I follow your reasoning, and you're raising what is a classic paradox in the natural history of lung cancer, which is to say that both are true.
And if you're going to present this, for instance, to a jury, or to any group of people who need to learn about this, to be fair, both pieces of data need to be presented.
On the one hand, it is true that an earlier stage at diagnosis is associated, in general, with an improvement in outcome. It's also true that, when you do chest x-rays earlier and earlier in time for patients with lung cancer, those earlier x-rays don't seem to improve their survival. And

it is a paradox.
Q. Let's look at your experience, Doctor.
In your experience. you've told me, when you get a stage 1 or stage 2 cancer, as part of the team approach, that patient is treated surgically, is that right?
A. That's correct.
Q. In your experience, have you kept track of mortality in your own patients who have undergone resection for stage 1A cancer?
A. I don't hate specific data from our institution regarding stage 1A patients. My opinions are reflective of a larger body of experience.
Q. I'm talking about your personal experience.
You've told me that you have personal experience in this regard, right?
A. In order -- yes. Although, you know, if you understand statistics, it's much more powerful to conclude what the survival is for a particular stage with a larger denominator.
Therefore, my opinion regarding five-year survival statistics for lung cancer is not derived from my own experience at a single institution, but rather from larger numbers of patients.
Q. And I know what the statistics are from the

Memorial Sloan-Kettering trials, from the Mayo Clinic trials, from the National Lung Cancer Study Group trials, which are the largest groups, I think you'll agree.

But let's put that aside, because apparently you're questioning that. I'm asking you, sir, what is your personal experience?

A. You're asking whether I have data regarding the specific survivals by stage at our institution?

Q. Just for stage 1A.

A. I don't have those from our own institution.

Q. How about for your own patients?

A. Again, I don't collect those for my own patients.

Q. And you have no recollection as to what they would be just by treating your patients?

A. It would not be a statistically valid opinion to tell you, oh, I remember John Smith, and he lived for four years. I mean, that would not be valuable information.

Q. Let's see if we can just get a couple other areas of agreement.

We know that, at some point between 1995 and 1998, Mr. Cowan's cancer went from being surgically curable to being surgically not curable, more likely than not, am I right?

A. Well, if I remember correctly regarding my testimony earlier this evening, I think that I declined to speculate what his stage would have been in 1995.

And I think that I, therefore, declined to say anything other than the facr that patients with stage 1A disease, in general, have a greater than 50 percent likelihood of surgical cure.

Q. Doctor, in your practice. do you ever do any of the things that were recommended to Dr. Husan in this case, i.e. chest fluoroscopy?

A. Depending upon the situation, that may be done.

Q. You have ordered chest fluoroscopy in your practice?

A. Yes.

These days, we use that far less than CAT scans, but yes.

Q. Have you ordered apical lordotic films in your practice?

A. Yes.

Q. In your practice, have you ordered CT scans?

A. Yes.

Q. And Doctor, in your practice, have you ever ordered one of those tests that then leads to the ultimate diagnosis of cancer in one of your

patients?

A. Yes.

Q. Can we agree that the reason that you order those tests is to see whether they will reveal additional information that may be helpful to you in determining whether the patient's lesion, as visible on plain film, is neoplastic or nonneoplastic?

A. That's correct.

And it's generally done upon recommendation of the radiologist.

Q. And when the radiologist recommends it, you do it, don't you?

A. Generally.

Q. All right.

When the radiologist recommends it, is it your obligation by virtue of the standard of care to obtain a CT scan?

A. I think it depends upon the clarity with which it's recommended by the radiologist.

If the radiologist says, there's a mass on chest x-ray, you must follow this up with a CT, I think that the standard of care would dictate that that scan should be done.

Q. But if he says if it's clinically necessary, that's

a loop hole, and you don't have to do it, is that how it works?

A. I wouldn't identify that as a loop hole.

I would read the radiologist's words. And if there are clinical signs or symptoms that, in my judgment. render that appropriate, I would do it. But that's a different statement than, CT or fluoroscopy is necessary in this patient.

Q. Even though you know and I know that. in most cases, stage 1A cancer doesn't have any clinical symptoms, right?

A. Well, I think by clinical it means in view of the larger picture of this patient.

Radiologists don't know very much about the patient except what they see on the film. And so, you know, you asked a while ago, what do I do, or what does the pulmonologist do that is different from the radiologist. He or she will consider the larger picture.

Q. It's their obligation to consider the larger picture, isn't it?

A. I think so, yes.

Q. So you and I can agree that the standard of care for the pulmonologist in this case is to consider the larger picture over and above what the

individual films may or may not show, isn't that right?
A. I think that's true.
You know, your use of the word "larger picture" is probably one that you're going to define in a particular way, and so I would answer that with caution.
Q. I thought I was using your term.
Didn't you use "larger picture" originally?
A. Yes, but I think it's possible you may be using it in a slightly different way than I am. I have a sneaking suspicion that might be the case.
Q. Why don't you tell me how you're using it?
A. I don't have any defmition for that.
Q. I'm a pretty easy guy to figure out.
A. So am I.
Q. Why don't you tell me how you're using "larger picture?"
A. I don't have any particular definition for that.
Q. Neither do I.
A. Okay.
MR. DJORDJEVIC: Can we agree on that?
MR. BROOKS: Yeah, we can agree on it.

BY MR. DJORDJEVIC:
Q. You and I can agree that, in the way you practice medicine, you sometimes order CT scans, and those CT scans are helpful in either ruling out or ruling in non-small cell cancer, right?
A. That's true.
Q. And your goal, presumably. in doing that is io either rule it in or rule it out before it goes from stage 1 to stage 2, from stage 2 to stage 3, right?
A. Correct.
Q. Because you know and I h o w, if you can rule it in while it's still stage 1, you might very well save this patient's life, right'?
A. Yes, although you can't do CAT scans on every patient.
Q. No, you can't. But when it's indicated, and when it's discussed by the radiologist, you and I can agree that there was no reason why Dr. Husari couldn't have done a CAT scan in November of 1995?
A. I fail to see where the radiologist specifically told Dr. Husari to get the CAT scan.
Q. I'm going to grant you, he doesn't specifically, "Get the CAT scan," all right? I'm using a little

judgment here. He says, if it's clinically indicated, get a CAT scan, right?
A. What he says is very mild. He says, if -- this is very mild. "If further evaluation is deemed clinically necessary for the assessment of any left lung lesion, apical lordotic films may be of benefit."
This is a very mild statement, very different, in my mind, from, "There's an abnormality here, get a CAT scan."
Q. Doctor, let's agree, you're not a technician, and Dr. Husari isn't a technician, is he?
You don't simply wait around and have the radiologist tell you what to do, do you?
A. As I said before, I rely heavily on the interpretation of the radiologist and the recommendation of the radiologist regarding other studies.
Q. And ultimately you decide, as Dr. Husari presumably did in this case, as to whether or not additional study was indicated, isn't that right?
A. Well, I have to rely on the radiologist. I don't believe that, with subtleties such as interpreting changes in a vague infiltrate or nodule over time, that I have, or that Dr. Husari as a pulmonologist

has the expertise to make that judgment.
Q. So was the radiologist, you think, wrong, in saying, "If further evaluation is deemed clinically necessary?" Should the radiologist know, gees, this doctor doesn't have the clinical judgment to make that determination?
A. *Your* question is --
Q. Yeah, I mean. h e a pulmonologist have the le\el of expertise to answer the question posed by the radiologist, if further evaluation is deemed clinically necessary?
A. It appears that, in this situation, as of 11-22-95, it was Dr. Husari's judgment that there was not enough clinical indication to obtain additional tests.
Q. So in other words, Dr. Husari had to sit down on about 11-22-95 and think about it, should I order more tests or shouldn't I order more tests, right?
A. And in view of the fact that the radiologist did not specifically suggest that it was necessary, I don't *think* we can fault Dr. Husari, except by unfairly judging him in retrospect.
Q. Let's take it one step at a time.
Dr. Husari was obligated to sit down at or

around 11-22-95 and think about it, can we agree he had an obligation to sit down and think about it?
A. I think that's fair.
Q. Should I order additional studies or shouldn't I, is that fair?
A. Yes.
Q. Can we agree that the standard of care required that, on or about November the 22nd, 1995, Dr. Husari think about what to do in his patient?
A. That he read the radiologist's interpretation and then decide on his own how he should proceed based on that information?
Q. Let's go through what would be the pros of ordering additional studies.
A. You know, I wasn't -- I can't put myself in Dr. Husari's shoes at that point in time. I don't have very much information about this patient at that point in time. I can't answer that question.
Q. Well, let me ask you this, let me ask you if we can agree that one of the potential pros of ordering more tests at that time would be, maybe this is a stage 1, non-small cell lung cancer, and maybe, if I order a CT scan, I'll be able to diagnose it before this is a dead man.

Is that one of the potential pros here?
A. Again, you're being unfair by looking at this retrospectively. You put up the x-rays of patients who have chronic obstructive pulmonary disease and who are smokers, and they're all going to have abnormalities on them.
And you can't go and CAT scan and biopsy all these patients. Again: it's only in retrospect that you can pursue this line of reasoning, which is highly unfair.
Q. Well, Doctor, I don't see the recommendations or the mentions of apical lordotic films. chest fluoroscopy, or CT scan on any of the previous films, do you?
A. Well, I don't see here that he specifically recommends that he obtain these tests.
Q. Okay, we can go around in circles on this.
Can you and I agree that a potential benefit of ordering a CT scan in November of 1995 is, if this gentleman has a cancer, maybe we can diagnose it early when it's still stage 1?
Can we agree that's a potential benefit?
A. Right. And I think there's a potential benefit to getting CAT scans on all smokers twice a year. It's a similar line -- I'm not being flippant.

It's a similar line of reasoning.
Q. I don't expect that you are.
What's the down side? What is the con to ordering a CT scan for this particular patient in November of 1995?
Is it dangerous to the patient?
A. You know, again, I would hazard a guess that, in a pulmonary practice, caring for patients with chronic obstructive pulmonary disease, that almost every patient has abnormalities on chest x-ray. And one simply cannot obtain CAT scans on all those patients. The problem in doing that is identifying an endless number of nodules that one then doesn't know what to do with.
For instance, as I said earlier, 25 percent of patients who are smokers have nodules on their CAT scan.
MR. LOUCAS: What was the question? Could you read the question back, please?
(Thereupon, the record was read.)
A. Right, and I believe I'm trying to answer that
We have CAT scan technology. We have PET scans. We have MRI scans. We have colonoscopies. We have all kinds of diagnostic tests available.

And you could make a case that every person over the age of 40 in this country should have all of these tests done, because, in fact, any patient that develops a pancreatic cancer, you could go back and say, what does it cost to do an abdominal CT scan'? How can you defend not having done rhat abdominal CAT scan in that patient for jusr a few hundred dollars'? Wouldn't that have saved thst patient's life?
It's an absurd argument. And you have to consider issues of standard of care and scientific data that indicate the efficacy of these studies as a screening procedure.
Q. Is there any study that you're aware of CT scan following recommendation or following recognition of an abnormality on plain chest film as being inefficient in diagnosing -- or being not cost-effective in diagnosing chest cancer?
A. Well, we have to use CAT scans judiciously based upon the recommendations of our radiology colleagues.
MR. DJORDJEVIC: Let's take a real quick break.
(Thereupon, Mr. Djordjevic left the deposition, and Mr. Loucas resumed questioning.)

CROSS-EXAMINATION

BY MR. LOUCAS:

Q. Doctor, we've been introduced. My name is George Loucas. I'm going to continue briefly.

I heard you reference -- well, would you agree with me that, if a patient presents with two -- I'm *sorry*, if-a patient presents with signs, symptoms, or findings on a laboratory test which may be consistent with two different disease states, which one of which may be life-threatening, there is a duty or responsibility on the part of the physician to rule out the life-threatening condition?

A. Well, I think that's a potentially very misleading statement that, of course, is germane to the details here.

As I have stated several times this evening, there are lots of little nodules on any chest x-ray of any patient with chronic obstructive pulmonary disease. And you could, with your retrospectoscope, when one of those nodules out of 200 turns into cancer --

Q. May I interject, Doctor?

MR. BROOKS: Let him answer the question.

MR. LOUCAS: I want to get

out of here. Generally speaking. I'm not talking about this.

A. Please let me fiiish.

You could look with your retrospectoscope at that noduir that has turned into cancer and say. just as you did now, well, wasn't it possible that that nodule was a benign granuloma, but wasn't it possiblc that it was a cancer'? And therefore, in direct response to your question, cancer was one of the two possibilities, and was it incumbent upon that physician to pursue that? Of course not.

Q. So, no, if a patient presents with a sign, symptom, or laboratory finding which may be consistent with two different disease states, one of which is life-threatening, there is no duty on the part of the physician to rule out the iife-threatening condition?

That's what you just said, correct?

A. I think that your question is extremely misleading, whether one answers it in the affirmative or in the negative. It's a distortion.

Q. Okay.

That's the entire principle behind a differential diagnosis, isn't it, what I just said?

A. As I said, your question is an attempt to trap me *into* making a statement that would undermine my standard of care opinion regarding Dr. Husari.

Q. It's not an attempt to do anything, Doctor.

If I come to you with chest pains, you're going to tell me I've got gastritis, or are you going to make sure that I don't have a heart attack before I walk out your door and drop over dead? That's all I'm asking you. Same principle.

A. Let's use your example of chest pain, then.

If a patient comes to me with chest pain, I need to make a determination whether that chest pain is cardiac, since cardiac chest pain is potentially lethal.

I need to make a decision whether that patient has a dissecting aortic aneurysm, whether that patient has a cancer in his or her chest. It is not incumbent upon me to pursue every potential component of the differential diagnosis on every patient who comes to me with chest pain. That patient would never get out of the office for all the tests that he would have.

Q. And one of the things you're going to do to determine if it's lethal or not is consider **risk** factors in our little scenario of chest pain,

wouldn't you, Doctor? Or are you going to deny that, too, today?

A. Sir, I don't appreciate your sarcasm. That's not the tone that your colleague used in the deposition earlier this evening, and I'd prefer that we conduct this in a different manner.

Q. I'm not my colleague, so please answer the question.

You are here to answer my questions.

THE WITSESS: Please repeat the question.

(Thereupon, the record was read.)

A. As I said, when a patient presents -- as I think we're talking about a theoretical arena rather than the specifics of this case.

When a patient presents with *any* particular sign or symptom, there's generally an extensive differential diagnosis that's associated with that. And I think that it would be overly rigid and, in fact, absurd, to say that the standard of care would dictate that a physician would have to pursue every component of that differential diagnosis each time a patient presents with a particular complaint.

Q. So my question was, would you consider risk factors

in the patient who presents to you with chest pain when you're trying to work up whether he's got a dissecting aneurysm or if it's cardiac origin, et cetera?

A. Well, I think that I would consider a whole array of factors, including physical examination, history, family history. A great many issues would be considered.

Q. And how about risk factors? Just answer the question, please.

A. What do you mean by risk factors?

Q. Do you even know what risk factors are if somebody presents with chest pain of cardiac origin?

A. Of course there are several risk factors associated with chest pain as there are risk factors associated with lung cancer.

Q. Coronary artery disease, what are the risk factors, Doctor, so you can tell me whether or not that is something you would consider with a patient who presents to you with chest pain?

A. I'm afraid I don't understand what your question is.

Q. It's very simple.

MR. BROOKS: Excuse me, I'm

going to object. You're asking a chest oncologist about coronary artery disease. I'm not sure we're even in the right analogies. If we can give a better analogy, you may get a better answer.

MR. LOUCAS: I'm sorry, this is a man who his testified he's qualified in internal medicine, he can come in here and give opinions on standard of care of pulmonologists, that I am now inquiring as to what this gentleman's knowledge is on risk factors.

MR. BROOKS: On coronary artery disease.

BY MR. LOUCAS:

Q. Risk factors for patients who present with chest pain.

Do you consider risk factors in the differential diagnosis, for instance, of patients who present with chest pain?

MR. LOUCAS: And the reason I'm asking is, all I want to know is if this man ever uses the concept of differential diagnosis in working up his patients. I want to know if he uses risk factors. It's

a very simple question. I don't think he wants to answer it.

MR. BROOKS: So the question, excuse me, is, "Dr. Levitan, do you ever use risk factors in working up diagnoses on patients?" Is that the question?

MR. LOUCAS: Let's try that one. He'll answer yours, I'm sure.

A. That's the question? The answer is, of course.

Q. Okay. Let's talk about Dennis Cowan. Can we do that?

A. Ofcourse.

Q. Thank you.

As of September, 1994--

THE WITNESS: Excuse me, your name is -- what's your last name?

MR. BROOKS: George Loucas.

THE WITNESS: Mr. Loucas, I've been deposed a number of times over the years, and let me just go on record as saying, every attorney who has ever deposed me has been a gentleman. And your tone and demeanor I find offensive and are unprecedented, in my experience.

MR. LOUCAS: And please, I don't want to take myself down to your level, or I would give you my opinion of what I think of you.

MR. BROOKS: Wait, George. This isn't being productive at all.

MS. LOUCAS: Let's go forward with the questions.

MR. BROOKS: West Virginia has a code of civility, too, George. You may want to read it.

MS. LOUCAS: Let's go on with the examination. We're all tired. We're only days away from trial. This has gone on too long, so let'sjust get our questions in.

BY MR. LOUCAS:

Q. As of September 23, 1993, until the abnormality in the left upper lobe of Dennis Cowan was found, may we agree it was an incidental finding on the x-ray?

MR. BROOKS: September of '94, George?

MR. LOUCAS: *Yes.*

THE WITNESS: You know, I'd

actually like to take a break for about two or three minutes, if we could.

MR. BROOKS: Okay.

THE WITNESS: Thank you.

(Thereupon, a short recess was taken.)

BY MR. LOUCAS:

Q. Doctor; I'm going to take your attention, please, back to September 23 of 1994.

May we agree that the left upper lobe abnormality as found on the x-ray was an incidental finding?

A. Mr. Loucas, I'm not sure what you mean by an incidental finding. We know that multiple serial x-rays were obtained thereafter, and the small area ofincreased density identified on the 9-23-94 scan seems to go away.

Q. Do you know why the x-ray was taken September 23, '94?

A. The patient had a productive cough, symptoms of pneumonia, so it was done to rule out pneumonia.

Q. All right.

March of 1995, Doctor, the left upper lobe abnormality re-appears, is that a fair statement?

A. Well, on March 28th, 1995, an abnormality is seen in the left upper lobe peripherally. We don't know

that it's the same exact area or that it is the same etiology. But there is another abnormality seen within the left upper lobe.

Q. Have you ever made a determination, in reviewing the records in this case. and based upon your knowledge and experience, many years of training, as to whether or not the left upper lobe abnormality found September 23 of '94 was the same, in fact, on April 4 of 1998?

A. I can't be sure of that either way.

Q. The left upper lobe abnormality, may we agree there was one identified on several occasions rhroughout that time period between September of '94 through April of 1998?

A. Yes, there are several abnormal findings that come and go in the left upper lobe.

Q. Did you ever arrive at an opinion as to what that abnormality was in Dennis Cowan?

A. Well, as I said a minute ago, in retrospect, one or more of these prior films probably, or at least possibly, reflected the abnormality that we finally see on 4-6-98 on the chest x-ray.

And we both know that the radiologist who read the 4-6-98 film does say this has been present on films dating back to 1995, but is more

prominent.

Q. You had mentioned on more than one occasion, I noted earlier, that it resolved more than one time during that time period.

Am I correct in paraphrasing something to that effect, that that's how your testimony went earlier?

A. What I'm doing is putting myself in Dr. Husari's shoes looking at the chronology of x-ray reports that are available to him.

And on a couple of occasions, there was a questionable abnormality. And then, with appropriate follow up, that seems to go away, or at the very least, to stabilize.

Q. And if it did not go away, what would the standard of care have been?

A. Well, when we're diagnosing lung cancer based on abnormalities on x-ray, a lesion which either resolves or fails to grow is one that we tend not to pursue. Whereas one that persistently enlarges over time is behaving like a malignancy. And those are ones that we would work up with further testing.

As we look at the series of x-rays here, the radiologists look at multiple films over time. And

on several occasions they conclude that something that was seen previously is really of no further concern.

Q. Was cancer ever within the differential diagnosis of Dennis Cowan, in your opinion, ever, with that left upper lobe abnormality?

A. Well, we discussed this before, Mr. Loucas. There is a very broad differential diagnosis for any finding on chest x-ray. And it is only when an abnormally appears io enlarge over time, that is a subtle abnormality, or when something is an obvious mass, that further work up is required.

Q. So when this left upper lobe abnormality first presented -- and I'm not going to concede that it first presenied in September of '94, but I'm going to assume for purposes of this question, if you would agree with me and assume with me September of '94 was the first appearance of this left upper lobe abnormality, there was a duty on the part of Dr. Husari or anybody else to consider cancer within the differential diagnosis, is that your testimony, sir?

A. You know, I feel like we've been over this many times tonight. I feel like, with all due respect, this is the same question that has been asked

before.

And in the real world, in view of the fact that most of his patients with chronic obstructive pulmonary disease had, we can assume, one or more areas of scarring or nodular findings or granulomas or something on the x-ray that could theoretically, 'over time, actually grow and ultimately turn out to be a cancer, having said that, in the real world, it's absurd to think that one is obligated to follow up on every little nodule just because, theoretically speaking, the differential diagnosis includes cancer. You can't do that.

And to look back in retrospect, not at the data available to the doctor at that time, not at the environment in which the doctor practices, but to say, there's a cancer in 1998. There was a little ditzel in 1994. It's theoretically possible that that could have been a cancer. Therefore, the standard of care would dictate that he pursue that with a CAT scan, that's ridiculous.

Q. Okay.

So there was no duty, then, to include cancer within the differential in September of '94, is that a fair statement? That's what you're telling me?

A. No, I don't think that's what I said.

Q. Are you able to say whether or not cancer should have been ruled out at all as a result of the abnormality that arose in the left upper lobe in September of '94?

And if so, how do you go about ruling it out? That's all I really want to know

A. Right.

And the best way I can explain that to you is, once again, to say that, strictly speaking, any tiny nodule on any of these films that belong to any of Dr. Husari's patients could include cancer as a differential diagnosis. But by no means is Dr. Husari required to get CAT scans on all of his patients with a chronic obstructive pulmonary disease just because, theoretically speaking, each of those little ditzels could be cancer.

Q. So in this instance, the abnormality could have been cancer, but it didn't rise to the level or raise your index of suspicion enough to say it was standard of care to rule out cancer, is that a fair statement?

A. I think that is a fair statement.

Q. Okay.

Now, let's talk about risk factors for Dennis

Cowan. What risk factors did he have that would increase the index of suspicion or the likelihood that that may be cancer?

A. Well, probably, like almost every one of Dr. Husari's patients, I would hazard a guess, he was probably a smoker -- he was a smoker. And smokers get chronic obstructive pulmonary disease, and smoking is a risk factor for lung cancer.

Q. What are his other risk factors at that moment in time, September of '94?

A. To my knowledge, that is his principal risk factor.

Q. Any others?

A. I don't know any details about his occupational history, so I don't know whether he was exposed to nickel, cadmium, asbestos, et cetera, etcetera. So I would again say that, to my knowledge, smoking was his principal risk factor.

Q. How about the frequency of smoking when he did smoke, is that relative at all to increasing the indicia or the likelihood of the risk factor that it may be cancerous?

A. At this moment, I'm not recalling when and if he quit smoking. Perhaps you could supply me with that detail, and then I could answer your question.

Q. That's all right, Doctor. I'm just testing your knowledge of the facts in the case.

How about the frequency, that was my question? Does that matter at all in evaluating a risk factor for whether or not a first presenting abnormality is cancerous or not?

A. I don't understand your question.

Q. I just want to know whether the frequency of smoking is a risk factor in and of itself; you know, whether you are a half pack a day or a pack a day smoker'?

A. To some extent?sure, There is a dose response relationship between smoking and the risk of developing lung cancer to some extent. It's not linear, but people who do smoke more do have a higher risk of developing lung cancer.

Q. Now, considering the risk factors for Dennis Cowan, did that raise at all the index of suspicion in the differential diagnosis that would cause one to rule in or rule out cancer as of September of '94?

A. Well, I think that I've answered that question.

Q. No, no, this is a new question.

Now that the risk factors have been identified, does that change your opinions at all?

A. Well, as I said, in a pulmonary practice, dealing with chronic obstructive pulmonary disease, most of those patients are smokers. And most of those patients have abnormalities on their chest x-ray.

So, in fact, while it is certainly true that anyone who was a smoker is at a higher risk for developing lung cancer than one who is not, returning to the real world in which Dr. Husari is practicing where all these patients have abnormalities on their x-rays and all of these patients smoke, that's some hyperbole, of course. But the point is true. It doesn't help him very much.

And what he really has to do is rely on looking at serial chest x-rays and to use the principle that, if a nodule enlarges over time, that's reason to worry about cancer. Whereas, if it remains stable over a long period of time or seems to decrease in size or disappears, the likelihood of that being cancer is considerably less.

Q. Let's assume for a moment a hypothetical using what you said, the question of a benign granuloma or a carcinoma.

What are the diagnostic approaches to make that determination?

A. Well, largely those that I just explained.

I mean, to some extent, the radiologist can help us make that determination based on certain radiographic features, and I defer to the radiologist in that regard.

And again, it's the issue of change over time. The value of looking at a series of films over time can't be overstated. And, in fact, the fact that Dr. Husari obtained so many follow-up films really points to how conscientious his care was. Because he believed, as do I, that it is that follow up over time that tells you when something needs to be pursued.

Q. How many films did Dr. Husari order'?

A. Well, we can count them up here. I'm going to --

MR. BROOKS: I would prefer you look at the requisitions.

A. Let's just go back to each of the films. It will take me a few minutes, but I'll be happy to do this.

Q. Is it fair to say, Doctor, that you don't know the answer to that unless you refresh your recollection by looking at the record? And let us then move on so we don't waste this time.

Is that a fair statement?

A. Well, I have prepared carefully for this deposition, Mr. Loucas. But I think this is not a memory test. This is really an inquiry into my professional opinion regarding this case. I didn't commit to memory every word of these requisitions. But if you'd hold on just a minute, I'm happy to answer this question by looking through the reports.

Q. I have a new question.

MR. BROOKS: Or you can withdraw it, because we all know how many he ordered and how many he didn't order.

MR. LOUCAS: You know. I know. She knows. I just wanted to know if the doctor knows.

BY MR. LOUCAS:

Q. Is it fair to say you do not know unless you refresh your recollection by going over the charts rightnow?

A. Your question is, Mr. Loucas, among the 18 chest x-rays ordered here, can I tell you exactly who ordered each one without looking at the report?

Q. No. I just asked you a new question, and that was, is it fair to say you don't know the number unless you now go through the medical record to refresh

your recollection?

Is that a fair statement?

A. As I said --

Q. It's not a memory test, is that a fair statement?

A. As I said. there are 18 chest x-rays here. And in preparing for this deposition, it did not seem to me to be of sufficient importance to commit to memory who ordered each of those 18 chest x-rays.

Q. As you said, it was so important to follow up. How often should follow up have been done as soon as the left upper lobe abnormality occurred?

A. Well, let's look at the chronology here. 8-25-91. the first abnormality is identified, and this is in the film read by Dr. Crossen --

Q. I'm sorry, Doctor, starting with the September of '94 left upper lobe abnormality.

Listen, I just want to make this short. I'm really not playing a game here at all.

A. I'm doing my very best to answer your questions.

Q. Please, Doctor, I want to know, first of all, what the diagnostic approaches were to determining whether a solitary lesion that appears in a left upper lobe is benign or cancerous.

You mentioned observing it over a period of

time with x-rays. Are you familiar with other approaches to make that determination?

A. Well, one could certainly do a needle biopsy, a bronchoscopy, a thoracoscopy, a thoracotomy, a fluoroscopy, a positron emission tomography, and others. There's a whole variety of modalities available to pursue an abnormality on chest x-ray, which, over time, exhibits features that are sufficiently womsome to justify that kind of intervention.

Q. How about **CT** scan, is that one, also?

A. Yes, of course.

Q. With **CT** scan, you mentioned before radiologic features that you look at to determine a change over time.

What are those radiologic features in an abnormality of the left upper lobe?

A. Well, again, I rely on my radiology colleagues to interpret the film, interpret those radiographic features, and tell me when it's sufficiently worrisome.

But broadly speaking, progressive enlargement over the period of serial films rather than stability or resolution is what would lead me to be concerned.

Q. How about anything else, specifically with the architecture of the abnormality?

A. You know, those kinds of findings are ones that I rely on my radiology colleagues to discern.

Q. And are you familiar with what those architecture criteria are, though, in determining wherher it's more consistent with benign or malignant?

A. Again, not being a radiologist. I rely on my radiology colleagues for that recommendarion.

Q. I'm asking, as an internist who is here giving pulmonary testimony on standard of care today, what the architecture and those criteria are in determining whether it's more consistent with benign or cancerous, Doctor?

A. Well, certainly a nodule that is calcified is less likely to be malignant. One that is dense is more suggestive of malignancy as opposed to something of lower density. Something that is smooth and rounded is often less likely to be malignant. And there are other features.

But, again, I don't make these determinations myself. I utilize my radiology colleagues for that purpose.

Q. May we agree that a CT scan better helps one visualize those types of things that we just talked

about than simple x-ray?

A. Well, it might. But again, you can't get CAT scans on everybody. You have to really rely on your radiology colleagues to tell you which subset of patients has an abnormality on chest x-ray sufficiently womsome to merit a **CAT** scan.

Q. Let's talk about those that do merit **CAT** scan.

May we agree **CAT** scan is a better imaging source to help one look at the architecture of an abnormality in a lung than simple x-ray imaging? Very general question.

A. Your question is --

MR. **LOUCAS:** Could you please read my question back?

(Thereupon, the record was read.)

A. Yes.

Q. What is the best imaging source for visualizing a posterior left upper lobe abnormality?

A. Well, one can do a lordotic film, but if there's sufficient concern raised by the radiologist about that lesion or any other lesion, and the radiologist recommends **CAT** scan, a **CAT** scan is a better modality than any particular view of a plain chest x-ray.

Q. Other than the PA and the lateral, are there any

other x-ray views that you are familiar with that help one visualize more adequately the left upper lobe -- posterior left upper lobe abnormality?

A. You know, at our institution, we don't tend to use anything other than plain chest x-rays under most circumstances, and CAT scans.

In this day and age, our radiologists tend to use special views less often and to go to CXT scans. I'm not saying that is the only way to do it, but, in my experience, we seldom use those additional views.

Q. Do you have any opinions as to whether this was, in fact, a carcinoma more likely than not with Dennis Cowan?

A. I have no opinion in that regard.

Q. Do you presently have plans to testify in Clarksburg, West Virginia in this case?

A. Yes.

Q. And on what date will you be going? Have you made your travel arrangements?

A. Yes.

Q. What date?

A. Wednesday, October 4th.

MR. **BROOKS:** That's before

you told me you were going to take a week to put your case on. And you represented to the Court you would accommodate.

MR. LOUCAS: I have no further questions, Doctor. Thank you.

MR. BROOKS: In light of the time factor, I'm not certain we'll be able to read and sign, so we'll waive that.

(DEPOSITION CONCLUDED)

(SIGNATURE WAIVED)

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IN THE CIRCUIT COURT OF HARRISON COUNTY
WEST VIRGMIA
CERTIFICATE

I, MICHELLE R. HORDINSKI, a Registered Merit Reporter and Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named witness. NATHAN LEVITAN, M.D., was by me first duly sworn to tell the trurh. 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 27th day of September, 2000.

Michelle R. Hordinski, RPR and Notary Public
in and for the State of Ohio
My Commission expires January 25, 2001.