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IN THE DISTRICT COURT OF KNOX COUNTY, NEBRASKA

DENNIS WIEBELHAUS, Personal Representative of the Estate of DONNA J. WIEBELHAUS, Deceased, Plaintiff,

-vs-

D. J. NAGENGAST, M.D., Defendant.

Case No. 12018

Taken at St. Elizabeth Community Hospital
Pathology Department
555 South 70th Street
Lincoln, Nebraska
May 20, 1994
3:30 P.M.

DEPOSITION OF DR. GEORGE GAMMEL
TAKEN ON BEHALF OF THE PLAINTIFF

A P P E A R A N C E S

For the Plaintiff: Mr. David A. Domina
Attorney at Law
10810 Harney
Suite 103
Omaha, Nebraska 68154

For the Defendant: Mr. Joseph F. Bataillon
Attorney at Law
200 Century Professional Plaza
7000 Spring Street
Omaha, Nebraska 68106

I N D E X

S T I P U L A T I O R

It is stipulated and agreed by and between the parties hereto by their respective counsel of record that the oral deposition of DR. GEORGE GAMMEL, may be taken commencing at 3:30 p.m. on this 20th day of May, 1994, at St. Elizabeth Hospital, Pathology Department, 555 South 70th Street, Lincoln, Lancaster County, Nebraska.

It is stipulated that all requirements of commission and issuance of commission for the taking of the deposition are waived.

It is stipulated that the original deposition will be delivered to David A. Domina, attorney for the Plaintiff, and that a certification of same will be filed with the Clerk of the District Court, setting forth that the depoeition was taken and the costs thereof.

It is stipulated that all objections may be reserved until time of trial, except objections relating to the form and foundation of the question and the responsiveness of the answer.

It is stipulated and agreed that the deposition may be transcribed outside the presence of the witness,

P R O C E E D I N G S

(The deposition of DR. GEORGE GAMMEL commenced at 3:30 on this 20th day of Nay, 1994, with both counsel David Domina, Joseph Bataillon, and the deponent present.)

DR. GEORGE GAMMEL

having been first duly sworn to tell the truth, the whole truth, and nothing but the truth, deposeth and sayeth as follows:

DIRECT EXAMINATION

BY MR. DOMINA?

Q. Dr. Gammel, can you tell me what you've reviewed for the purpose of preparing to testify as a witneaa in this case, please?

A. I've received two folders, or two notebooks full of material. One was the depositions from Dr. Nagengast and Donna Wiebelhaus, three depositions. I think that's all in there. And the other one was the office records from, the general records from Dr. Nagengaet's office. And some more records from the University of Nebraska, and whatever other pertinent medical records that were collected.

And I also received the slides, the pathology material from both the primary lesion of

the shoulder, the primary melanoma of the shoulder, and the subsequent reexcision from the shoulder and the axilla.

Q. The latter having been performed at UNMC?

A. Yes.

Q. Have you reviewed any depositions of any physicians other than Dr. Nagengast in connection with this case?

A. I don't believe so. I can't remember for sure. That one book on depositions was a mighty long one. I just can't remember, to tell you the truth. The ones I concentrated on were those two, so I can't remember.

Q. The patient and the physician were the two you concentrated on?

A. Yes.

Q. How long ago did you review these materials?

A. Probably a month ago. Then I rereviewed them a little bit today, this morning.

Q. What were you asked to do?

A. Review it and give my opinion as to what I felt the process was.

Q. The disease process?

A. The disease process and how it, how it occurred.

Q. Do you have opinions in this case concerning what examination methodology Dr. Ragengast should have used?

A. No.

Q. Do you have opinions concerning the follow-up care, if any, that he should have rendered after his first contact with the patient in a setting in which she presented concern about a mole?

A. That, as far as I'm concerned, is more the clinical side of it. I'm more on the pathological side of it. I have a good concept of how malignant melanomas develop, the various classifications of them, and perhaps that would fit in there. But I guess the answer to that would be no.

Q. I was frankly trying to rule out your involvement on the clinical side by being a bit more specific than asking you that broadly. But maybe I can ask you that broadly and then follow-up with a feu questions that are likely to have pretty basic negative answers too, but if you'll indulge me for a moment. Do you have any opinions at all

concerning the clinical performance of Dr. Nagengast in the care of this patient?

A. No--well, do I have opinions concerning? Still I'm not sure I understand what you're asking me.

MR. BATAILMN: Maybe I can clarify. I don't intend to offer this witness on any issues

with respect to the standard of medical care rendered by Dr. Nagengast from a clinical standpoint, what he should have done or what he should not have done.

MR. DOMINA: Well, because I thought I'd done a little better job of articulating that question than I could do if I do it again, would you please read it back.

(The pending question was read by the reporter.)

THE WITNESS: No, as far as I'm concerned, I'm on the pathology side of it, so I guess the answer to that would be no.

Q. (By Mr. Domina) Was there information in Dr. Nagengast's deposition that was significant then to you, doctor, in the formation of your opinions as a pathologist testifying in this case?

A. Probably the timing, because the timing

of what happened when would be important in how I look at the case.

Q. Was there anything besides Dr. Nagengast's recitation of the timing that was significant for your purpose in forming the impressions, opinions and conclusions as a pathologist?

A. It's really about all, from his testimony, that--

Q. And what about from Mrs. Wiebelhaus's deposition then, was there information contained in her testimony that was significant for the purposes of your work as a pathologist in rendering opinions7

A. Again, probably timing again. I was trying to look at the timing *of* what happened when.

Q. None of the descriptions given by either Dr. Nagengast or Mrs. Wiebelhaus of the actual lesion were significant for your purposes7

A. Yes, the descriptions of the size and coloration and the oozing or various descriptions of the gross lesion, gross pathology, is important for me, so I did look at that.

Q. Did you, for your purposes, that is, the

purposes of your work in this case, find the descriptions of the lesion and its gross pathology to be consistent between the physician and the patient?

A. Yes, I did.

Q. What's your understanding of the appearance of the lesion when first presented by Mrs. Wiebelhaus to Dr. Nagengast?

A. The gross impression of what it looked like?

Q. Yes.

A. I got the impression it was fairly small. He described it as the size of a pencil eraser, which would be about 7 millimeters, 7 or 8 millimeters in diameter. Had a smooth surface, and that's--they both seemed to. I think that's what I, early on that's what it looked like.

Q. What about its color?

A. That I didn't really pick up that much. The coloration didn't, of the lesion, didn't add much to my interpretation.

Q. What about the shape of the lesion?

A. From what I could gather it seemed to be symmetrical.

Q. And what do you rely on for the

conclusion that it was symmetrical?

A. I guess because it looks like an eraser on a pencil and that would be symmetrical. It was never described as being asymmetrical, I guess.

Q. Did anyone describe it as being symmetrical other than to say it was the approximate size of a pencil eraser?

A. Probably. That's--no, I don't remember that word being used.

Q. Neither witness described it as being circular, did they?

A. I guess, I guess I'm remembering the fact that it was described to be like a pencil eraser, and that--and when I visualize that, that would be a fairly symmetrical, raised area on the skin.

Q. Did you *see* Mrs. Wiebelhaus's deposition on videotape7

A. No, I did not.

Q. Do you recall reading, Dr. Gammel, in her deposition, that ahe waa pointing to a lesion on her forehead, or temple7

A. I do remember that, um-hmm.

Q. And identifying it as being to be an approximate shape, or at least circumference, as

the lesion that was cancerous?

A. I do remember something along the lines of it that, um-hmm.

Q. But you've not seen that--

A. No.

Q. --film of the lesion?

A. Huh-uh.

Q. Do you know whether that lesion on her head that she pointed to during her deposition was symmetrical?

A. I assumed it was because--1 assumed it was.

Q. And what description was given by either Dr. Nagengast or Mrs. Wiebelhaus *of* the border area of the lesion?

A. I do not remember anything about the border. There was no--nothing that comes to mind.

Q. Do you recall either witness estimating its diameter in some quantity of millimeters, inches?

A. I think, if I remember, Dr. Nagengast estimating it at about six to eight, or something like that. His estimation of size was consistent with the eraser on a pencil.

Q. Dr. Gammel, how long had the lesion been

on the patient's body before it was presented?

A. As far as I know, it had been there as long as Hrs. Wiebelhaus could remember, so it would be either, would either be a congenital nevus or one that occurred at a very early age.

Q. Had its texture or surface appearance changed before it was presented to the doctor?

A. There obviously was some reason why it should be presented to the doctor, so I would asaume that.

Q. What was your understanding of the reason, please?

A. It had changed In size and I suppose coloration.

Q. Do you recall which?

A. There was a change though, whether that's size or--it's probably a little of both really.

Q. Size and color?

A. Yeah.

Q. Do you recall a description of a crusting or flaking?

A. Yea, I do.

Q. What's keratosis, please?

A. Keratosis is just a buildup *of* keratin

cells on the surface of the skin.

Q. Do they ordinarily present as crusty or flaking to the person who's trained to distinguish between a keratotic condition and some other condition, parakeratosis, for example?

A. You mean keratosis as perceived by the patient?

Q. As being crusty or threatening?

A. Crusty? Yeah, I think that would be it.

Q. That would be a commonplace way for a layperson to present with7

A. Yeah.

Q. Did you conclude that this particular lesion, then, may have had some keratotic features when it was first presented to Dr. Nagengast?

A. Yeah, could be. Could be.

Q. Did you ascertain from any of the materials available to you what Mrs. Wiebelhaus's eye coloration was?

A. No, I just, I determined that she was fair-skinned. And fair-skinned individuals usually have blue eyes, so I presume that's it.

Q. In this case it's a perfectly

appropriate presumption. Did you ascertain, doctor, what her employment was; do you recall

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that?
A. Not so much. I remember she grew up in a rural setting and was on the farm. But other than that I don't remember.
Q. Was there any history of serious sunburn at an early age in her life?
A. Not that I--1 don't think that I read.
Q. Do you recall what her pattern was of protection from and exposure to sun and sunlight--
A. No.
Q. --in her adult life?
A. No, I don't remember that.
Q. Is that kind of--
A. I'm--
Q. Pardon me?
A. I don't remember that part, no.
Q. I didn't mean to interrupt you, if I did. I think I started too quickly with a ' question. Is that kind of Information, information of a kind that you would expect to be of interest to a primary care physician looking at a lesion?
MR. BATAILLON: Objection, foundation. You can answer that though.
THE WITNESS: Well, I guess no one knows why malignant melanomas develop in previous nevi,

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There's assumptions that it has eomething to do with sunlight, but that's all very vague. And to have someone ask specifically, I would imagine you get similar answers from everyone, so I doubt very much if that would add much to a history, to aek that question.
Q. (By Mr. Domina) Are you aware of epidemiological studies conducted for the purpose of studying whether or not persons of fair complexion with employment that ordinarily shields them from the sun but life habits that subject them to intermittent periods of intense sun exposure are at an enhanced risk from melanoma?
A. I've read quite a number of articles on melanoma. And, yes, I'm familiar with some of those articles that suggest that the early, early sunburn does increase the risk. And there's obviously something happening because I'm seeing more and more melanomas over my 20-some years of watching skin lesions, so it's--
Q. It is indeed one of the most rapidly accelerating cancers to occur, is it not?
A. Yes, it is, um-hmm, very common for me to see it nowadays.
Q. Would you agree too, doctor, that there

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is no cure for the disease known, once it metastasizes?
A. At this time, yeah, sure, no 100 percent cure. Things are being tried all the time with Interferon and immunotherapy. Sometimes works. Melanomas are a kind of interesting because sometimes they will regress spontaneously, go away, and so no one really knows why. But nothing consistent, that's for sure.
Q. Even with Interferon, the incidence of positive reaction to retard the disease is under 40 percent, isn't it?
A. Yeah, it's very variable, but there are some indications that it seems to work out, who knows why.
Q. Do you k n w if this particular patient experienced Interferon treatment?
A. I do not know that. I think she experienced BCG.
Q. She did indeed.
A. It was early on.
Q. Do you know which other drugs were tried with her?
A. No. Once I get Into the chemotherapy line, that's not my bag. All I know is

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chemotherapy.
Q. Are you aware of forecasts by epidemiologists, doctor, that as many as 1 in 100 white, that is, Caucasian American children will suffer from melanoma during their lifetime, that is, children under age 15, during the 90s?
A. I didn't know that atatistic, but I know it's--the incidence of melanoma is really going up rapidly.
Q. And alarmingly to physicians, isn't it?
A. Yes, um-hmm.
Q. And a disease about which a great deal has been written in the past several years?
A. Yes, um-hmm.
Q. Would you say, doctor, that there is a high degree of awareness of the disease and its risks in the medical profession today in America?
A. I think so, um-hmm.
Q. Are you acquainted with Dr. Nagengast?
A. No, I'm not.
Q. Are you acquainted with hie son, who practices medicine here in Lincoln?
A. A little bit. He's new in town, and I do every so often do frozen sections and do surgicals for him. But as far as being acquainted

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with him, we know each other as we pass in the haule, but that's about it.
Q. Nothing more than a professional relationship?
A. That's right, professional.
Q. Are you acquainted with Dr. Glenn Lau?
A. Again, not as much. He's usually at Bryan, I think, and I do know him but just by name.
Q. The same sort of casual?
A. The same, sort of very casual. He's in with surgeons more, because of a surgical fellow I spend most of my time dealing with surgeons.
Q. Do you know Dr. Scot Sorensen?
A. Yes, I do know him.
Q. And what's the nature of your acquaintance?
A. He's of course, an oncologist, and since one of my major things I do is diagnoee cancer, classify cancer, I deal with him quite a bit. Because he--all of his patients are dealt with by either myself or one of the other surgical pathologists here in Lincoln.
Q. And who would the other one be?
A. Actually, we all do that quite a bit. I

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guess here at St. Elizabeth it's myself and there's Dr. Till and Dr. Davidson. At Bryan we have Dr. Casey, and Dr. Masada, and at Lincoln General it's Dr. Silenieks.
Q. So you would routinely have contact with Dr. Sorensen's oncology patients at St. Elizabeth, is that right?
A. I don't have particular contact with them but I'm the one that exams their, the specimen, the tumor that was removed.
Q. In the course of your practice, how often do you have direct patient contact?
A. Rot a whole lot. I--the pathologists do bone marrows, so we meet the patient that way. And *every* so often we'll be asked to explain a complicated surgical to a patient, but not a whole lot of patient contact.
Q. Would it be weekly, once a week?
A. Perhaps, once a week, if that. Depends on what field. Some of the clinical pathologist. have more, but I guess sometimes it's forensic pathologists that will come in contact with patlents. It's a whole different story.
Q. Are you an author?
A. No, I'm not.

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Q. Have you published any professional works?
A. Oh, I think when I was way, way back in *my* residency, I was named on a paper or two, but nothing on my *own,* no.
Q. Has your practice since being board certified been entirely in Lincoln?
A. No.
Q. Where else have you practiced, doctor?
A. I went into the Army right after my residency and spent two years at Fort Bragg. And then I went back to Columbia, Missouri. That's

where I trained. I was in private practice of surgical pathologist down there for four years and then I moved up here to Nebraska. I've been here for 18 years.

Q. Do you know Dr. Robert Langdon from Omaha?

A. No, I do not.

Q. Dr. Fred Pettid from Omaha?

A. No.

Q. Doctor, do you have an opinion about whether or not the fact that a female patlent is pregnant places her at an enhanced risk of melanoma?

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A. I have an opinion. I'm not sure I know if it's right or not, but--

Q. All right, sir. Without knowing whether it's right or not, I take it it's really, then, a personal opinion that you wouldn't hold out as one that meets professional standards?

A. That's right, it's controversial. We've always heard in the past when you're pregnant you have that hormonal development and the pigment in the nevi get darker, the a real a get darker and cancer is worae, but I've not read anything to ever back that up as having anything to really do with it. So there are certain tumors that hormones will influence them and you don't want a patient pregnant during certain tumors. But for specifically malignant melanoma, I know of nothing that, no response that malignant melanoma would undergo in relationship to the pregnancy.

Q. I take it, then, that in the profession, the medical profeesion, there is a debate in which one advocate argues that cancer does create an enhanced risk and while the other school of thought argues that there's insufficient data to reach that conclusion7

A. You mean pregnancy?

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Q. What did I say7

A. You said cancer.

Q. I did. I apologize. I meant pregnancy, yes. There's a school of thought that pregnant--

A. I'm not sure that--you know, when we talk about cancer we're talking about such a huge field.

Q. Let me narrow it to melanoma.

A. Okay. I take it the debate is that--I don't know if there's even a debate there. As far as I'm concerned, it doesn't have an increaeed risk. But I'm in the pathology field so I guess I'm all I'm saying is that's out of my field. I don't see anything that changes it under the microscope.

Q. Does family history of melanoma in the family tend to place one at an enhanced risk?

A. Yee, it does.

Q. And are there readily identifiable reasons, pathologically, for that?

A. Pathological reasons. Of course, there's a syndrome called Dysplastic Nevus Syndrome. And then there is a--then a patient--well, if a family fits into that category they have all kinds of abnormal moles on their skin

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and some of those change over to malignant melanoma. If they don't have that syndrome, I think there's still an increased risk. If a patlent should have a, just a malignant melanoma, still there's an increased risk there, but why, I don't know.

Q. Certainly pereons who have dysplastic nevi are at enhanced risk, aren't they?

A. That's really controversial. I think we haven't really defined what a dysplastic nevus is. In fact, the latest conferences I've gone to there's a big push to get rid of that term.

Q. And why in that?

A. Becauee we haven't defined it well. I can--I know the criteria for dysplastic nevus but I don't have all the information. So the only person that ehould make that diagnosis would be the clinician and say, yes, this is the Dysplastic Nevus Syndrome. So I'd say if somebody has, has put this patient in the category of Dysplastic Nevus syndrome, then there definitely is an increased risk.

Q. Well, let's see if we can define it this way: What's a nevus?

A. A nevus is a proliferation of

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melanocytes that--and these presumably come from the neural crest and migrate along the skin, and for some reason they proliferate in a kind of a localized fashion underneath the akin's surface and they go through a certain pattern of growth. They start in the epidermis and drop down to the dermis, and then they, I guess, simply follow along and finally eventually disappear.

Q. And what does the term dysplastic mean?

A. Dysplasia means bad growth, and to mast physicians dysplasia means bad. 80 that's one of the reasons they want to get rid of that term in talking about nevi because the criteria for dysplastic nevus may not mean anything. We haven't really defined it, so we're trying--in other words, if someone gives me a nevus that looks atypical, and I look at it under the microscope and it fits this criteria for dysplastic nevus, there's recent literature to suggest that this does not mean that that nevus gives that patient increased risk or not. We don't know that. And to put a patient in that increased risk category at this point is not justified.

Q. When you look at a slide that displays microscopically a nevus that the clinician has

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thought may have been dysplastia, what are the features you're looking for?

A. I'm looking for, actually now the new term that I use is nevus with architectural disorder.

Q. It sounds to me like what is happening to your profession is the same thing that's happened to ours, which I'd urge you to avoid. But that's all right, go ahead.

A. Well, it changes all the time. That's why I try to go to conferences yearly to try to keep up with the thing. Basically what I'm looking at, I'm looking at a nevus that is not symmetrical, it looks asymmetrical, irregular. There are melanocytes up in the epidermis that look a little, they're single and small, little clusters, and they're not really uniform throughout there.

Q. In the epidermis?

A. In the epidermis. And the dermis usually has what we call fibrosis or fibroplasia. There is also a little inflammation of the papillodermis. And that's about all the criteria. The original person that described dysplastic nevus, which is Wallis Clark, made a big point of it being cellular atypia. And that's really

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controversial, whether there is or not. I don't know at this point. We presumably should be trying to determine cellular melanocyte or cellular atypia ae well with that plastic nevus.

Q. Well, how do you then microscopically or otherwise pathologically distinguish a dysplastic nevus from a papilloma?

A. Now, when you say papilloma you just, I mean, you know, I'm a pathologist, so I--a papilloma in my view is not a pigmented lesion. A papilloma is a squamous little skin tag or something. So it doesn't, it's not even in the same category.

Q. All right, very good.

A. A dysplastic nevus is way--no, that's way, way different. Under the microscope there would be no, not even the faintest of a problem in differentiating, because a papilloma does not have nevus cella. It's not a--

Q. There are no melanocytes?

A. Well, there might be a few but not many. There wouldn't be a proliferation of melanocytes.

Q. Ordinarily there wouldn't be enough to alter its color, is that true?

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A. I think some of the papillomas are

brown. But, again, it's from a pathology point of view, you know. I've received papillomas, many of them that were described as being nevi, and I don't, you know, under the microscope they're obviously not nevi, they're papillomas, and the other way around as well. So I don't think clinically it's all that clear, from my view, because I've seen too many skin lesions given to me with the wrong clinical impression.

Q. So, in other words, a physician could think he's seeing a papilloma and actually be looking at an architecturally imperfect nevus?

A. Yes, um-hmm. But, again, that papilloma is kind of a vague term. I'm a little hesitant because if I'm going to say papilloma I'm asking to say squamous papilloma. Pathology has all kinds of terms that I'd use.

Q. If the patient presents, doctor, with a concern about a mole of long-historical duration, perhaps congenital and perhaps not, but of long-standing duration, with a complaint that the mole is at enhanced levels of sensitivity or sensation, that it has grown, changed in color, and that its borders have changed in the recent past,

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and upon-questioning describes the lesion as a mole of long duration, would you expect the physician to think that he or she is looking at what is conventionally called a papilloma by physicians?

MR. BATAILLON: Object, foundation. You can answer, doctor. It's hypothetical too.

THE WITNESS: I don't think--I don't think most physicians get moles and papillomas mixed up.

Q. (By Mr. Domina) Okay.

A. I don't think--I mean, I think it would be rare. I think most physicians that would look would know a mole. And, you know, the mole le a lay term for a pigmented lesion or a melanocytic lesion, so I don't think they'd get those two mixed up, although some could. But generally I would think they wouldn't.

Q. Do the melanocytes, the cells themselves, ordinarily cluster in a predictable fashion if they are growing with what I guess I'll call architectural normalcy, to try to stay with the terminology you suggested?

A. So, in other words, the benign nevus, how do I tell that?

Q. Yes, you have a better question, thank

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you.

A. Well, I see about 20 a day. Because I do, truly, I see about 20 nevi a day. And I go through the drill of why this is a nevus and not a melanoma or not anything atypical. Basically, once thoae melanocytes start to proliferate we called them nevi cella, and they're usually in a nice, symmetrical nodule underneath the skin surface. And, you know, I have all kind of criteria that I use, about ten that I look at. But basically they're, they're pretty bland. They're--as they go deeper into the dermis they tend to get smaller, don't tend the invade the epidermis. There's no inflammation with them, unless the nevus has been irritated or ulcerated on the surface by scratching.

Q. Do you use a written protocol, a checklist, if you will?

A. That's all--

Q. You probably know it well enough now you don't have to?

A. Well, with anything you have, you have to go through a certain sequence to remember to look at this, this, and this.

Q. What I wonder is, even though obviously

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you don't need it because you have it committed to memory, is it a written protocol that you keep on the premises of the lab somewhere?

A. Not particularly. It's--there are various articles that are published, various textbooks that are written will have a little list of like a pros and cons. Obviously this would be criteria for malignant melanoma, a criteria for benign nevus, and they would compare the two.

Q. I take it that you can get through the list and at the conclusion not be sure?

A. Right, there are some that, there are some, I mean pigmented lesions are very, very complicated. There's books written on them. I've gone to conferences where we've just discussed them and there are all kinds of them. And there are cases where, well, you know, there are cases that I'm not sure on. When I'm not sure on a lesion I usually have a consultant that I send it to, to look at it and help me make that decision.

Q. Okay. And in the case of a pigmented lesion, if there is doubt would you ordinarily communicate the doubt to the physician who submits the tissue with a recommendation that it be excised?

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A. As far as I'm concerned,, any pigmented lesion should be excised so as to get a biopsy. IF they don't, I'm very disturbed. That's the way I make mistakes. That's called a pitfall that I wouldn't want to--

Q. Explain what you mean. It's just too risky?

A. Oh, yeah, you don't biopsy a pigmented lesion unless they're under very rare circumstances.

Q. You just take it out?

A. You take it out, yeah, give me the whole thing.

Q. I presume that's because they're so easy to remove?

A. Yeah, they're small enough to remove.

Q. There's no--

A. Rarely you'll have a large congenital nevus with a nodule in it and rather than take out this large nevus they'll give me the nodule. But that's so rare that I can barely remember when I did it last.

Q. Okay. In this particular case, you mentioned that you looked at Dr. Nagengast's recorda. Did you look at the pathology report that

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came back to his office after he submitted the excised tissue material--

A. Yes, um-hmm.

Q. --to the lab in Sioux Falls?

A. Yes, I did.

Q. Are you familiar with the Nichols Laboratory in Sioux Falls?

A. Just I know there's one up there but I don't know the physicians.

Q. You don't know the doctor who looked at this particular specimen?

A. No, I don't.

Q. Did you also obtain the actual elide from there?

A. I received--I obtained a recut. It wasn't an original slide, but as far as I'm concerned it was a very close facsimile thereof.

Q. Close enough so it was satisfactory for your purposes?

A. Sure.

Q. Do you concur with the diagnosis made there?

A. Yes, I do. Easy diagnosis.

Q. When you say easy, what do you mean?

A. Nodular malignant melanoma.

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Q. And its characteristics?

A. Well, it was a nodule. The skin over the surface was ulcerated. The tumor was composed of very atypical tumor cells that infiltrated down, forming a rather large nodule and extended Into the deeper aspects of the skin, or the dermis. It's just, again, it was very classic for malignant melanoma. Nobody would miss that one.

Q. And were you able to estimate how long the malignancy had been in this particular nevus?

A. No. There was--again, there wasn't a nevus there anymore. It was all malignant melanoma.

Q. Can you estimate the age of the malignancy?

A, Not really. I mean, one thing about a malignant melanoma, it doesn't grow in a linear

fashion. They tend to go by growth and then they go in remissions and sometimes even regressions. And so that as far as I'm concerned the growth rats of a malignant melanoma is not linear at all. It would be very difficult to know.
Q. other than to guess, is there any way for you to say how long this patient had had some malignancy present in the lesion that was removed

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from her body by Dr. Nagengast?
MR. BATAILLON: Object to the form of the question. You can answer, doctor.
THE WITNESS: Do I knw how long the malignant melanoma has been there?
Q. (By Mr. Domina) Yes, sir.
A. No.
Q. Are you able to estimate the shortest period of its possible duration before it was excised?
A. Not really. I know that malignancies start with one cell and that one cell divides and divides and divides. Usually by the time I see a tumor, it been there quite awhile. What is quite awhile? Months.
Q. In the case of malignant melanoma, for instance, this is a disease that does move very rapidly if not treated early and removed from the body, isn't it?
A. How fast is very rapidly? I don't--
Q. Well, let's compare it with cervical cancer, for example, which may develop over a decade or two.
A. Yes, it's an aggressive-growing tumor.
Q. Melanoma commonly kills in a year,

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doesn't it?
A. Well, if it's--yeah, it could, um-hmm. I guees one to two to three years.
Q. And from the time when the first cell that could be defined as malignant appears in pigmented nevus tisaue until you'd expect the vertical growth phase of that cell to extend down into the cutaneous tissue would be how long?
A. That depends on the type of melanoma.
Q. What kind was this?
A. This was a nodular malignant melanoma. It probably had--if it had a radial growth phase at all, it was very short or nonexistent.
Q. You think its entire growth phase was vertical then?
A. I'd say either its entire growth phase was vertical. Or it might have had a very, very short one which would, you know, I don't know how short "short" is, but I would say--
Q. Hours or days?
A. It might be days, right. That's another thing, this presumably was a congenital nevus. And melanomas can develop down in the deeper aspects of congenital nevi rather than up on the surface, whereas in the majority, most malignant melanomas

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are what we call superficial spreading melanomas and start at the surface and go through a very prolonged radial growth phase before vertical.
This was a very different lesion. It was a modular malignant melanoma, which, again, didn't--I mean, it might well have just started with a vertical growth phase.
Q. And there's no way to know, is there, where within the nevus the malignant growth initiated?
A. No, because it--by the time that we see it under the microscope there is no nevus there; it's all gone.
Q. What's the frequency of this nodular type of malignant melanoma as compared with all melanomas?
A. Let me see if I can remember. There's a range that they give and it seems like it's 10 to 20 percent, something along that. I remember 20 percent something.
Q. It's not a number you carry about with you, I take it?
A. No, not really.
Q. I really didn't intend to quiz you and make you feel uncomfortable with the question.

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A. It depends on which study you would look at. Host of the ranges I've seen can range from like 10 to *20* percent, whereas the superficial spreading would be I suppose 50 to 60 percent, so it's, I don't remember for sure the percentage range but I know it's quite a bit below the others, The most common is the superficial spreading.
Q. Is it true that a statistically significant percentage of congenital nevi develop melanoma?
A. Very controversial. Very controversial.
Q. And what is the nature of the controversy about, as you understand it?
A. The first nature is trying to define what a congenital nevus is.
Q. Once that's done?
A. Bven after that's done it's controversial because you have to raly on history. Well, how goad is history? History is as good as the person giving it to you. Congenital nevus presumably is one that was there when the patient was born, but you have these other type of nevi that pop up at an early age and is that congenital or not? I really don't think that it makes that

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much difference.
There was a couple of articles on whether all congenital nevi should be removed and, again, that's again controversial. As I read the literature, it seems that if they get over a centimeter and a half then they definitely should be removed. Under a centimeter and a half they probably shouldn't, it's their--they shouldn't be. But, again, that's not my--has to be more in the realm of a surgeon than a dermatologist to follow that literature a little closer. In my view, it's very controversial.
Q. Are you aware of published cases that estimate that at least five percent of nevi of long duration, whether there at birth or appearing in early childhood, develop into malignant melanoma in white--in the Caucasian population?
A. I think I am aware of that. I've also just recently read some articles that refuted that and said that, again, that the definition of a congenital nevus was so vague that they really couldn't make that statement. 80 I'm not, you knw, I've read it but I don't know if I believe it or not. I would think it would be much lower than that personally but--

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Q. Do you recall the source of the articles that you think may refute that?
A. lo, I don't. I'm not that--my mind doesn't work that way. It's probably one of the--like I say, I go to conferences quite frequently and listen to lectures, and it probably came from one of most recent ones, I understood.
Q. When did you last attend a conference at which melanoma was the topic?
A. Wednesday night.
Q. And where was that?
A, At the Nebraska Association of Pathologists. We had a scientific session by a Dr. Pelligrini from Ohio University who was one who studies melanomas. He gave us a talk on dysplastic nevi, as a matter of fact.
Q. Did he present materials--
A. Yes, um-hmm, yeah.
Q. --including either epidemiological studies or clinical trials?
A. The main subject of that meeting was the differentiation of a spitz nevus from the malignant melanoma.
Q. Which is also a difficult task, isn't it?

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A. Very difficult. That's the main thing. Just at the very end he talked about dysplastic nevi just as sort of in passing. He didn't have a handout, so I can't go much on, other than it was a good talk.
Q. In fact, the need to distinguish between

a spitz nevus and a malignant melanoma is something that is known to pathologists universally, isn't it; a physician in pathology knows you've got to be sure about which of those two you're dealing with?
A. Yes, definitely.
Q. And you'd expect a family practice physician to know that there is a need pathologically to make that distinction upon submission of tissue--
MR. EATAILLON: Objection, foundation.
Q. (By Mr. Domina) --wouldn't you?
A. A physician that takes off any pigmented lesion wants to know what it is.
Q. But just the term spitz--
MR. BATAILLON: Objection, foundation.
Q. (By Mr. Domina) --would generally be known to physicians, wouldn't it?
A. I've Eound some that don't know what it means. That's more of a pathological term. You

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have really got to be Into skin pathology to really know what that Is. Some clinicians do and some don't. So I don't, I don't think I'd expect that.
Q. Insofar as you're concerned, given the high regularity with which you contact tissue submitted for pathological examination to determine whether it's a malignant melanoma or not, when should a primary care physician refrain from excising pigmented lesion tissue?
MR. BATAILLON: Objection; foundation.
THE WITNESS: I can't answer that. I know that--
Q. (By Mr. Domina) Insofar as you're concerned, should he ever refrain from it?
MR. BATAILLON: Objection; foundation.
THE WITNESS: I think he has to. Too many people have too many moles. You can't take them all. There's got to be some sort of a, there has to be some sort of a decision made someplace along the line that this mole should or shouldn't come off. I don't think they all can come off. They could but it might raise the cost of medicine sky high.
Q. (By Mr. Domina) Should they all come off because the patient presents them and reports

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change?
MR. BATAILLON: Objection; foundation.
THE WITNESS: I think it would depend a lot on, would depend a lot on what the change was.
Q. (By Mr. Domina) Coloring and size?
MR. BATAILLON: Objection; foundation.
THE WITNESS: It--I can't answer that. Too many unknowns *for* me to answer it.
Q. (Ey Mr. Domina) Do you have an opinion, Dr. Gammel, about when Donna Wiebelhaus's melanoma metastasized?
A. I feel it metastasized very early on in its trans--when it went, transformed into melanoma. Very, very early. Perhaps after the first ten cell8 were developed. In other words, I think its metastasis occurred right at just about the same time it transformed over.
Q. And why do you think that?
A. Well, mainly because of the size of the metastasis.
Q. And by that you mean its depth?
A. No, the size of the metastasis, the axillary node that contained the malignant melanoma.
Q. And you'll recall that there were how

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many axillary nodes involved in October when she was operated on at the University?
A. One.
Q. One of how many?
A. I can't remember. 15.
Q. 15, I believe?
A. Something like that.
Q. And the size of that metastasis was significant to you how?
A. Two centimetera.
Q. And what does that suggest to you?
A. That suggests to me that since the metastasis was larger than the primary, that they would be grwing at the same rate. And if you extrapolate them both back, I would say that this metastasis Occurred very, very early, at the inception of the, when the actual primary turned over to a malignant melanoma.
Q. Row long do you think it took for the axillary node to grow from its first incidence of cancerous growth to the size of two centimeters?
A. Again, I have no idea on that, as I don't have any idea on the primary. But if I compare the two, I would say they grew similarly; they grew in tandem.

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Q. Would you anticipate that that growth in the axillary node could have occurred over a period of 30 days?
A. I would think it would be much longer.
Q. Bow much longer?
A. I don't know. I guess we'd have to get down to what we considered the doubling time of this tumor, and I don't know what that is, really. I know that it seemed to have doubled from the time it was described as being 7 millimeters until the time it was removed and measured as 1.5 centimeters. So I have that framework, and I guees if I put It in that framework I'd say it would take several months *for* it to get that size.
Q. Well, now wait a minute. We're talking about 7 millimeters being what it looked like on the surface of the skin, isn't that right?
A. That's right.
Q. But you said earlier that it didn't go through a radial growth phase?
A. That's right.
Q. So it could have grown into the skin, metastasized, and never transformed in appearance on the eurface?
A. Yeah. But the measurement of the lesion

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when it was taken out was 1.5 by 1.5 by point 5, so--
Q. What does that auggeet to you; that it did have a radial growth phase?
A. No, no, just that's what I had--when it grew it was more of a polypoid growth rather than down into the tissue growth, and that's why we measure them. It's not as much, not so much haw deep this invades, just how thick they are. And that's related to the prognosis.
Q. For the metastasis to occur, the cancerous cells have to get into a fluid-bearing vessel in the body, don't they?
A. Yes, they have to be down in the derma, which is in the dermis.
Q. And without knowing where this one started its growth we wouldn't know when the invasion into the dermis occurred, would we?
A. Well, again, nodular malignant melanomas invade the dermis very, very early in their inception, and especially from a congenital nevus it could have started there, but I don't know.
Q. And is it possible, then, that there could have been some malignancy in that nevus for a period of years?

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A. I don't knw. I don't know that. I know that malignant melanomas are really peculiar malignancies and have tendencies to start and then go into remission. And I've even looked at some of the superficial spreading variety where they've regressed. I've seen malignant melanoma primaries that have caused metastasis and the primary regresses to nothing. And why that happened I don't know.
Q. Bo, in other words, in this case it's possible that that axillary node could have grown while the primary lesion on the back could have shrunk?
A. Well, again, no, I don't believe that. I think the--Well, I guees you could say that.
Q. That would be consistent with something you've at: least seen happen before?
A. Well, but I saw no evidence of regression in the primary lesion. Bee, evidence of regression would be fibrosis, inflammation, and there wasn't any fibrosis or inflammation. 80 evidence of regression usually is something that

you can see under the microscope.
Q. There was, of course, no charting or mapping or photography of this particular lesion in

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your medical records of Dr. Nagengast, was there7
A. No, not necessarily.
Q. So really the only thing we know about how the primary lesion changed in size, other than the gross dimensions reported at the first date and the last date I guess, by Dr. Nagengast, that is, are from the history related by the patient and her husband, aren't they?
A. I missed that again. Would you--
Q. I apologize to you.
A. All of a sudden you switched over.
Q. It probably got to be too complicated a question I have might have lost myself at. Dr. Nagengast didn't chart it or describe it except with an approximation at the, I guess at the end, that it had doubled in size, basically, la what he said?
A. No, the only thing I saw from Dr. Nagengast is he estimated it at 7 millimeters as its start. I don't think he said anything about its end. I'm taking the end from the pathologist.
Q. From the pathologist?
A. From the pathology description.
Q. Okay. And everything else we know about what happened to this lesion before it was excised

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is information gathered from Mrs. Wiebelhaus and her husband, isn't it? I mean, there are no other historians known to you, are there?
A. No.
Q. At some point in time the patient reported that this lesion ulcerated. Is that somehow pathologically diagnostically significant to you, doctor7
A. Ulceration on a malignant melanoma Is an ominous sign. I have seen a lot of normal, benign nevi that are ulcerated by scratching, by clothes that rub. So, you know, again, I've seen both. But if it's a malignant melanoma and ulcerates, it's an ominous sign, yes. aut, again, if it's a normal nevus and it's scratched, it's not.
Q. Ulceration, then, is not a by-product of the malignancy, is it?
A. Yes, I think if it's a malignant melanoma and it ulcerates it's not becauee it was scratched; it's because it probably outgrew its blood supply and the top of it is starting to increase.
Q. And it has outgrown the epidermis then7
A. Yes.
Q. So what we're seeing is at that point

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we're actually shedding cancerous cells7
A. Or else they're dying on the surface.
Q. Pathologically, then, with an ulceration, it wouldn't even be necessary to excise it; you could simply scrape the ulcerated tissue and you might be able to diagnose melanoma7
A. I would never--I never would get that, no. It would be just too necrotic, too much inflammation, you wouldn't have a chance. I would not recommend that,
Q. I'm not asking you--
A. Don't give me one of those.
Q. I'm not aeking you for a recommendation.
A. Well, the answer to that is still no. I mean, I don't k n w of anybody that does that. That's not a diagnostic procedure, to diagnose malignant melanoma in its primaries, in my view.
Q. Would you expect if you--would you expect to see melanoma cells in the oozing material, that is, the ulceration from a malignant melanoma if you looked at it microscopically?
A. I think the melanoma cells would be so necrotic that they probably would be unrecognizable. They would be there but I could

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not recognize them under the microscope.
Q. This particular tumor was identified as being a Stage III or IV, do you recall which tumor, by the people in Sioux Falls?
A. See, I really don't get into the staging of melanomas. That's a clinical staging, and all I do, I'm not--when I go into the study of the melanoma I go Into more its thickness at the class level, and so I'm not really, staging is not that, I don't have that off the top of my head. I can look it I up; I've got it in my books. I don't know that off the top of my head. All I know is it was a Class Level IV.
Q. What does that mean to you?
A. That means it goes down into the reticular dermis, goes down Into the deeper layers of the dermis. The skin is epidermis and dermis and Class Level I is in-situ, and then 11, III, IV, V.
V is subcutaneous, all the way through the skin, so this one then invaded the dermis.
Q. And do you have any way of knowing how many day8 or weeks prior to excision it had first invaded the dermis?
A. No. But again, it's a nodular melanoma,

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so it's been there quite awhile.
Q. What does that mean7
A. Well, if it's a nodular malignant melanoma, that means it had a very short or nonexistent vertical growth phase — I mean, correction, radial growth phase, and it went directly into a vertical growth phase. A vertical growth phase means it goes into the reticular dermis. So there would be reticular dermis invasion very early after its inception.
Q. What is the period of time that's required for a melanoma cell to move from new formation to the cellular division?
A. I don't have--like I say, it's a very aggressive, very fast tumor cell.
Q. Does that happen in the course of several days, several hours7
A. I don't know that. I've never been involved in that.
Q. Does it happen predictably?
A. As far as I know, the malignant melanomas, they have a very--they do not grow linearly, so they may grow fast for awhile and for some reason not grow fast, they stop. And so I don't know.

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Q. So it really isn't possible for you to say, then, on a reasonably certain basis, is it, doctor, that this particular melanoma had been present in the dermis for an extended time without knowing something about its rate of growth? I mean, it would be a guess, wouldn't it?
MR. BATAILLON: Object to the form of the question. You can answer, doctor.
THE WITNESS: Let's see. Do I know how long the tumor cell had been in the dermis? I guess again the answer is no, because I don't know how fast it's grown. I don't know. I think we started the whole thing with that admission, that I don't know how long tumor cells would be in the dermis.
Q. (By Mr. Domina) Have you done any previous work for Mr. Bataillon or his law firm?
A. No.
Q. Eave you testified previously in professional negligence litigation?
A. No.
Q. Have you had the unfortunate experience of being Involved in any as a defendant?
A. Yes.
Q. And when?

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A. Oh, several years ago I missed a nodular malignant melanoma. I misread it.
Q. And there was a suit that was filed as a result of that?
A. Yes.
Q. What was the result?
A. It was settled out of court.
Q. And the outcome for the patient?
A. I really don't know. I didn't follow it up.
Q. Do you know where that case occurred, in

what jurisdiction, in what court?
A. Patient was in Seward.
Q. And an far as you know the case was filed in Seward?
A. I'm not sure. I just know--
Q. Was PUS a party to that case as well as you? You are associated with PMS?
A. Yes.
Q. Doctor, do you involve yourself in any way with patient education about malignant me1anoma?
A. No, no, I don't.
Q. I take it that in this case you're not going to testify about the physician's duty to

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educate the patient about the risks of changes in pigmented nevi, are you?
A. No.
Q. Did you look at the pathology and histopathology slides from UNMC?
A. Yes.
Q. Were they significant to you in forming opinions?
A. Yes, um-hmm.
Q. And was that significance centered on the size of the axillary node's--
A. Yes.
Q. --disease involvement? Was there any other diagnostic significance besides the size of that malignancy in the node?
A. No, that was really all that impressed me, that was it, size.
Q. Would you have recommended any course of treatment for the patient after excision of that axillary node different from what you know she experienced?
MR. BATAILLON: Objection; foundation.
THE WITNESS: I don't treat.
Q. (By Mr. Domina) So the answer is no because it wouldn't be your field?

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A. No, it's not my field.
Q. Do you hold any opinions about this case or this patient's course that you haven't expressed during our discussion today?
A. No, I think we've hit the main point. I don't think I--1 don't think SO. I think we've covered just about everything I had in mind.
MR. DOMINA: Thank you very much, doctor. No further questions.
CROSS-EXAMINATION
BY MR. BATAILLON:
Q. Doctor, the patient presented to Dr. Nagengaet on July 8th, I believe it was?
MR. DOMINA: 9th, Joe.
MR. BATAILLON: Was it the 9th?
Q. (By Mr. Bataillon) The patient presented on July 9th, 1992 with the first report of a mole that Dr. Nagengast examined. Dr. Nagengast recommended excision on August 22; 1992?
A. About six weeks later.
Q. All right. And the mole was excieed on September 14, 1992?
A. Okay.
Q. Do you have an opinion as to whether or not the mole was--strike that. Do you have an

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opinion as to whether or not there was distant metastasis on July 9, 19927
A. Yes, I feel that there most likely was. Yes, I think there was, because of the size.
Q. All right.
MR. DOMINA: Move to strike as not responsive and volunteering by the witness.
Q. (By Mr. Bataillon) Because of the size of the distant metastasis, is that correct?
A. At the time of its excision.
Q. Last September 14, 1992--
A. Yes.
Q. --is that correct?
A. Yes.
Q. All right. You can't tell us the exact date that it started as far as the melanoma is concerned, is that correct?
A. That'a correct.
Q. But based on the size of the melanoma that you saw from a primary lesion and the size of the nodular, or of the lymph node that you saw, is it your opinion that on July 9, 1992, that there was already metastasis?
A. Yes, it is.
MR. BATAILLON: I don't have anything

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further. I think that covers everything.
REDIRECT EXAMINATION
BY MR. DOMINA:
Q. Doctor, the first presentation to Dr. Uagengaat waa on July 9th but the first distant metastasis identified was in mid-October, not mid-September, at the University of Nebraska Medical Center. The pathology--
A. Yes.
Q.' --in September was,. of course, only at the primary site?
A. That's right. And it was done, I think--no, wait a minute. At the University they did the reexcision of the skin and the axillary node reexcision. Yeah, they did two separate things, but at the same time.
Q. They did a reexcision within several days. In September they did the--
A. I thought it was at the same time.
Q. Well--
A. But, again, I'd have to reread. But it's very close, very close, yes.
MR. DOMINA: That's all I have. You a have a right to read your deposition and sign it or you can waive that right, whichever you'd prefer.

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THE WITNESS: I'd like to read it.
MR. BATAILLON: One thing further.
RECROSS-EXAMINATION
BY MR. BATAILMR:
Q. Doctor, Mr. Domina asked you if you'd ever testified in a medical negligence setting, and I think by that not only go to court but do a deposition. Have you done depositions in medical negligence settings, if you can recall?
A. The only thing that I've teetified on, I'm in the coronary as tar as I do autopsies on the forensic so I've done a lot of testimony for autopsies and deaths and this sort of thing. And some of those might have been in the negligence line.
Q. But not against physicians, I take it?
A. No.
Q. Depositions?
A. I've done a lot of depositions for autopsies that I've done.
Q. I just wanted to make sure you understood the question, that's all.
MR. BATAILLON: Nothing further.
(The deposition of Dr. George Gammel concluded at 4:35 p.m. on this 20th day

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C S R T I F I C A T B

STATE OF NEBRASKA)
) ss.
COUNTY OF LANCASTER)

I, the undersigned, Dr. George Gammel, do hereby certify that I have read the foregoing deposition and that, to the best of my knowledge, said deposition is true and accurate with the exception of the following corrections(s) listed below:

Page	Line	Correction/Reason

DATE: SIGHED:

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