N0. B-150, 698
IN THE DISTRICT COURT

LESTER AND SHERRICE BARRETT
VS.
MOBIL OIL CORPORATION, ET AL.

JEFFERSON COUNTY, TEXAS
60TH JUDICIAL DISTRICT

DEPOSITION OF
ETHAN A. NATELSON, M.D., F.A.C.P

On **October 22, 1997,** the oral deposition of **ETHAN A. NATELSON, M.D., F.A.C.P.,** was taken at the instance of the Plaintiff in the offices of St. Joseph Medical Center, 1315 Calhoun Street, 18th Floor, Houston, Texas, pursuant to Stipulation attached hereto.

Those persons present were as follows:
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17 Copies of articles from the medical literature that generally deal with gastric lymphoma and lymphomas of what we call the MALT category, Helicobacter pylori and the association between Helicobacter pylori-and lymphomas, non-Hodgkin's lymphoma in general and classifications of that illness, and the relationship between Helicobacter pylori and gastric cancer. 129

18 One-page letter to James Wimberley from Enrique Spindel, M.D., dated 11 July 1997 139

ETHAN A. NATELSON, M.D., F.A.C.P.,
having been duly sworn, testified as follows, to-wit:
EXAMINATION BY MR. HYDE:
Q. Good afternoon. Would you please introduce yourself?
A. My name is Ethan Natelson.
Q. Dr. Natelson, what is your home address?
A. 8707 Wateka, W-a-t-e-k-a, Drive, Houston, Texas 77074.
Q. And what's your telephone number?
A. Well, the work number here is area code 713-652-3161.
Q. And how are you employed?
A. Well, in several ways. I -- I have several jobs. I'm the director of medical education at St. Joseph Hospital. And in that category I'm paid by the hospital -- those type things. I'm also in private practice, and I do that here at this Stehlin Oncology Clinic. And then I gain money from seeing private patients.
Q. Dr. Natelson, my name is Keith Hyde. And we have never met, correct?
A. That's correct.
Q. Do you understand that you are under oath to tell the truth today?

A. Yes.
Q. If at any time I ask you a question that you don't understand, will you tell me that so that I can rephrase my question?
A. Yes.
Q. And, Doctor, if at any time you'd like to take a break, we'll take a break for whatever reason. Is that agreeable to you?
A. Excellent.
MR. HYDE: Would you mark that, please?
(AT THIS TIME NATELSON EXHIBIT N0. 1 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Doctor, I've had attached as Exhibit 1 the notice of deposition for your deposition today. Obviously, you received a-copy of that document.
A. Yes.
Q. We requested that you bring with you certain items, including a current resume or a curriculum vitae. Do you have such a document?
A. Yes.

Q. And that's in this pile in front of me?
A. Yes
Q. We requested that you bring a copy of your complete file in this matter. Is what's in front of me now everything in your file?
A. Well, what's in front of you are all the materials that Mr. Faulk has sent me and any letters or bills I might have sent him and then certain medical papers from my files.
Q. Is there any information in your file concerning this lawsuit that is not in front of me that is still in some other file?
A. Well, the answer would have to be yes in the sense that this lawsuit deals with lymphoma. And I have hundreds of papers that deal with lymphoma, books, texts, and many other things that I might either consciously or unconsciously rely on when asked questions that have to do with lymphoma. So what I brought are articles that I think are most pertinent and would support the views that I would give.
Q. So as we sit here today, the documents that you have here in front of you concerning non-Hodgkin's lymphoma, those are the documents that you would expect to give specific testimony on at the time of trial; is that correct?

A. Well, I can't anticipate what questions you might ask of me; and so these documents cover what I think needs to be covered. There may be other documents that I would need to supply depending upon what you might choose to ask me.
Q. And it's your understanding that the documents in front of you are the documents that you'll be relying upon at the time of trial upon examination by Mr. Faulk; is that correct?
A. Well, they may not exclusively be these because medicine is a continuing operation. There may be an article published next week that may have great relevance, and I might use that if it turned out to be pertinent.
Q. But as it concerns documents that are in publication now that you have, the documents that are in front of me are most likely the documents that you'll be relying upon during your direct examination with Mr. Faulk. Is that a fair statement?
A. Yes, sir.
Q. We also requested that you produce a copy of any report prepared by you in this matter. Would you identify that document, please?
A. Yes. That is this document (indicating).
MR. HYDE: Would you mark that,

please?
(AT THIS TIME NATELSON EXHIBIT NO. 2
WAS MARKED FOR IDENTIFICATION PURPOSES AND
IS FULLY DESCRIBED IN THE "EXHIBIT INDEX"
HEREIN. SAME WILL BE FOUND AT THE
CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Doctor, would you please identify the document
which we've had marked as Exhibit 2?
A. This is a letter that I sent to Mr. Richard
Faulk on July 10th, 1997, concerning the case of Lester
Barrett versus Mobil Oil Company.
Q. When were you requested to write the document,
your report in this matter?
A. I can't tell you the exact date.
Q. Approximately when?
A. Well -
MR. FAULK: I'm going to object
because -
A. I don't really know. I can't -- Obviously
sometime before this.
MR. FAULK: Hold on a minute, Doctor.
I'm going to object because the question
lacks a foundation because it doesn't
establish that I, in fact, asked you to

prepare a report. You may answer the question.
Q. Doctor, then I can clear that up. Who asked you to prepare Exhibit 2, your report in this matter?
A. Mr. Faulk.
Q. And approximately when did Mr. Faulk or someone at his firm request you to write Exhibit 2? And I'm asking for an approximate time period.
A. I would say approximately weeks prior to this letter --
Q. Okay.
A. -- probably not months.
Q. Doctor, did you have a draft of Exhibit 2?
A. No.
Q. Did you have any document other than Exhibit 2 that you gave to any of the attorneys at Mr. Faulk's law firm for them to review prior to July 10th, 1997 -
A. No, I --
Q. -- that reflected your opinions in this matter?
A. No, I did not.
Q. So, therefore, it would be reasonable to conclude that Exhibit 2, your report in this matter, is the only document that you've written in this matter: and there have been no drafts. Is that correct?
A. That is correct.

Q. We also requested that you produce a copy of all documents reviewed by you in preparation for this deposition. Are all those documents that you reviewed in preparation for this deposition in front of me now?
A. Yes.
Q. Are there any others?
A. No.
Q. We requested that you produce all documents that you have relied upon relative to the formation of your opinions in this matter. And are those documents in front of us today?
A. Well, again, as I said earlier, there -- there are concepts that have to do with lymphoma that I have many other documents that relate to that. And so that -- I believe these documents will support my opinion, but there may be others that I have that would do the same.
Q. And, again, you have no specific intention of bringing any of those other documents to trial as we sit here today.
A. No, I do not.
Q. That was probably -- Since I phrased my question in the negative and you answered in the negative, it's -- I know what you and I meant to say; but let me ask it this way, Doctor. Are there any other

documents except those documents that are in front of me now that as we sit here today you intend to bring to trial in this case?
A. No.
Q. Okay.
MR. HYDE: Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Doctor, you've given your deposition before: is that correct?
A. Yes.
Q. Approximately how many times, your best estimate?
A. Perhaps 20 times.
Q. And you've given your case -- Strike that. You've given your deposition in a case where the plaintiff's name was Frias; is that correct?
A. Yes, that is correct.
Q. Did you review any of your past depositions in preparation for today's deposition?
A. No.
Q. I understand that you typically are retained as an expert witness approximately six to eight times per

year; is that correct -- involving six or eight cases?
A. That could be so. That would be approximately right.
Q. And I understand that you have been testifying as an expert witness at different rates obviously, not rates in money but rates in how many cases per year, for approximately 20 years; is that correct?
A. Well, it could be that long. I have testified for -- and not necessarily in liability-type lawsuits, but I've testified in a number of types of trials. And it could date as long as 20 years.
Q. And it's fair to say that the great majority of the cases in which you consult, you consult on behalf of defendants, true?
A. The majority.
Q. Well, if you had to assign a percentage, wouldn't it be correct that 90 to 95 percent of the times in which you're retained as an expert in a case, that you're retained by attorneys for the defendant?
A. I don't think it's anywhere near that high.
Q. Give me your best estimate then.
A. Well, my best estimate would be that about - If I review cases -- And you have to understand that if I -- if I reviewed a case for the plaintiff and my opinion might not be favorable to the plaintiff, then

there would be no deposition and no testimony on my part. So I've reviewed a number of cases for the plaintiff, but they have not come to trial or deposition. And so if I look at the totality of cases I look at, I'd guess it's probably about 70/30 in terms of defendant and plaintiff.
Q. So that I'm clear on that, of cases that you review, it's your best estimate that approximately 70 percent of those cases you are retained as an expert on behalf of the defendant; is that correct?
A. That's correct.
Q. Now, in the cases in which you have given deposition testimony -
A. Right.
Q. -- would it be correct that that would represent 90 to 95 percent of the depositions that you've given that would be such that you'd be there on behalf of the attorneys representing the defendant?
A. I still think that's too high. I can think of several cases where I testified on behalf of the plaintiffs, and I haven't done all that many cases. So I don't know what -- the numbers, but 95 percent sounds much too high.
Q. Well, do you have a better approximate?
A. I'd say probably in the range of 80 percent.

Q. So that the record's clear, for your -
(AT THIS TIME THERE WAS IN
INTERRUPTION AT THE DOOR TO ANNOUNCE THAT
JIM WIMBERLEY WAS HERE, AND THERE WAS AN
OFF-THE-RECORD DISCUSSION.)
Q. In cases in which you've been retained as an
expert and you've given deposition testimony, your best
- estimate is that approximately 80 percent of the time
that you give the deposition testimony, you're giving
deposition testimony on behalf of the defendant. Is
that a fair -
A. I think that's fair, yes.
Q. Now, have you ever testified at the trial of
any lawsuit on behalf of a plaintiff?
A. Yes.
Q. And would that include a case involving an
allegation of chemical exposure causing a certain
hematologic disorder?
A. The answer would be no.
MR. HYDE: Off the record.
(AT THIS TIME THERE WAS AN
OFF-THE-RECORD DISCUSSION, AFTER WHICH THE
PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Approximately how many times have you testified

at trial as an expert witness?
A. Possibly in the range of ten.
Q. And for those ten times that you've testified at trial as an expert witness, those have been solely on behalf of the defendants as it relates to hematological disorders. Is that a fair statement?
MR. FAULK: Let me make an objection because I think the question lacks a foundation as to whether all of those ten times were.
Q. Let me ask it this way.
MR. FAULK: Okay.
Q. Of the ten times that you've testified, how many of those cases involved your giving testimony that a plaintiff's hematological condition or disorder was not caused by exposure to chemicals?
A. You'll have to run that one by again.
Q. Fair statement.
A. I got lost in that one.
Q. It's a complex question really for a simple concept. Have you ever testified in trial on behalf of a plaintiff that a blood disorder was caused as a result of chemical exposure?
A. No, not to my knowledge.
Q. Have you ever testified that a plaintiff's

blood disorder was not the result of chemical exposure?
A. Yes.
Q. About how many times?
A. You're talking in trial?
Q. Yes, sir.
A. Two that I recall.
Q. Have you ever testified in a deposition that a plaintiff's blood condition or blood-related cancer was caused as a result of chemical exposure?
A. No.
Q. Do you know who Mr. Faulk is representing in this lawsuit?
A. I believe Mobil Oil.
Q. Have you ever been to Jefferson County, specifically Beaumont, Port Arthur, Port Neches?
A. Yes.
Q. What has caused you to go to Jefferson County?
A. Well, I purchased some citrus trees from a man who lived in Port Neches once. I've been to Beaumont a couple of times, I think to give some talks there. I used to drive through that area commonly because my wife lived in Louisiana. I can't recall the last time I've been there.
Q. You said you gave some speeches in Beaumont. To whom?

A. These would be medical talks. And it's been a long time ago, so I -- I can't recall the details.
Q. Do you recall what hospital you were speaking at?
A. Probably St. Elizabeth's, but I -- I don't -
Q. Do you know that?
A. -- recall the details. I can't recall. It's been a long time ago.
Q. How long ago?
A. More than ten years.
Q. Do you recall having any specific discussions with any of the oncologists or hematologists in Beaumont?
A. Not specifically.
Q. The speeches that you gave in Beaumont, do you know what subject -
A. They would be in hematology presumably. But, again, it's been in hematology, which is my field. But it's been so long ago that I -- I can't remember any details.
Q. So as to the subject matter of any speeches you gave in Beaumont, as we sit here today, you would be guessing or speculating as to the subject?
A. That's correct.
Q. Specifically, have you ever been to the Mobil

refinery in Beaumont?
A. No.
Q. Have you been to the Mobil chemical plant, specifically the 0 and A facility in Beaumont?
A. No.
Q. Have you ever had a conversation with any of the Mobil plant physicians or plant doctors from either the Mobil refinery or the Mobil chemical plant?
A. Not to my knowledge.
Q. I know that the Frias case in which Mr. Faulk represented one of the defendants involved the Lyondell Petrochemical and Atlantic Richfield. Do you recall that?
A. I don't recall the companies that were involved.
Q. And I understand that you have consulted with Mr. Faulk while he was at Akin, Gump, correct?
A. Yes.
Q. Approximately how many times have you consulted with Mr. Faulk or someone at Mr. Faulk's firm, specifically Akin, Gump, when he was with that firm?
A. I have no idea.
Q. All right. Obviously, every case in which you consulted with Mr. Faulk while he was at Akin, Gump involved some type of hematological or blood disorder or

some type of cancer; is that correct?
A. Well, that would be correct. Yes.
Q. Now, when you say you have no idea, are you talking because the number might be in the range of 20, 30, 40, or 50 times: or you just don't have a clue?
A. Well, the last one I remember was the Frias case. Perhaps there was one before that. If there was, I've forgotten about it.
Q. Okay.
A. But there certainly wouldn't be 20 or 30 cases.
Q. That's what I -- I just want to get an idea, sir.
A. Okay.
Q. Mr. Faulk is now with Gardere Wynne Sewell & Riggs. And besides this case, are you currently testifying for Mr. Faulk as a consulting -- not as a consulting but as a testifying expert?
A. Not to my knowledge.
Q. Approximately how many hours have you spent working on this matter, Mr. Barrett's case?
A. Perhaps four or five hours.
Q. Does that include today's work?
A. We haven't concluded today's work yet, so I don't know.
Q. Well --

A. That would be up -- up until today, in other words.
Q. And I take it that you had an opportunity to meet with Mr. Faulk today, true?
A. Yes.
Q. And I would take it that you met with Mr. Faulk for an hour or two?
A. No. That would be incorrect.
Q. About how long?
A. About 15 minutes.
Q. Dr. Natelson, what do you charge for your work as a consultant?
A. Generally $200 an hour.
Q. And that's a flat rate whether you're in deposition or whether you're reviewing documents or whatever; is that correct?
A. Yes.
Q. And I take it that the money that you receive from your consulting work goes directly to you: is that correct?
A. Yes.
Q. Doctor, have you been supplied any exposure information concerning Mr. Barrett and his exposure to benzene?
A. No.

Q. Dr. Natelson, have you been provided with any exposure information concerning Mr. Barrett's exposure to butadiene?
A. No.
Q. Have you requested any exposure information concerning Mr. Barrett and his exposure to any chemicals?
A. No.
Q. What is your understanding of Mr. Barrett's occupation while he was at the Mobil refinery and Mobil chemical plant in Beaumont?
A. I think I commented on that in my letter, if I can look at that. And what I could see from the medical records, he had been employed as a pipe fitter for 15 years. And at the time of his diagnosis of lymphoma, he was not in that line of work.
Q. What is your understanding as to what a pipe fitter does in a refinery and chemical plant?
A. I don't know exactly what a pipe fitter does.
Q. To your knowledge have you ever observed a pipe fitter performing pipe fitter work in a refinery or chemical plant?
A. Definitely not.
Q. Doctor, have -- Let me strike that. Dr. Natelson, have you been provided with any Mobil

documents concerning the health hazards of benzene?
A. No.
Q. Dr. Natelson, have you been provided with any Mobil documents concerning the health hazards of butadiene?
A. No.
Q. Dr. Natelson, have you been provided with any Mobil documents specifically concerning toxicological studies concerning benzene?
A. No.
Q. Have you been provided with any Mobil toxicological studies or information concerning butadiene?
A. No.
Q. Have you been provided with any Mobil epidemiological studies?
A. No.
Q. Dr. Natelson, have you ever given any type of public presentation concerning benzene?
A. Well, I've given talks on aplastic anemia; and historically benzene has been a cause of that. So I can say indirectly. I don't recall any specific lectures on benzene in particular.
Q. Have you ever given a public presentation or talk concerning butadiene?

A. No.
Q. Have you ever given a public presentation concerning non-Hodgkin's lymphoma?
A. Many times.
Q. When is the last time you gave such a public presentation concerning non-Hodgkin's lymphoma?
A. Well, we have a multidisciplinary cancer meeting each Monday; and the public or anybody is invited to that. There usually are about 50 people in attendance. And we present cases of patients with cancer diagnosed at St. Joseph Hospital. Commonly lymphoma is a topic. And I probably presented within the last two weeks at that meeting.
Q. Have you ever given a public presentation concerning the cause of a specific case of non-Hodgkin's lymphoma?
A. We've -- Yes, in the sense that we've talked at this conference about MALT lymphomas, which are thought to be induced by Helicobacter.
Q. And when did you first give that presentation?
A. We talked about that about -- either two or three weeks ago.
Q. And that was after you had written your report in this matter, correct?
A. Yes. It had to do with another patient of

mine.
Q. Doctor, are you aware that benzene is present at the Mobil refinery in Beaumont?
A. I would assume it's there. I don't have specific knowledge of what chemicals are located there.
Q. Do you know whether or not benzene is present at the Mobil chemical 0 and A plant?
A. Again, I don't know what chemicals they have in their repertoire.
Q. Do you know or have you been told what percentage of the employees at the Mobil Oil refinery are exposed to benzene?
A. No.
Q. Have you -- Do you know or have you been told what percentage of workers are exposed to benzene at the Mobil chemical 0 and A plant?
A. No.
Q. Do you know whether or not butadiene is present at either the Mobil refinery or Mobil chemical plant, specifically the 0 and A plant in Beaumont?
A. No.
Q. Have you ever visited an oil refinery, taken a tour of a refinery?
A. No.
Q. Have you ever taken a tour of a chemical plant?

A. You have to define what you mean by chemical plant.
Q. Fair enough, Doctor. In the Houston, Deer Park, Pasadena, Channelview area, there are a number of chemical plants that make a variety of chemicals through the use of distillation towers and other process equipment. And my question to you is: Have you been in a chemical plant such as those that I've -- in the area that I've just described?
A. No.
Q. And have you been in any refinery or chemical plant in Jefferson County?
A. No.
Q. I want to start broad here, Doctor; and I'm going to try to narrow it down. But hang with me here for a second.
A. okay.
Q. When were you first contacted to be an expert witness on behalf of Mobil?
A. In this particular case
Q. Yes, sir.
A. -- you're talking about? Well, it would be -- It probably would be before the July 10th date. I don't know exactly when. It would be perhaps a month or two before that date.

Q. And you received some medical records: is that correct?
A. Yes.
Q. And are those medical records in front of me and Mr. Wimberley?
A. Yes.
Q. Do you know Dr. Spindel or Dr. Hoverman, the physicians who treated Mr. Barrett?
A. No.
Q. Mr. Barrett has a cancer, correct?
A. Yes.
Q. And, more specifically, Mr. Barrett was diagnosed with non-Hodgkin's lymphoma, correct?
A. Correct.
Q. And I suppose, more specifically, Mr. Barrett has a form of non-Hodgkin's lymphoma known as gastric lymphoma.
A. Yes.
Q. What specific cell type of non-Hodgkin's lymphoma do you understand that Mr. Barrett has been diagnosed with?
A. A B-cell large cell type.
Q. Do you have any quarrel or dispute about Mr. Barrett's diagnosis, that being a B-cell large cell non-Hodgkin's lymphoma, specifically gastric lymphoma?

A. No.
Q. Now, I think, and correct me if I'm wrong, that there can be some other distinctions made when looking at cell type. And I think they use the word diffuse or other words, correct?
A. Correct.
Q. Did he have a diffuse large cell B-cell non-Hodgkin's lymphoma?
A. Well, those terms are best applied to lymph nodes: diffuse and nodular. In this biopsy he did have nodular changes of lymphoid tissue, but the area of the tumor was diffuse. But our classifications are generally based on nodal lymphomas, not extranodal lymphomas. This would be called an extranodal lymphoma.
Q. So with his extranodal lymphoma, he did have characteristics of diffuse and -- What's the other?
A. Nodular.
Q. -- nodular. Dr. Natelson, have you published any papers concerning benzene?
A. Not to my knowledge.
Q. Dr. Natelson, have you published any papers concerning butadiene?
A. No.
Q. Have you published any papers concerning non-Hodgkin's lymphoma?

A. I'd have to look at my curriculum vitae. I don't know. I've published papers in a number of areas in hematology.
Q. Well, let me hand it to you there (tendering document).
A. Look and see.
Q. Doctor, while you're looking through that, do you have any problem with Mr. Wimberley looking through these piles of documents here?
A. Not at all.
Q. If it interrupts you in any way, just let me know. Okay?
A. Okay.
MR. HYDE: Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
A. Well, the -- One of the papers on my curriculum vitae has to do with chemotherapy studies on Camptothecin, which is an anticancer drug. And this involved studies of patients with a variety of malignancies, including lymphoma. So in a sense that - that paper has something to do with treatment of lymphoma. But there are no articles specifically concerning lymphoma.

(By Mr. Hyde)
Q. Have you published any papers that specifically concern gastric lymphoma?
A. No.
Q. Doctor, do you consider yourself to be a toxicologist?
A. No.
Q. Do you consider yourself to be an epidemiologist?
A. No.
Q. Do you consider yourself to be an industrial hygienist?
A. No.
Q. And you have a medical degree from what university?
A. Baylor Medical School.
Q. And what year did you graduate?
A. 1966.
Q. And I suppose you did internships or residencies, correct?
A. Yes.
Q. In what specific areas?
A. In internal medicine.
Q. And where?
A. At the Baylor-affiliated hospitals, which

consist of the Ben Taub Hospital, the Veterans Hospital, and Methodist Hospital.
Q. And out of your work with internal medicine, I take it that somehow you landed in hematology.
A. Yes.
Q. In medical school did you study hematology?
A. Yes.
$Q. What textbooks did you use concerning internal medicine?
A. Well, at that time the most commonly used textbooks were either Cecil and Loeb, which was a common internal medicine text, or Harrison. Those were probably the two widest texts in use at that time.
Q. And I take it that you still have those books somewhere in your files?
A. Well, newer editions of them. The original ones are long gone.
(AT THIS TIME NATELSON EXHIBIT NOS. 3 AND 4 WERE MARKED FOR IDENTIFICATION PURPOSES AND AER FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
Q. Doctor, I've had marked as Exhibit 3 A Textbook Of Medicine edited by Cecil and Loeb. And I've had specific portions of the 1953 reprint copied and

included in Exhibit 3. And I've also had marked as
Exhibit 4 Principles Of Internal Medicine,
Editor-in-Chief Dr. Harrison, a 1952 reprint,
specifically the section dealing with chemical agents.
And I'll give you a chance to look at those if you want
to go off the record. Would that be all right?
A. Oh, certainly.
(AT THIS TIME THERE WAS AN
OFF-THE-RECORD DISCUSSION, AFTER WHICH THE
PROCEEDINGS RESUMED AS FOLLOWS:)
A. Okay.
Q. Doctor, looking at Exhibit 3, which is Cecil
and Loeb's book on internal medicine, on Page 511
there's a section on benzene poisoning, correct?
A. Yes.
Q. And it states, "Benzene (benzol, C6H6, to be
distinguished from petroleum benzine) is, with
disturbing frequency, the cause of serious and even
fatal poisoning." That's a correct reading, isn't it?
A. That's correct.
Q. I take it that when you were at medical school,
you learned that benzene was capable of causing serious
and even fatal conditions.
A. Yes.
Q. And that would have been something that you

would have learned in the 1960s time period, correct?
A. Yes.
Q. It further states, "Chronic poisoning -- And I'm reading right here on the right-hand column - "Chronic poisoning or subacute poisoning is much more frequent and is manifested usually after days or months of exposure to benzene." That's a correct reading?
A. Yes.
Q. And that's something you knew while you were in medical school, correct?
A. Yes.
Q. It further states -- And I'm skipping a few lines -- "Abdominal pain and gastro-intestinal irritation with nausea and vomiting are common:" Is that a correct reading?
A. Yes.
Q. And that's something you were aware of when you were in medical school, correct?
A. Yes.
Q. It further states, "The blood picture -- going down to the next paragraph, "The blood picture may vary considerably from the so-called classical changes. Leukopenia, neutropenia, thrombocytopenia, hypochromia, eosinophilia, and anemia may or may not be present. The bone marrow may be affected, or it may be aplastic" --

Excuse me. "The bone marrow may not be affected, or it may be aplastic, hyperplastic or leukemic." Is that correct?
A. Correct.
Q. And that's information you knew when you were in medical school -
A. Yes.
Q. -- correct? It further states in the next midsection under Diagnosis, the last sentence on Page 511, "A history of ben -- A history of exposure to benzol should be the determining factor in the diagnosis of benzene poisoning." Is that a correct reading?
A. Yes.
Q. And you knew that when you were in law school; is that -- Excuse me. You knew that when you were in medical school, correct?
A. Yes.
Q. Thank God you didn't go to law school. Let's turn over here to Exhibit 4, Doctor, which is "Principles of Internal Medicine," edited by Dr. Harrison. Again, that was a book you used in medical school, correct?
MR. FAULK: Well, objection. Not this particular edition, I think, would be more fair.

Q. It is a book that you used in medical school -- maybe not this edition but you used Harrison, correct?
MR. FAULK: And I'm going to object to the question again still because the question necessarily infers or implies that the text remained the same throughout all the editions. If you can give him a text of an edition that he used in medical school, you can then examine that. But I think it's unfair to characterize it any other way.
Q. Let's phrase it this way, Doctor.
A. Yes.
Q. One of the books you used in medical school concerning internal medicine during the 1960s was Harrison's book on internal medicine, true?
A. No. That's actually false. Cecil and Loeb. I didn't know Harrison until I was out of medical school.
Q. Were you in your residency or internship when you owned the Principles Of Internal Medicine book by Harrison?
A. I was probably in my residency.
Q. And that would have been, again, in the late 1960s?

A. Yes.
Q. Now, from this 1952 edition of Harrison's Principles of Internal Medicine book, on Page 731 there's a section concerning chemical agents. Do you see that?
A. Yes.
Q. And it's authored by Dr. Marshall Clinton. Do you see that?
A. Well, it doesn't give his title as to his degree. It just says "Marshall Clinton." I don't know
Q. Did you know that Dr. Marshall Clinton was at one time affiliated with Mobil Oil?
A. No.
Q. Did you know that Dr. Marshall Clinton was the physician who compiled the information for the 1948 American Petroleum Institute toxicological review for benzene?
A. No.
Q. On Page 738 of this edition of Principles of Internal Medicine by Harrison, it states under the section for benzene poisoning, "Benzene may in addition produce serious, even fatal, delayed poisoning following repeated exposure to very low concentrations which may escape sensory detection." That's a correct reading,

correct?
A. Yes.
Q. As we sit here today, Doctor, do you know what the odor threshold is for benzene?
A. I don't recall it. I can speculate. I've seen the number, but I don't recall the exact number. It's in some of my references.
Q. Doctor, you have had patients who have been exposed to benzene, correct?
A. Yes.
Q. And you have on occasion attributed benzene exposure as a cause of their blood disorder, correct?
A. Yes.
Q. And I think you've testified in the past that you recall one case where an individual was diagnosed with myelodysplastic syndrome and had a history of exposure to benzene, correct?
A. Among other chemicals, yes.
Q. And I think you also testified that one of your patients developed myelofibrosis and had .a history of exposure to benzene, correct?
A. Yes.
Q. At the time when you attributed benzene exposure as a cause of either the myelodysplasia or myelofibrosis, did you attempt to determine the level of

benzene exposure that these individuals had
A. Well, in the case of the person who had myelodysplasia or erythroleukemia, I had his plant records, which showed numerous drops in his white blood cell count, indicating that he'd had enough exposure to make the blood counts abnormal and then allow them to recover when he was taken out of the atmosphere. I did not have any data as to what levels of benzene were measured at that time.
In the case of the other fellow I think I mentioned, I did not have any levels of benzene: but we had history that he'd been made sick from benzene exposure.
Q. Some kind of acute -
A. Acute -
Q. -- illness?
A. -- illnesses, yes.
Q. Certainly, if an individual could smell benzene in the air, you as a physician would recognize that that individual may be overexposed to benzene, true?
A. Probably, yes.
Q. Further, on Page 738 on the right-hand column under Chronic Benzene Poisoning, it states, "Chronic benzene poisoning results from repeated or continuous exposure to relatively low concentrations of benzene

vapor. The level and degree of exposure necessary to produce poisoning apparently vary widely." Do you agree with that statement, sir?
A. It depends what kind of poisoning you're talking about.
Q. Well, they're talking about chronic poisoning now.
A. Well, but, I mean, what -- what result of chronic poisoning? Leukemia? Aplastic anemia? Myelofibrosis? I mean, what -- what exactly are you referring to here?
Q. As a general proposition, do you agree with that statement?
A. As a general proposition, I think that we believe now that very high levels of benzene exposure, probably in the range of 1 to 200 parts per million over time, can -- can produce leukemia; but very low levels probably do not.
Q. Doctor, what study can you point me to that would support your opinion that exposures at 1 to 200 parts per million are necessary in order to cause a hematological disorder or blood disorder such as leukemia?
MR. FAULK: I'm going to object to the question because his answer was

specifically limited to leukemia. I think your question's broader. He hasn't expressed an opinion in regard to some of these other -
Q. You may answer, Doctor.
A. In the case of acute leukemia, Dr. Wong has written a number of epidemiologic papers. There have been many others. There's papers by Paxton dealing with the exposure at the pliofilm plants, and I would have in my files a number of papers that would indicate that leukemia is really caused by -- by high total exposures: in other words, high exposures over short periods of time or low exposures over very long periods of time so that you accumulate a large amount of benzene part per million years, so to speak.
Q. So Dr. Wong is someone who you consider authoritative in the field of benzene-related epidemiology; is that correct?
A. He's published many papers in the area of epidemiology relating to leukemia. And as to whether he's authoritative, I don't know that I look at anybody as authoritative. But he's written a lot of papers in the area.
Q. Have you ever had an opportunity to speak with Dr. Wong?

A. No.
Q. Have you seen Dr. Wong's report in this case?
A. Yes.
Q. Have you been provided with any other statements made by Dr. Wong – Strike that. Have you been made -- Strike that. Has Mr. Faulk provided to you the statements that Dr. Wong made to OSHA at the hearings concerning the benzene standard back in the 1984 time period?
A. Not to my knowledge.
Q. Have you ever reviewed the OSHA benzene standard, specifically the preamble, that concerns benzene and cancer?
A. I probably have at some time in the past. I -- It hasn't been recently.
Q. Do you recall any statements attributed to Dr. Wong in the OSHA benzene standard, specifically the preamble?
A. No.
Q. So that I'm correct, benzene may cause leukemia when there's a high total exposure -- And I'm not going to misquote you in any way. So, you know, if I do, I would like for you to correct me. But I want to make sure I understand this.
MR. FAULK: Well, I am going to object

that that mischaracterizes his testimony as to a general category of leukemia.
MR. HYDE: I wasn't finished.
MR. FAULK: Okay.
(By Mr. Hyde)
Q. But as it relates to, I think you said, acute myelogenous leukemia and benzene exposure, you look at exposure in two different ways, one being a high level of exposure for either a long or short period of time or lower exposure levels over a long period of time. And those would be factors that you would be considering as to whether or not an acute myelogenous leukemia was caused from benzene exposure, correct?
A. Those would be in part what I would consider, yes.
Q. And I take it that -- Well, is it your position that -- in order for you to attribute benzene exposure as a cause of acute myelogenous leukemia, is there any requirement of any precursor conditions such as aplastic anemia or myelodysplastic syndrome or some other type of blood dyscrasia?
A. No. In other words, the leukemia caused by benzene may have a myelodysplastic phase but doesn't necessarily have a myelodysplastic phase.
Q. In the 1953 edition -- Strike that. In the

1952 edition reprint of Harrison's book on internal medicine, on Page 738 it states, "Inasmuch as the body develops no tolerance to benzene, it is generally considered that the only absolutely safe concentration for benzene is zero." That's a correct reading, isn't it?
A. I'm not following where you are here.
MR. FAULK: Which page are you on, Keith?
MR. HYDE: 738 -
THE WITNESS: He said 738.
MR. HYDE: -- on the right-hand side.
(By Mr. Hyde)
Q. It says, "The American Standards Association" on top of the paragraph, about halfway down in the paragraph. See, I've got it marked here, Doctor (indicating). Look.
A. Yes. I think I see.
Q. It states -- And so the question's clear, on Page 738 of Harrison's book on internal medicine, specifically the 1952 edition, it states, "Inasmuch as the body develops no tolerance to benzene, it is generally considered that the only absolutely safe concentration for benzene is zero." That's a correct reading, isn't it?

A. Yes.
Q. Have you heard that before today?
A. I don't recall that -- having heard that before.
Q. On .the next page, Page 739, under Chronic Benzene Poisoning on the left-hand side, it states, "Chronic benzene poisoning is more frequent, more insidious, and usually more serious than acute benzene poisoning." That's a correct reading, isn't it?
A. Again, I'm not certain where you are.
MR. FAULK: Which paragraph, Keith?
Q. (Indicating.)
A. Oh, the other side. That's what it says. "Chronic benzene poisoning is more frequent, more insidious, and usually more serious than acute benzene poisoning."
Q. Dr. Natelson, you certainly are aware that the diseases or conditions associated with benzene exposure are serious and life-threatening.
A. Benzene exposure at certain levels can result in life-threatening illnesses.
Q. Including death?
A. Including death.
Q. And exposures to benzene may pose a substantial risk of harm to the worker exposed to benzene, correct?

A. Depending on the levels exposed to.
Q. Have you ever seen any risk assessment data concerning worker exposure to benzene and the risk of harm associated with those benzene exposures?
A. Well, I've seen epidemiologic articles talking about -- as the ones we've commented from Dr. Wong and others, about what chronic-type exposures have caused acute myeloplastic leukemia.
MR. HYDE: Let me -- I need to object.
(By Mr. Hyde)
Q. I guess I want to be very clear. I'm not talking about an epidemiological study. I'm talking about a risk assessment based on certain risk assessment principles. Do you recall reading any study dealing with risk assessment and exposure to benzene?
A. You'd have to -- I may have. You'd have to show me a specific article you're talking about.
Q. As we sit here today, does that specifically ring a bell that you've read a study concerning risk assessment and benzene?
A. No, not particular.
MR. HYDE: Off the record for a second.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE

PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Doctor, what is your understanding of when chronic benzene poisoning was first reported in the medical literature?
A. Well, you've shown me articles written here in the 1950s that talk about it. I believe we knew aplastic anemia could be caused from benzene much earlier than that. I don't know the exact initial publication on benzene poisoning.
Q. Have you ever used a textbook by Dr. Wintrobe entitled, "Clinical Hematology"?
A. Yes.
(AT THIS TIME NATELSON EXHIBIT NO. 5 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
Q. Doctor, I've had marked as Exhibit 5, Dr. Wintrobe's book on Clinical Hematology dated 1942. Do you see that, sir?
A. Yes.
Q. And there's a section from that textbook on Page 394 concerning aplastic anemia. Do you see that section?

A. Yes.
Q. On this -
MR. FAULK: I'm going to object to the line of questioning because it lacks a foundation that this is the edition that the doctor has referred to and used.
Q. In the 1942 edition of Wintrobe's -- Dr. Wintrobe's book on clinical hematology, there's a section concerning benzol, correct?
A. Yes.
Q. And, of course, you understand benzol to be benzene.
A. Yes.
Q. And it states on Page 395, "Benzene has been known as a cause of fatal aplastic anemia since Santesson's description (1897) of 4 cases in workers in a bicycle tire factory." That's correct, isn't it?
A. Yes.
Q. Were you aware that cases of aplastic anemia were first reported in 1897 involving workers exposed to benzene?
A. No.
Q. What textbooks do you now use, Doctor, in your work as a hematologist?
A. Well, I have Wintrobe's textbook in my office.

I also have Williams' textbook of hematology. I have another one with a red cover. I'm blanking out on the lead author.
Q. Would that be Dr. Hoffman or Dr. Jandel?
A. No. Dr. Hoffman's is one. But when you say use, the use of textbooks has become less and less useful, you might say, to a practicing physician because of the fact that we normally use the medical literature, which is more up to date: and textbooks are typically several years behind the medical literature. And so periodically we'll buy a new textbook, but the amount of time that we use it is on rare occasions as a reference matter.
Q. The textbooks that you have available to you in your office or in your practice include Dr. Williams' book on hematology, Dr. Wintrobe's book on hematology, and Dr. Hoffman's book on hematology: is that correct?
A. Correct.
Q. And on occasion you will use these books as references in your work as a hematologist; is that correct?
A. Correct.
Q. And these books you have found to be authoritative in the field of hematology: is that correct?

A. No. I wouldn't recognize these books as authoritative. Many times there are errors in them. And -- But they are useful, nevertheless.
Q. Now, are you aware as to the classification of benzene by OSHA whether or not benzene is or is not a carcinogen?
A. Benzene is considered a carcinogen.
Q. And you're familiar with the International Agency for Research on Cancer, otherwise known as IARC, correct?
A. Yes.
Q. And how does IARC classify benzene as it relates to its cancer-causing properties?
A. It's considered to be a carcinogen.
Q. And I believe it's a class 1 human carcinogen; is that correct?
A. If you say so.
Q. Well, I mean
A. It's a carcinogen, yeah.
Q. Okay. And certainly you have no dispute with OSHA or IARC concerning their classification of benzene as a carcinogen, correct?
A. No, none whatsoever.
Q. I take it that you know that benzene is harmful to the bone marrow?

A. Can be.
Q. Benzene may be harmful to the DNA?
A. Yes, it can be.
Q. Why is that important, Doctor?
A. Well, the metabolites of benzene are what we call topoisomerase 2 inhibitors. The topoisomerase system has to do with unfolding of DNA so the cells can divide. And there are two forms of topoisomerase: topoisomerase 1 and 2. And benzene, like many of our chemotherapy drugs, is a topoisomerase 2 inhibitor or its metabolites are topoisomerase 2 inhibitors. When you have drugs that are topoisomerase 2 inhibitors, you have drugs that have the potential for causing leukemia -- acute leukemia.
Q. Now, the DNA that may be harmed as a result of benzene exposure, that DNA is located in the bone marrow; is that correct?
A. Well, DNA is located in every -- most every cell in the body.
Q. But of concern, as it relates to benzene, typically has been that benzene exposure may harm the DNA of the cells that are located in the bone marrow. Is that a fair statement?
A. That would be a concern, yes.
Q. Would there be other concerns as well?

A. Well, I mean, presumably any cell that can be damaged by inhibition of the DNA replication systems can be damaging to the organism.
Q. Now, I'm not going to go in great detail because I really can't. I'm aware of the totipotential stem cell that's located in the bone marrow, correct?
A. There are stem cells in the bone marrow, yes.
Q. And what is the importance of the stem cell in the bone marrow?
A. Well, stem cells are important because they give rise to the mature cells that circulate, but they also have the capacity for reproducing themselves so that you don't run out of gas; in other words, that you don't -- You don't want all of your stem cells to go into circulating cells that will die off. You want some of them to remain and repopulate the bone marrow.
Q. So from the stem cells there go different lineages of cells that circulate in the blood, correct?
A. Well, as -- as stem cells mature, they go down certain pathways and eventually reach a point where they are committed to go a particular way. Early in their development, they may give rise to different types of cells.
Q. But eventually --
A. Eventually a stem cell leads to a final cell

that is a dead end that eventually is going to die.
Q. And those dead end cells are one of several groups, T-cells, B-cells -
A. Red blood cells, white blood cells of various kinds, yes.
Q. With all these questions that I'm fixing to ask you, because .I can ask them in about like one minute, I'm going to ask you about some conditions - hematological conditions or oncology-type cancers. We'll just call them that. I'm going to ask you whether or not you recognize the condition as being associated with exposure to benzene. Now, I know that -- I assume that you would answer the question with sufficient exposure at sufficient duration, you know, those types of questions. I suppose the best way is that I should just go ahead and include that in my question. But I'll try to make this as fast as I can.
With sufficient exposure to benzene, you recognize an association with benzene in myelodysplastic syndrome: is that correct?
A. That is correct.
Q. And you recognize benzene as a cause of myelodysplastic syndrome.
A. Yes.
Q. With sufficient exposure you recognize that

benzene is a cause of acute myelogenous leukemia.
A. Yes.
Q. With sufficient exposure you recognize that benzene is a cause of aplastic anemia.
A. Yes.
Q. With sufficient exposure do you recognize an association with benzene and acute lymphocytic leukemia?
A. No.
Q. Do you recognize an association between exposure to benzene and chronic myelogenous leukemia?
A. No.
MR. FAULK: You didn't -- Well, okay. That's fine. You didn't preface it with sufficient exposure.
MR. HYDE: Yeah. Well, if I thought that he would answer it differently, I would maybe ask it that way.
MR. FAULK: Need to be consistent, though.
(By Mr. Hyde)
Q. Do you recognize an association between benzene and chronic lymphocytic leukemia?
A. No.
Q. With sufficient exposure to benzene, do you recognize benzene as a cause of myelofibrosis?

A. Yes.
Q. With sufficient exposure do you recognize benzene as a cause of thrombocytopenia?
A. Yes.
Q. With sufficient exposure do you recognize benzene as a cause of leukopenia?
A. Yes.
Q. Doctor, have you read any documents that suggest that exposure to benzene is a cause of non-Hodgkin's lymphoma?
MR. FAULK: I want to object because the term "suggest" is vague.
A. Well, there are many suggestions as to the cause of non-Hodgkin's lymphoma: and many papers have been written on the subject. And certain papers, particularly epidemiologic studies, have suggested that chemicals, including benzene, might be a cause of non-Hodgkin's lymphoma. And I have seen such studies, yes.
Q. Now, in the United States there are two sources of information that industrial hygienists go to as it concerns exposure levels -- or limits for workers exposure -- exposed to certain chemicals, those being OSHA, Occupational Safety and Health Administration, and the American Conference of Governmental Industrial

Hygienists. Are you aware of those two organizations?
A. Yes.
MR. FAULK:. I'm going to object to the question because his awareness of the organizations is apparently the question. And he testified about a number of things that -- I think the question's misleading and bad form.
A. I have heard of both these organizations.
Q. And I understand that you're not an industrial hygienist and certainly don't mean to represent by that question that you are an industrial hygienist or that you hold yourself out to be a specialist in industrial hygiene. Do you understand that?
A. Correct.
MR. HYDE: Mark that for me, please.
(AT THIS TIME NATELSON EXHIBIT NO. 6 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Dr. Natelson, I've had marked as Exhibit 6 the Notice Of Intended Changes For Benzene from the Applied Occupational Environmental Hygiene magazine, July of

1990, which is the magazine of the American Conference of Governmental Industrial Hygienists. And I'm going to ask if you've ever seen this document before.
A. If I have, I don't recognize it.
Q. Let me see it, please.
A. (Tendering document.)
Q. On Page 459 on Exhibit 6 on the right-hand column, it states -- I'll read it to you -- "Prolonged cumulative exposures were judged more important for human benzene carcinogenicity than maximum peak exposures, and the authors concluded that there was a significant association between occupational benzene exposure and the occurrence of leukemia, all lymphopoietic cancers, and non-Hodgkin's lymphopoietic cancers." Have you ever heard that before today?
A. Well, as I mentioned, I've seen epidemiologic studies that suggest that non-Hodgkin's lymphoma can be caused by benzene.
Q. Now, I'm going to have marked as the next exhibit -
MR. FAULK: I Object to that answer as being nonresponsive.
MR. HYDE: What number are we on?
COURT REPORTER: 7.
MR. HYDE: 7. Go ahead and mark this,

please.
(AT THIS TIME NATELSON EXHIBIT NO. 7
WAS MARKED FOR IDENTIFICATION PURPOSES AND
IS FULLY DESCRIBED IN THE "EXHIBIT INDEX"
HEREIN. SAME WILL BE FOUND AT THE
CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Doctor, do you recall seeing any studies from Dow Chemical concerning workers exposed to benzene who had chromosomal aberrations attributed to benzene exposure at levels of exposure as low as 5 parts per million? Have you ever seen such a study?
A. I don't recall.
Q. Now, earlier you talked about a Dr. Wong and some of the research that you've read from Dr. Wong. And in Exhibit 7, which is the OSHA regulation for benzene dated September 11th, 1987, on Page 34,475 in the middle of the page, there's a quote concerning Dr. Wong. And it states, "As a result of the analyses, Wong, et al., concluded that there was a significant association between occupational exposure to benzene and leukemia, all lymphopoietic cancers, as well as non-Hodgkin's lymphopoietic cancer." That's a correct reading, isn't it?
A. Yes.

MR. FAULK: Can we get the question read back? I want to -- Are you saying this -- Well, just a second. Are you saying this is a quote from Dr. Wong or a quote from the standard?
MR. HYDE: OSHA standard.
MR. FAULK: Okay. Fine.
(By Mr. Hyde)
Q. Now, and that is a similar quote to what was in the ACGIH Notice Of Intended Change document which has been marked Exhibit 6, correct?
A. Yes.
(AT THIS TIME NATELSON EXHIBIT N0. 8 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
Q. Now, Exhibit 8 is a document I received from Dr. Dement at Duke University. Do you know Dr. Dement?
A. No.
Q. Have you ever heard of Dr. Dement?
A. No.
Q. This is a study that Dr. Dement sent me that is entitled, "Proportional Mortality Ratio (PMR) Analysis of Crown Zellerbach Death Certificates, 1981 through

1985, Final Report," dated June 2nd, 1987. And one of the authors of that document was Dr. Otto Wong, while he, was with Environmental Health Associates. I'm going to ask if you have ever seen this document before today.
A. No.
Q. Doctor, I'm going to turn to Page 9 in a second. If I can, I'll -
A. I have mine.
Q. On Page 9 in the second full paragraph, the paragraph starts off, "For lymphopoietic cancer and diseases." I'm going to move on later on into the paragraph. And it states, "There has been at least two previous reports of excess lymphopoietic cancer in pulp and paper workers. (Robinson 1983, Milham 1984). These disease are usually associated with solvents, especially benzene." And my question is: Have you ever seen this document where Dr. Wong states that lympho -- lympho - I can't say it -- lymphopoietic cancers are usually those types of diseases associated with solvents, especially benzene?
A. I have not seen this article or that statement.
Q. Do you disagree with what Dr. Wong said in 1987?
MR. FAULK: I'm going to object that the term "lymphopoietic cancer" is not a

sufficiently specific category to answer
any questions about it.
(By Mr. Hyde)
Q. You may answer, Doctor.
A. You know, I would -- I would agree lymph --
This Dr. Wong presumably is an epidemiologist, and
I'd -- I'd like to know what he includes under that
category. That's -,- That could include a number of
things.
Q. I think he states on Page 9, "The disease
category for lymphopoietic cancer includes both the
lymphomas and leukemias." That's a correct reading,
isn't it?
A. That's correct.
Q. Do you have any disagreement with that?
A. Well, I think that to lump leukemia in with
lymphoma, you've got apples and oranges there. And so
obviously he's putting apples and oranges together.
That's what he's saying.
Q. Doctor, have you -- Well, never mind.
MR. HYDE: Let's go ahead and mark it.
(AT THIS TIME NATELSON EXHIBIT NO. 9
WAS MARKED FOR IDENTIFICATION PURPOSES AND
IS FULLY DESCRIBED IN THE "EXHIBIT INDEX"
HEREIN. SAME WILL BE FOUND AT THE

CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Am I correct then, Doctor, that you would disagree with the inclusion of lymphomas and leukemias as lymphopoietic cancer -
MR. FAULK: Well, I'm going to object -
Q. -- such that -- such as what Dr. Wong included in his report in June of 1987? Do you disagree with that category?
MR. FAULK: Well, I'm going to -- I'm going to object to the question unless you specify whether you're asking him as an epidemiologist or as a clinician. I think that he's testified that they're apples and oranges. And I think the question is misleading.
Q. As a physician, Doctor.
A. As a physician, if you put two different diseases in the same category and one disease has a high incidence of something related to a particular chemical and you lump the two together, you're dragging one in with the other. In other words, you have to look at these things separately. If you have a large number of - leukemia cases and no lymphoma cases and you put your

lymphomas in with your leukemias, everything might look elevated: but it may have nothing to do about lymphoma.
Q. It might be just the opposite. You might have a lot of lymphomas and no leukemias and have the same elevation but it be attributable to the lymphomas, correct?
A. Correct.
Q. And as it relates to -- Well, strike that,. Dr. Natelson, I'm going to show you Exhibit 9. And I'm going to ask you if you have ever seen this document before.
MR. FAULK: Dr. Natelson -- Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS .RESUMED AS FOLLOWS:)
MR. FAULK: Back on the record.
A. I may have seen this article. I would think I probably have seen this article at some time.
Q. I take it that you also have treated patients with lung cancer?
A. On rare occasion. I don't see a lot of patients with solid tumors unless they have some unusual circumstance.
Q. But you as a physician -- Strike that. Do you

recognize that cigarette smoking causes lung cancer?
A. Yes.
Q. And do you know what the SMRs or standard mortality ratios are as it concerns deaths from lung cancer amongst cigarette smokers?
A. No.
Q. Is there any particular level of an SMR that you as a physician use when you want to establish whether or not a certain condition or cancer may be caused by some bacteria or environmental agent like a chemical?
A. Well, we have recognized that epidemiologic studies have many problems because of inaccurate death certificates -- if their based on death certificates, inaccurate data. And so if you want to be certain that an epidemiologic or a mortality rate is significant relating a chemical to a particular disease, what you'd like to see are consistent studies; in other words, that several people conduct the same kind of study and find the same basic number. And you'd like to see that number at least three times what -- what the expected would be.
Q. But I take it that also you take into consideration the power of a study when looking for a cause of a certain condition or illness, correct?

A. Well, that's one thing that you take into consideration. But if you have ten bad studies and put them together, now you've got one big bad study. So, I mean, it depends on the particular studies you're looking at.
Q. Well, for instance, if you had a well-run, well-designed study that had a million people in it and there was an SMR of 1.1, that may be statistically significant, correct?
A. It might to an epidemiologist.
Q. In other words, if you look at a million people and you expect a certain condition in 100,000 but actually you see it in 110,000, it may be significant that there are 10,000 more people with this condition or cancer than what was expected. That might be statistically significant, correct?
MR. FAULK: I'm going to object until you lay a foundation that he's qualified to express opinions as an epidemiologist.
Q. As a physician, Doctor.
A. As a physician, if you told me that something was 1.1 higher than normal, I'd say it's utter nonsense.
Q. Now, if in the population of this million people only 50,000 had exposure to a specific etiologic agent and there were 10,000 more deaths amongst those

50,000, that may be significant to you, correct -
MR. FAULK: Same objection.
Q. -- as a physician?
A. Now, let's see. You have to-run that one by again. You've got 50,000 people now -
Q. Within the million-person cohort.
A. . All right.
Q. But those 50,000 actually had exposure to some agent. I'm not going to say whether it's chemical or whatever. But within those 50,000, we had 10,000 diseases or deaths. That may be significant to you.
A. If you have 10,000 people getting an illness in a group of only 50,000, that would seem very impressive.',
Q. Now, first of all, let's go back to this study here. Exhibit 9 --
MR. FAULK: You want to refresh his recollection as to what it is?
MR. HYDE: Yes, sir, I will.
(By Mr. Hyde)
Q. It's entitled, "Benzene and the Dose-Related Incidence of Hematologic Neoplasms in China." The first investigator is Richard B. Hayes. And you said you may have seen this document before, correct?
A. Yes.
Q. One of the conclusions from Exhibit 9, the

report by Hayes, is that workers with ten or more years of benzene exposure had a relative risk of developing non-Hodgkin's lymphoma of 4.2, 95 percent confidence interval 1.1 through 15.9. Have you ever seen that specific conclusion before, Doctor?
A. Well, I think I've seen this paper. So I think I would have seen that conclusion.
Q. Certainly when -- Because when I asked you earlier, you indicated you like to see consistent studies with three times odds ratio or SMRs, whatever, that that would be significant to you, correct?
A. Yes.
Q. Certainly when you see an SMR relative risk of 4.2, that certainly rings of significance to you, doesn't it?
MR. FAULK: I'm going to object because -
Q. As a physician.
MR. FAULK: I'm still going to object because your previous question was prefaced with consistency. And you haven't laid a foundation showing that this study is consistent with anything.
A. Well, it depends, again, on the type of study. If the study is one that I considered well done and came

up with a result of four times the incidence, I would think that would be suggestive. I would like to see other studies show the same thing; but, again, it would depend on the quality of the study.
Q., Do you have any evidence that the study which has been marked as Exhibit 9, the study by Dr. Hayes, that this study is not a competently designed and carried out study?
A. Yes.
Q. What evidence do you have, sir?
A. I just visited in China, and I was there for two weeks at several of the universities lecturing and saw what kind of medical care they get, what kind of universities they have, and what kind of recordkeeping they have. And I would -- wouldn't believe a piece -- a speck of fly on that paper.
Q. So the basis of your criticisms of this report by Dr. Hayes is your recent visit to China and your knowledge of their medical system, correct?
A. In part. Dr. Wong points out other features about the fact that, for example, the diagnosis of lymphoma, I think he mentioned, could only be verified 60 percent of the time when the slides were looked at. And I would -- I'm surprised it's that good after seeing what I saw. So I would think that the data collection

here would be extremely invalid. Plus, the conditions there are so unique that they would probably have no bearing on what we see here in the United States. The level of pollution in these cities there is staggering. We don't have anything like it comparable in the United States. So I think whatever conclusions they would might find in China would have very little bearing about what happens in the United States.
Q. What information or evidence do you have as it concerns ambient benzene levels in the environment in China as compared to the levels of benzene present in Jefferson County, Texas?
A. I have no specific information about benzene levels there versus Jefferson County.
Q. You understand that the last day that Mr. Barrett worked as a pipe fitter he was on a benzene tower at the Mobil chemical plant in Beaumont and that that tower caught on fire, and Mr. Barrett spent over 50 days in the hospital for his wounds. Did you know that?
A. Yes.
Q. And as we sit here today, you have no idea of the level of benzene Mr. Barrett was exposed to before and during that fire on the benzene tower at Mobil, correct?
A. That is correct.

(AT THIS TIME NATELSON EXHIBIT NO. 10
WAS MARKED FOR IDENTIFICATION PURPOSES AND
IS FULLY DESCRIBED IN THE "EXHIBIT INDEX"
HEREIN. SAME WILL BE FOUND AT THE
CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Doctor, this is Exhibit 10, which is the Updated Mortality Study of Workers at a Petroleum Refinery in Beaumont, Texas, by Dr. Raabe and others. And I'll represent to you that this is an updated mortality study of the Mobil - Beaumont refinery. And, as I understand it, you've not seen this document: is that correct?
A. That's correct.
Q. May I see it, Doctor?
A. (Tendering document.)
Q. Now, you understand that a pipe fitter is part of maintenance.
A. Yes.
Q. On Table XIII it's entitled, "Selected Cause-Specific Mortality Among Beaumont Males Employed Greater Than 6 Months in Maintenance Craft Jobs by Hire Period." That's a correct reading, isn't it?
A. Yes.
Q. Now, lymphoma, specifically non-Hodgkin's

lymphoma, is included in the category of cancers of other lymphatic tissue. Is that --
MR. FAULK: I'm going to object because you haven't laid a -
Q. -- consistent with your understanding?
MR. FAULK: I'm going to object because you haven't laid a foundation for that.
A. Well, I don't know. It just says "other lymphatic tissue." They don't tell you what that means, whether they've lump -- put chronic lymphocytic leukemia in there, whether Hodgkin's disease is in there, whether) non-Hodgkin's is in there. It doesn't specify what's in there.
Q. Well, we see that leukemia is in a category right above other lymphatic tissue, correct?
A. Okay.
Q. And I'll represent to you that one of the cancers included in cancers of other lymphatic tissue isle non-Hodgkin's lymphoma, and I believe multiple myeloma is also included in that. All right?
A. Okay.
Q. Now, for workers who worked in maintenance greater than six months prior to 1950, there is an SMR of 205 that is statistically significant for workers at

Mobil who died of cancers of other lymphatic tissue; is that correct?
MR. FAULK: I'm going to object because the question's misleading. You prefaced it by only including two causes of death within the other lymphatic tissue when you know that the document specifies numerous others.
MR. HYDE: I don't know that.
(By Mr. Hyde)
Q. But, Doctor, that's a correct SMR, isn't it?
A. I can read the number there. It says 205.
Q. And it says it's statistically significant; is that correct?
A. ..05 level, yes.
Q. And that shows at least a twofold increase in those types of cancers, correct?
MR. FAULK: I'll object because the question's vague. What types of cancer is this? No types of cancer are specified on that page.
Q. Of other lymphatic tissue.
A. It's of whatever other lymphatic tissue is.
Q. And we move over to workers who worked more than six months in maintenance at the Mobil refinery who

were hired after 1950. There is an SMR of 443 under that same category of cancers of other lymphatic tissue; is that correct?
A. Yes.
MR. FAULK: I'm going to object to the question as being vague:
Q. And that would be a fourfold increase over what was expected, correct?
A. Of whatever is in that category.
Q. All right. Well, overall -- I'm looking at male refinery workers with greater than six months in the Beaumont refinery who had employment greater than six months in maintenance craft jobs for all lymphopoietic cancers, specifically cancer of lymphatic tissue -- there was an SMR of 233. That was statistically significant, correct?
MR. FAULK: Again, I object to the question as being vague. The category "other lymphatic tissue" has not been specified to the doctor as to what it includes. And as such the question's misleading.
A. Well, I see the 233; and I see that it's statistically significant at the .O1 level.
Q. Now, on Table -- And just so -- We were

referring -- That was Table XII that that question
referred to. Now we're looking at Table XIV, which is
"Observed and Expected Deaths, SMRs and 95% Confidence
Interval for Hematopoietic Cancers-Among Male
Maintenance Craftworkers by Duration of Employment."
That's a correct reading, isn't it?
A. Yes.
Q. And there's a section for non-Hodgkin's
lymphoma, correct?
A. Yes.
Q. And for workers who worked less than ten years,
there was an SMR of 244; is that correct?
A. Yes.
Q. And if you worked 10 to 29 years, there was an
SMR of 174, correct?
A. Yes.
Q. And that would represent a 74 percent increase
over what was expected, correct?
A. Yes.
Q. And for the total there was an SMR of 168 of
non-Hodgkin's lymphoma amongst maintenance craft workers
at the Mobil - Beaumont refinery; is that correct?
A. Yes.
MR. FAULK: I'm going to object
because the question's misleading because

you're leaving out the confidence intervals, and that's a necessary component for understanding any SMR.
COURT REPORTER: And that's -
MR. FAULK: -- a necessary component for understanding any SMR.
Q. And that would represent a 68 percent increase over what was expected in the category of non-Hodgkin's lymphoma amongst the maintenance workers, correct?
MR. FAULK: I'm going to object. The question's vague because you're not considering the confidence intervals.
Q. You may answer.
A. Well, the 168 is higher than 100.
Q. Sixty-eight percent higher.
A. Yes.
Q. Would it be important to you to know how many of the maintenance workers actually worked in the benzene area for those workers who developed' I non-Hodgkin's lymphoma at the Beaumont refinery? Is that something that you as a hematologist would like to know?
MR. FAULK: I'm going to object because you've not laid a foundation that the doctor is familiar with the document in

any degree other than the pages you've shown him, and I think it's manifestly unfair to ask him questions and ask him to interpret ultimate findings from a document without him demonstrating familiarity with it or even the ability to analyze it as an epidemiologist.
MR. HYDE: So what your objection is -
MR. FAULK: My object speaks for itself.
MR. HYDE: Okay.
(By Mr. Hyde)
Q. Doctor, you may answer the question.
A. Well, the question -- the question would be, what am I being asked? If I'm being asked something that has to do with acute leukemia, I certainly would be interested in knowing what specific chemicals were involved. It really depends on the question I'm being asked.
Q. If you were going to -- Hypothetically speaking, if you as a hematologist were asked to evaluate whether or not benzene played a role in any of the deaths amongst former workers at Mobil from non-Hodgkin's lymphoma, would you want to know how many

of those workers were exposed to benzene and what the extent and duration of their exposure to benzene was?
MR. FAULK: Objection; calls for speculation.
A. Well, all data would be useful. You'd like to know that, plus the duration of exposure, plus the latency period between the onset of the illness and their exposure. There are many things you'd like to know, the type of lymphoma.
MR. FAULK: You're asking -
A. The part of the data you'd be looking for.
MR. FAULK: You're asking this as a physician?
MR. HYDE: Yeah.
MR. FAULK: Because I'm going to again object because you've not laid a foundation that physicians do that. Physicians treat patients. Physicians make conclusions based on particular cases. And I don't think you've laid a proper foundation for your question and move to strike the answer on that basis.
(By Mr. Hyde)
Q. Doctor, have you ever acted as a consultant on behalf of any labor union concerning hematological

questions?
A. No.
Q. Have you ever been requested by Mobil to review their medical program as it relates to hematological questions?
A. No.
Q. Have you been asked by any oil or chemical company to review their medical program as it concerns hematological issues?
A. No.
Q. Do you consider yourself to be an occupational physician?
A. No.
MR. FAULK: Well, I'm going to object to that question as being vague as to what an occupational physician is and move to strike the answer to that.
MR. HYDE: I'm almost through with this one. When we finish this, I propose that we take maybe a five-minute break. Would that be agreeable to you?
THE WITNESS: Sure.
MR. HYDE: And I'll represent to you that I really have about a page or so of notes, and I think it deals more

specifically with your report. Okay?
THE WITNESS: Okay.
(By Mr. Hyde)
Q. Dr. Natelson, would you ever recommend that a worker wash their hands with benzene?
A. No.
Q. Would you recommend that a worker wash their tools with benzene?
A. No.
Q. And you as a hematologist would recognize that as potentially unsafe, correct?
A. Yes.
Q. Were you provided with Mr. Barrett's deposition?
A. I'm sure I was.
Q. Did you read -
A. But if I was, it's in the pile of -- Whatever I've been provided with is right there (indicating).
Q. I'm sorry. Dr. Natelson, do you recall reading Mr. Barrett's deposition?
A. If I -- if I did, you'll have to jog my memory what specifically I might have read.
Q. Do you recall Mr. Barrett discussing the use of benzene to wash hands or tools while he was out at Mobil?

MR. FAULK: Be sure that you've read the document.
A. Yeah. Well, as I say, if the document is in there, I've read it. Now, it may be some weeks ago. And I certainly don't remember that particular statement.
Q. Certainly, you would not recommend -- you would not have recommended that Mr. Barrett do that, correct?
A. No..
Q. Have you been provided with any depositions of any current or former physicians employed by Mobil?
A. No.
Q. Has anyone provided you with any information about the level of benzene exposure to pipe fitters at either the Mobil chemical plant O and A facility or the Mobil refinery in Beaumont?
A. No.
MR. HYDE: Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Have you ever been provided with any benzene exposure records for millwrights or maintenance mechanics at either the Mobil - Beaumont refinery or

chemical plant, specifically the 0 and A plant?
A. No.
Q. Have you been provided with any butadiene exposure monitoring information that concerns the Mobil refinery or Mobil chemical O and A plant?
A. No.
MR. HYDE: Let's take a break.
(AT THIS TIME A BRIEF RECESS WAS TAKEN, AND NATELSON EXHIBIT N0. 11 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION. THE PROCEEDINGS THEREAFTER RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Doctor, I think this is the letter that Mr. Faulk sent you retaining you as an expert in this litigation. Is that correct?
A. Let's just see. Yes. That would appear to be the letter.
Q. And with that letter I take it that you got certain medical records. Is that correct?
A. Yes.
Q. Do you recall specifically which medical records you received?

MR. FAULK: I think --
A. I can say that probably about roughly two-thirds came initially. And then I had -- a little bit more came from time to time. There are some other letters in that pile, indicating when some other things came.
Q. I'm going to have marked as Exhibit 12 some correspondence from a legal assistant at Mr. Faulk's firm to you, enclosing some additional updated medical records.
(AT THIS TIME NATELSON EXHIBIT NO. 12 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
Q. And you received those medical records sometime around July 9th, 1997, correct?
A. Well, the letters and the corresponding documents are a jumble. In other words, this letter doesn't refer to this particular group of documents you have here, I feel certain. I can't tell you which ones came with what. There are numerous letters in there. And because of the way I review them, I don't always keep the form letter: and I don't always put it back in , the same position that it came from. So I can't tell

you exactly which documents came at which points in time.
Q. The fact that the letter, Exhibit 12, was on top of the medical records from St. David's Health Care System, what you're saying is that --
A. That's meaningless.
Q. -- may just be by chance.
A. That's correct.
Q. Did you make any copies of any of these medical records for your own specific use?
A. No. Many of these are duplicates that I was sent at different times.
Q. Did you pull out any excerpts from any of the medical records and make copies of those documents?
A. No.
Q. Do you know why the documents -- I'm going to have this marked 13 based on your testimony then.
(AT THIS TIME NATELSON EXHIBIT N0. 13 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
Q. I've had marked as Exhibit 13 some medical records from the St. David's Health Care System in Austin. And can you tell me approximately when you

received those documents?
A. These -
MR. FAULK: I don't know if they're not duplicated in some other stack either.
A. Well, I'm confident that these documents are duplicated over there in that stack. These documents relate to biopsy reports in general, and they're a collection of biopsy reports from different time periods. And I can't tell you with any certainty when any of that stack came.
Q. Did you pull out these specific records?
A. Did I? No.
Q. Yes, sir. More than likely they were provided to you in this little binder?
A. Correct.
Q. And do you know who collected the medical records from St. David's Health Care System and bound them together as Exhibit 13? Do you know who did that?
A. No.
Q. Did you make any writings on any of the documents contained in Exhibit 13?
A. I think I may have highlighted something. Let me look at that and see. Yes. I think these yellow highlights are -- that I put on one of these pages are mine.

Q. Doctor, do you have any evidence that cigarette smoking is a cause of non-Hodgkin's lymphoma?
A. No.
Q. Doctor, do you have any evidence that radiation exposure is a cause of non-Hodgkin's lymphoma?
A. There are articles that say that it is and articles that say that it doesn't. I would have to say that the evidence is slim and equivocal.
Q. When you have evidence that is slim and equivocal, does this equate in your mind as something equivalent to a risk factor?
A. Well, I ans -- I don't know exactly how to answer that question.
Q. Well, and maybe I'm unclear. I want to clear it up. When we say A causes B, then that's very specific, you know, A causes B. Whereas when we say A is a risk factor for B, does that in your mind as a physician mean there may be studies concerning causation; but me, Dr. Natelson -- "I've not come to the I conclusion that, in fact, A causes B: but I will concede that it may be a risk factor that A causes B"?
A. I think -- Let me see if I can interpret what you've asked me. For example, if I found that farmers had a high incidence of acute leukemia, I would say -- I might say farming is a risk factor for acute leukemia:

but it doesn't necessarily mean farming causes leukemia. It might be the chemicals they use. It my be organisms in the soil. It might be viruses they got from their cattle. But it doesn't necessarily mean being a farmer causes the leukemia, but it might be a risk factor. That's my understanding of what you're asking me.
Q. Exactly, Doctor. As someone who works with radiation, are they at risk of acquiring non-Hodgkin's lymphoma?
MR. FAULK: Object to the question as vague.
Q. In other words, in your mind is radiation exposure a risk factor for non-Hodgkin's lymphoma?
A. No, not in my mind.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION BETWEEN MR. HYDE AND MR. WIMBERLEY, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
MR. HYDE: Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
MR. HYDE: Back on the record.
(By Mr. Hyde)
Q. Do you know of any genetic risk factors

concerning the causation of non-Hodgkin's lymphoma?
A. Yes.. There are risk factors in the causation of non-Hodgkin's lymphoma that are genetic in that we see that illness occasionally in multiple family members. Now, what the specific defect is is uncertain but it clearly is a genetic defect because we see it in multiple -- maybe in siblings or father-daughter. And there's enough of a pattern to say that there clearly is a genetic influence. But specifically what the gene is or what the defect is, we don't know.
We also see circumstances where there are inherited diseases of the immune system where the immunity is extremely reduced. And in these circumstances a person may catch lymphoma; and, again, we don't know if they caught the lymphoma because they were so immunosuppressed that they couldn't handle a particular virus or whether or not it was something the matter with their DNA, let's say, that was innate and related to the immune defect. But the bottom line is we do recognize circumstances in which there are genetic patterns to lymphoma.
Q. Is there any genetic pattern or risk factor specifically concerning Mr. Lester Barrett and his non-Hodgkin's lymphoma?
A. Well, in the information that I have, I don't

have information that other people in his family have lymphoma.
Q. So as we sit here today, you have no evidence that Mr. Barrett, because of his genetic background, was at increased risk of acquiring non-Hodgkin's lymphoma: is that true?
MR. FAULK: One moment. That mischaracterizes his testimony. His. testimony -
MR. HYDE: Well, let him -
MR. FAULK: -- was very specific.
MR. HYDE: Let him answer.
MR. FAULK: Well, I don't want you -
MR. HYDE: Just state your objection.
MR. FAULK: -- to mis -
MR. HYDE: And I'd prefer that you not -
MR. FAULK: Well, I just did.
MR. HYDE: Fine.
(By Mr. Hyde)
Q. Would you answer the question?
A. Run the question by again exactly.
MR. HYDE: Ms. Court Reporter -- And I know Mr. Faulk -
THE WITNESS: Maybe she can read the

question.
MR. HYDE: -- has an objection. Go ahead and put the objection when you read it back.
MR. FAULK: The objection is that the question mischaracterizes his testimony.
(AT THIS TIME THE REQUESTED MATERIAL WAS READ BACK.)
A. Is there any risk factor in his family? Is that what you're asking? Not that I'm aware of.
(By Mr. Hyde)
Q. And I don't want to repeat myself, but I'm going down this outline here, so I'm going to just go down. Have you seen any opinions from anyone concerning the level of exposure that Mr. Lester Barrett had to benzene?
A. I don't recall seeing that.
Q. Have you seen any epidemiological studies concerning the use of solvents and an increased SMR or odds ratio or relative risk concerning non-Hodgkin's lymphoma?
MR. FAULK: I object. The question's vague without a definition of solvents.
A. I've seen -- I may have. I've seen summaries of such studies that suggest an increased risk of

non-Hodgkin's lymphoma.
Q. Doctor, do you recognize the possibility that benzene may cause non-Hodgkin's lymphoma?
A. In my opinion there's no evidence that we have today in 1997 that benzene causes non-Hodgkin's lymphoma. And so with that in mind, I would have to say there's no reason for me to think that benzene caused this man's lymphoma.
MR. HYDE: Let me object.
(By Mr. Hyde)
Q. My question was kind of specific, though broad in some ways. Do you, Dr. Natelson, believe that it is possible -- and not probable but just there's some possibility that benzene may cause non-Hodgkin's lymphoma?
MR. FAULK: I object. The question's vague because non-Hodgkin's lymphoma is not sufficiently specific for him to answer.
Q. You may answer, Doctor.
A. I don't have any reason to think that benzene causes non-Hodgkin's lymphoma..
Q. well, we have gone over the Chinese study -
A. Yes.
Q. -- where there was an SMR of 4.1 for workers exposed to benzene over ten years and the formation of

non-Hodgkin's lymphoma. We've gone over the Mobil epidemiologic study and discusset specifically non-Hodgkin's lymphoma amongst maintenance workers where there was a 68 percent increase, though not statistically significant but still an SMR of 168. And you're aware of other studies concerning SMRs that are elevated for non-Hodgkin's lymphoma amongst workers exposed to either solvents or benzene, correct?
A. Yes.
Q. And my question is not whether you assign benzene as a cause of non-Hodgkin's lymphoma. My question is: Do you recognize that benzene is a potential risk factor for non-Hodgkin's lymphoma?
MR. FAULK: I object to the question as being vague, indefinite, and misleading -
COURT REPORTER: I'm sorry. I need you to speak up.
MR. FAULK: I'm sorry. I object to the question as vague, indefinite, and misleading because the category non-Hodgkin's lymphoma is not a disease.
A. Well, my answer is that there are papers in the literature, as you've pointed out, that suggest that benzene is a risk factor. But when you look on balance

in all of the information, I do not believe that benzene causes non-Hodgkin's lymphoma.
Q. And do you think that it's even a possible cause?
MR. FAULK: I'll object. The question's asked and answered.
A. Well, I don't -- I don't -- I don't see that it would be a possible cause.
Q. Do you agree that there is a need for additional study with respect to benzene and whether or not benzene exposure is associated -- or a cause of non-Hodgkin's lymphoma?
MR. FAULK: Again object to the vague category non-Hodgkin's lymphoma.
A. Well, I think that basically the benzene issue is chasing your tail. In other words, you have a situation where benzene exposure is going down and has been going down for many years, where the diseases that we associate with benzene, such as aplastic anemia and acute leukemia, are virtually nonexistent. And you have a situation where lymphoma is increasing -- despite this the lymphoma is going the opposite direction and increasing. So to me if someone wants to put energy into epidemiologic studies, it's not to worry about whether benzene causes non-Hodgkin's lymphoma but to

look at other things. I think the benzene question has been answered.
MR. HYDE: I probably need to object to responsiveness.
THE WITNESS: All right.
(By Mr Hyde)
Q. Do you have any evidence as to the diet that Mr. Barrett had prior to his diagnosis
A. No.
Q. -- of non-Hodgkin's lymphoma?
A. No.
Q. Do you know whether Mr. Barrett had anything but an average intake of salt?
A. I have no idea what his salt intake was.
Q. Did you see any evidence that Mr. Lester Barrett had a history of gastritis?
A. Well, he had dyspepsia, which certainly could be gastritis. I believe that led to a gallbladder operation. Isn't that right? I'd have to look again at my comments, if we have them, about his history.
Q. They're here somewhere, Doctor.
MR. FAULK: Well, that's -- If you need to review it, let's --
MR. HYDE: Yeah.
MR. FAULK: -- just pull it out. It

can be -
A. Let's just look and find that letter and see just what I said about his history.
MR. FAULK: I think it's the second exhibit.
Q. Take your time, Doctor.
A. Yes. In other words, he had a laparoscopic cholecystectomy because of abdominal symptoms; and gastritis may or may not produce abdominal symptoms. Some people have a lot of abdominal symptoms from severe gastritis. In other people it's almost an asymptomatic condition. But he had the potential to have symptoms from it because someone thought enough of his abdominal pain to take out his gallbladder.
MR. HYDE: I'm sorry. I need to object to the responsiveness.
(By Mr. Hyde)
Q. Have you seen any document in the medical records that states Mr. Barrett had a history of gastritis --
MR. FAULK: I'm going to object because I think -
Q. -- that specific diagnosis?
MR. FAULK: Okay. I'm going to object. I think the question is vague

because you're not -- the question doesn't -- Are you talking about the history? Are you talking about any document, including biopsies, gastrectomy, or anything like that?
MR. HYDE: Any document.
A. Yes.
(By Mr. Hyde)
Q. Other than your report.
A. Yes. Certainly, he's -- we have here somewhere these various biopsy reports. And I believe his initial biopsy report showed inflammation in the stomach.
Q. Okay. Would you show me those? I think they're in front of you.
A. Let's find that someplace. Let's see what we've got here. Let's just see.
Q. And what I'm looking for is a document that shows a history of gastritis.
A. Okay. Well, in the -- even the biopsy that -- from the surgery -- Let's see where we are here. This is a biopsy done on 8/11/94, where we talk about background of inflammatory cells such as eosinophils and neutrophils. We have a background of inflammation in this biopsy. Now, that's not a history. In other words, a history is something you take from the patient.

This is a pathologic diagnosis.
Q. And that's the point I was trying to get to, Doctor. Have you seen any document concerning Mr. Barrett that states that Mr. Barrett had a history of gastritis?
A. No.
Q. Have you seen any document or any evidence to indicate that Mr. Barrett had a history of any type ulcer?
A. No.
Q. Did you personally review any of the pathology slides concerning any of the biopsies taken from Mr. Barrett?
A. No.
Q. Are you a pathologist?
A. No.
Q. Obviously you're aware of the treatment that Mr. Barrett received for his lymphoma, correct?
A. Yes.
Q. And would you briefly describe the treatment that Mr. Barrett received for his lymphoma?
A. Well, his initial treatment was with chemotherapy with what's called the CHOP protocol, which is probably the most widely used group of drugs for large cell lymphoma in the -- in the country. And he

had several courses of this type of CHOP chemotherapy - C-H-O-P chemotherapy. And when there was no evidence that he had had a major favorable response, he subsequently underwent surgery and had removal of the stomach -- or part -- part of it.
Q. Do you have any criticisms of the treatment that Mr. Barrett received for his lymphoma?
A. No, in that CHOP chemotherapy is a standard form of chemotherapy for non-Hodgkin's lymphomas.
Q. Now, one of the risks associated with chemotherapy is the risk of a future leukemia, correct?
A. Yes. That would be true.
Q. And based on any epidemiological studies you've seen, persons who receive chemotherapy are at an increased risk of acquiring leukemia.
A. Well, as a generic statement, that wouldn't be true. It depends on the type of chemotherapy, the doses they get, the duration. But depending on -- If you want high doses of therapy, as one might give in the CHOP protocol, the answer would be yes
Q. In other words, because of the CHOP chemotherapy that Mr. Barrett received, he's now at an increased risk of a future leukemia, correct?
A. Yes. That would be so.
Q. And that's confirmed by valid epidemiological

studies: is that correct?
A. Yes.
Q. What is your understanding as it concerns Mr. Barrett's prognosis?
A. Well, his prognosis -- I guess at this point one would have to consider it to be uncertain because lymphomas are very unpredictable. And at the moment things look very good for him. He's gone some years now, three years I take it, sense the surgery. And, generally speaking, in large cell lymphomas, if you make it past three years, you usually do very well from the standpoint of reoccurrence. However, lymphomas that involve the gastrointestinal tract tend to carry a somewhat worse prognosis. And I would say he's probably not totally out of the woods.
Q. So based on your experience, someone who has -- someone like Mr. Barrett with his lymphoma, they're at risk of having a subsequent lymphoma, correct -- or subsequent tumors?
A. He may have a relapse.
Q. Relapse. And that -- In your mind that would obviously be a very serious and potentially life-threatening condition, correct?
A. Yes.
Q. In a general sense, the lymphoma that Mr.

Barrett had was a life-threatening cancer, correct?
A. Correct.
Q. And I take it that in your practice you have seen patients die of the type of lymphoma that Mr. Barrett has, true?
A. Well, yes. I would say that would be true.
Q. Therefore, you -- as a physician you recognize the stress that Mr. Barrett was under when he received his diagnosis and his treatment, correct?
A. I would assume that would be very stressful for most people.
Q. And you also understand that it would be a very painful condition, correct, that requires the administration of certain pain medicine?
A. Well, the surgery would be associated with some pain. Now, the chemotherapy is not particularly a painful process -- taking chemotherapy.
Q. But the ill effects from chemotherapy can be very painful, correct?
A. I wouldn't use the term "painful." They might be unpleasant. Your hair might fall out. But that's not painful. It might be psychologically painful, but it doesn't hurt. It depends -- You might get -- get a little nausea, but that's very minimal these days. You might get, low blood counts, but that doesn't cause pain.

So pain is probably not the right word to use.
Q. Well, during the time period when Mr. Barrett was receiving treatment for his lymphoma, do you know what pain medicine was prescribed to Mr. Barrett?
A. I don't recall.
Q. Certainly morphine is not given to all your patients, correct?
A. It's certainly not, no.
Q. And typically when a doctor prescribes morphine to a patient, that is because the patient has reported significant pain.
A. Yes.
Q. And as we sit here today, that's just not an area of Mr. Barrett's medical records that you've reviewed with an eye on the details, correct?
A. That would be correct, yes.
Q. And certainly in your work as a hematologist, you've seen the effect on the spouses and family members when the patient has been told of a diagnosis of lymphoma and undergoes the treatment, correct
A. Yes.
Q. And that is in your mind a very stressful time period for the family.
A. Certainly can be, yes.
Q. I'm sorry. Where is your report, Doctor? Let

me see if I can find mine real quick. I've got mine so let me give you yours. And we're looking at Exhibit 2, your report in this matter; is that correct?
A. Yes.
Q. Have you seen any other reports other than Exhibit 2 as it relates to this case?
A. No.
MR. FAULK: Where did you get that?
That's what he sent to you -- his report?
MR. HYDE: Actually, we got it in Otto Wong's deposition.
MR. FAULK: Oh, okay. Okay. I was just curious.
(By Mr. Hyde)
Q. Doctor, are you a board certified oncologist?
A. I'm a board certified hematologist.
Q. Are you a board certified oncologist?
A. No. Hematologists do oncology but there -- The division of oncology occurred after my training.
Q. Okay.
A. In other words, there wasn't such an entity at the time I was trained.
Q. I understand that. In May of 1993, Mr. Barrett had his gallbladder removed, correct?
A. Yes.

Q. Anything abnormal about that in your mind?
A. No.
Q. Mr. Barrett then later in August of 1994 had a workup, including gastroscopy --
A. Uh-huh.
Q. -- and gastric biopsy: is that correct?
A. Correct.
Q. What are those, Doctor?
A. Well, gastroscopy is looking inside the stomach with a flexible lighted tube.
Q. And that's usually done on an outpatient basis: is that correct?
A. Typically, yes.
Q. Additionally, he had -- Mr. Barrett, that is, in August of 1994 had a gastric biopsy.
A. Yes.
Q. And I take it that's when some tissue was removed during the gastroscopy, correct?
A. Yes.
Q. And there's some device that allows you to remove tissue?
A. Correct.
Q. And from what exact organ was this tissue removed?
A. From various parts of the stomach.

Q. In your mind is gastric carcinoma and gastric lymphoma the same thing?
A. No, definitely not.
Q. Totally different cancers, correct?
A. Well, they're totally different cancers. Now, they may occur in the same individual; but they're totally different cancers.
Q. And in August of 1994, Mr. Barrett received the unpleasant diagnosis of lymphoma, correct?
A. Correct.
Q. And from August of 1994 through November of 1994, Mr. Barrett received the chemotherapy or the CHOP.
A. Yes, chemotherapy.
Q. In November Mr. Barrett continued to have lymphoma in his stomach area, correct?
A. Yes.
Q. And on December 8th, 1994, Mr. Barrett underwent a gastric resection; is that correct?
A. Correct.
Q. Would you explain to the judge and jury what a gastric resection is?
A. Well, the stomach is a large organ; and there are names for various parts of it. And a gastric resection is where part of the stomach is removed. It may vary from a small part to a large part. But

resection means a part is removed, and then the remnant is hooked back together.
Q. And, of course, when an individual receives a gastric resection, there are many future problems that that individual will likely have associated with that resection, correct
A. As a general rule, that's true.
Q. And what are some of those problems that someone would have when receiving a resection of their stomach -
A. Well -
Q. -- or removal of part of their stomach?
A. Probably the most common would be a failure to gain weight or have difficulty in gaining weight because part of the absorptive surface is gone. Now, there are many other potential complications. In part they depend' on what sort of a reconstruction is done. Depending on the type of reconstruction, a person may have what's called a dumping syndrome, where they get episodes of abdominal pain and sudden diarrhea. They may get bleeding complications from the anastomosis lines or where the stomach was put back together. They may get loss of vitamin B12 absorption and have to get some vitamin B12.shots. Those are some of the things that come to mind.

Q. Also, when a person like Mr. Barrett receives his resection or removal of part of his stomach, that has some effect on the stomach acids, correct?
A. Well, depending on what part is removed. The -- the higher part of the stomach has most of the acid-forming glands in there, and the lower part of the stomach has some of the more enzyme-producing cells. So it depends on what -- actually what part is taken out.
Q. one effect of having your stomach -- part of your stomach removed is that you may be subject to infection at a higher rate than someone who has not gone through this procedure, correct?
A. Certain types of infections it's thought that -- At least in the older literature, it was thought that tuberculosis can occur in a higher incidence in people who have had part of their stomach removed. Certain kinds of infections are present at higher rates.
Q. And that's even with someone who didn't have a history of tuberculosis, correct?
A. That would be correct, yes.
Q. Now, the dumping syndrome that you talked about, that is something that would result in someone having diarrhea because of the smaller stomach, correct?
A. Well, it's not because of the smallness of the stomach. But generally stomachs are put back together

by what used to be called either a Billroth I or a Billroth II type procedure. In the Billroth I procedure, everything looks the same except the stomach is just a little smaller. And that doesn't have a lot of dumping associated with it. In the Billroth II operation, you have what's referred to as a blind loop. You have a piece of intestine sort of floating in the breeze with the bile ducts connected to it. And that intestine can suddenly fill up with liquids and kink and create problems. And I must say I've forgotten what type of resection he had as to what his hookup was. But in part it depends on how the reconstruction is done.
Q. Mr. Barrett -- Have you seen any evidence that he had problems with diarrhea and as such was required to wear a diaper?
A. I don't recall seeing that.
Q. Certainly, that's something you've heard about, individuals who have had stomach resections -- that they may need to wear diapers because of this dumping syndrome, correct?
A. Well, that would be very unusual. I suppose it's possible; but that certainly wouldn't be the rule.
Q. Now, to save myself the embarrassment of having to say this name over and over and over, I'm going to try to say it one time: and then I'm going to try to do

a little abbreviation. But Helicobacter pylori -
A. Uh-huh.
Q. -- is what?
A. Helicobacter pylori is a bacteria that may live in the stomach and colonize the stomach. And it's been associated with a number of problems because of that. In recent years it's been recognized that ulcer disease -- peptic ulcer disease is a common consequence of that infection. One can also have chronic gastritis or inflammation of the stomach as a result of that infection, which may or may not produce any symptoms. In recent years it's been recognized that that organism can stimulate the transformation of lymphocytes from normal lymphocytes into lymphomatous lymphocytes. And we call this a MALT lymphoma.
COURT REPORTER: A what?
THE WITNESS: A MALT, M-A-L-T, lymphoma.
A. And it's also been thought to -- The chronic inflammation that may result has also been thought to cause gastric carcinoma, which is a different type of tumor of the stomach. It's an organism that is sensitive to many antibiotics, but sometimes it's difficult to eradicate.
Q. What percentage of the males 'in the 50 age

category in the United States have H. pylori in their stomach?
A. I don't know the exact number.
Q. Do you know whether we're talking about -- Well, let's talk in general. Of the male population in the United States for adult males, what percentage of that population has H. pylori in their stomach?
A. I don't know the number. I mean, it's a significant number. It's not a rare finding. ,But certainly not everybody has it.
Q. Are we talking millions of males in the United States who have H. pylori in their stomach?
A. Well, I -- As I say, I don't know the exact figures: but it could be as much as 10 to 15 percent, which would translate to a lot of people.
Q. Is there anyplace in particular where you have gotten that number that maybe 10 to 15 percent of the males in the United States may have H. pylori in their stomach?
A. No. I took it you asked me to speculate. These numbers are in the GI literature. They vary all over the world, depending on where you live. You said the United States.
Q. Yes, sir.

A. And so I may subliminally have seen a number like that in one of these articles. But I wouldn't - refuse to be held to a specific number because I don't know it.
Q. You're giving me your best recollection -
A. I'm just giving you a guess.
Q. Are there different types of H. pylori, different strains?
A. There are different strains of the bacteria, yes.
Q. What specific strain of H. pylori do you contend that Mr. Barrett had?
A. I don't know what strain he had.
Q. Do you know when -- at what point in time Mr. Barrett was, if ever, infected with H. pylori?
A. Well, the gastric resection biopsy demonstrated evidence of chronic inflammation with plasma cells and other inflammatory cells, suggesting that it had been present there at least months, possibly longer. But the exact time would be unknown.
MR. HYDE: I need to object to the responsiveness.
(By Mr. Hyde)
Q. My question was: Do you know or have any evidence specifically as to when Mr. Barrett was first

infected with H. pylori?
A. No.
Q. Have you reviewed any literature in scientific or medical journals concerning the ways in which someone) can be infected with H. pylori?
A. Well, it's generally considered to be the oral route. In other words, one of the describers of the illness gave it to himself by -- by swallowing the bacteria.
Q. That's one way.
A. Yeah. I mean, certainly that would be the -- the way one would expect to get it is some type of oral contamination.
Q. Have you read any published literature concerning the risk of infecting a person with H. pylori through gastroscopy?
A. Gastroscopy, yes. Many infections have been introduced, from tuberculosis to a number of things, through improperly sterilized equipment. And generally the gastroscopy devices are gas sterilized. But if they weren't sterile, it might be passed from one person to another.
Q. You certainly recognize that gastroscopy is a risk factor concerning the infection from H. pylori?
A. Well, a risk factor with dirty equipment. I

mean, I don't think it's a risk factor inherent to being gastroscoped. It depends on whether the equipment is sterile or not sterile.
Q. Are you aware of any cases of H. pylori infections from gastroscopy?
A. Gastroscopy?
Q. Yes.
A. I can't cite a particular article, but I'm quite certain that that's occurred. I'm sure I've seen that in the literature.
Q. Have you seen any -- Well, strike that. Have you seen instances of contamination of a gastroscope here at St. Joseph's Hospital?
A. No.
Q. Would that be something that you would know about?
A. Probably, almost certainly.
Q. A copy for you and a copy for me.
MR. HYDE: Mark in that order.
(AT THIS TIME NATELSON EXHIBIT NOS. 14 AND 15 WERE MARKED FOR IDENTIFICATION PURPOSES AND ARE FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)

Q. Doctor, on Exhibit 13 you had some specific medical records concerning biopsies?
A. Yes.
Q. And I've had marked as Exhibits 14 and 15 some additional medical records which, I think, concern the same subject.
A. All right.
Q. So I think between Exhibits 13, 14, and 15, all of the biopsies associated with Mr. Barrett's stomach should be included in those three exhibits. I'll give you a chance to look at it and see if you know of any others -- any other studies concerning biopsies of Mr. Barrett's stomach. Take your time.
A. Well, this first one has two sets of biopsies in here, it looks like. This one is from 11/1/94, and then there's a second one that's from 1/6/95.
Q. Now, let's see -
A. Okay.
Q. Those are some biopsies -
A. Okay.
Q. -- of Mr. Barrett. And then you had some more in your stack under Exhibit 13, correct?
A. Let's see. Where is -- Yes.
Q. Okay. Why don't you read the dates on those biopsies, please?

A. All right. Okay. Let's see. First one we have here is 8/11/94.
Q. That's a biopsy of Mr. Barrett's stomach, correct?
A. Right.
Q. What's the next one?
A. The next one is same as this, I guess, 11/1/94.
Q. All rightie.
A. And then we've got 12/8/94.
Q. 12/8/94. All right. Any others?
A. We've got 1/4/95. We've got 2/6/96.
Q. Okay. Any more?
A. That looks to be it.
MR. FAULK: There's another exhibit.
A. Yeah. There's another exhibit. Let's see if -
Q. Yeah. Go ahead and do that.
A. This may be a duplication.
Q. Yeah. There may be -- may be some duplication there, so we want to make sure that we've got all this down.
A. Here's one from 2/6/96. I think we had that one.
Q. I think we had that one, yes.
A. I think that's it.

(AT THIS TIME THERE WAS AN
OFF-THE-RECORD DISCUSSION, AFTER WHICH THE
PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Okay, Doctor. I have -
MR. HYDE: Go ahead and mark that as
the next exhibit.
(AT THIS TIME NATELSON EXHIBIT NO. 16
WAS MARKED FOR IDENTIFICATION PURPOSES AND
IS FULLY DESCRIBED IN THE "EXHIBIT INDEX"
HEREIN. SAME WILL BE FOUND AT THE
CONCLUSION OF THIS DEPOSITION.)
(By Mr. Hyde)
Q. Now, I've had marked as Exhibit 16 a piece of
paper that I have entitled, "Lester Barrett Stomach
Biopsies." And I've listed six dates, that being August
11th, 1994; November 1st, 1994; December 8th, 1994;
January 4th, 1995; January 6, 1995; and February 6th,
1996. And it's my understanding that as it relates to
the medical records, those are the biopsies -- the dates
of the biopsies from Mr. Barrett's stomach. Is that -
A. Yes. That seems to be correct here.
MR. FAULK: I'm going to object to the
use of this document in the format that
you've prepared it because by referring to

them generally as the subject of biopsies,
they're not sufficiently specific to
describe the types of biopsies involved.
And I'll object that it's misleading in
that regard.
Q. Doctor, would you get Exhibits 13, 14, and 15
out -
A. Okay (complying.)
Q. -- and find specifically the biopsy work
performed on Mr. Barrett on August 11th, 1994? Are we
there?
A. Yes, we're there.
Q. How many samples were collected on Mr.
Barrett -- Mr. Barrett's stomach on August 11th, 1994?
A. Five irregular tan soft tissue fragments.
Q. So five biopsies?
A. Yes.
Q. Five biopsies we're taken on August 11th, 1994;
is that correct?
A. Yes.
Q. Were there any more?
A. On that date? It just said received in
formalin are five biopsies from that session.
Q. What were the results of those five biopsies as
it concerns H. pylori and the presence or absence of H.

pylori?
A. H. pylori was not seen in these biopsies.
Q. I'll put over here, "No H. P." Now, would you turn with me in the medical records to the biopsies taken of Mr. Barrett on November 1st, 1994?
A. 11/1/94. Is that what we're after? Yes.
Q. Yes, sir. How many biopsies were taken of Mr. Barrett on November 1st, 1994? And I'm talking about biopsies in Mr. Barrett's stomach.
A. Seven biopsies.
Q. Now, of the seven biopsies taken of Mr. Lester Barrett's stomach on November 1st, 1994, how many of those biopsies showed the presence of H. pylori?
A. H. pylori is not identified.
Q. I've put under there next to those biopsies on my Exhibit 16, "No H. P.," meaning no H. pylori, correct?
A. Correct.
Q. Now, the next sample was taken December 8th, 1994; is that correct?
A. Correct.
Q. And how many biopsies were collected from Mr. Barrett's stomach on December 8th, 1994?
A. Well, the part of the stomach was removed;-and they -- The pathologist did the biopsy on this occasion

by removing part of the stomach to look at it. And he lists -- He or she lists this as A & B, C, D, E, F, G, H, I, J. SO that's 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and a - K, 11. So he has at least 11 sections here that they're looking at.
Q. So would it be correct to say that there were 11 biopsies taken of Mr. Barrett's stomach, the portion that was removed, and examined December 8th, 1994? Is that correct?
A. Well, there were -- You know, culling these biopsies, they're really apples and oranges. These are not exactly biopsies. They're hunks of the stomach that the person's putting under the microscope. They're not really biopsies.
Q. Okay.
A. They're separate slides that are being prepared.
Q. Why don't I put on December 8th, 1994, instead of putting biopsies, then part of stomach.
A: You could put part of stomach, yes.
Q. Part of stomach.
MR. FAULK: Or more correctly,
-parts -
A. Parts of stomach.
Q. Parts of stomach.

MR. FAULK: -- 11 parts.
Q. Now, as it relates to the testing on December 8th, 1994, was H. pylori found according to the pathologist?
A. Helicobacter-like organisms identified, reads the report.
Q. Now, it says H. pylori-like organisms, correct?
A. Correct.
Q. Do you have any idea what strain of H. pylori?
A. No.
Q. Prior to December 8th, 1994, is there any medical record concerning Mr. Lester Barrett that suggests by pathology the presence of H. pylori in Mr. Barrett's stomach?
A. Now, prior to which date, did you -
Q. Fair enough. So we can get clear, prior to December 8th, 1994, is there pathology that specifically states that Mr. Barrett has H. pylori in his stomach?
A. No.
Q. So on December 8th, 1994, for the parts of the stomach that were examined, H. P.-like organisms were found.
A. Correct.
Q. Let me put that in there. "H. P.-like , organisms found." Now, would you turn with me to the

January 4th, 1995,-biopsies?
A. Let's see. Which-- January 4, 1995, correct.
Q. How many biopsies were collected on January 4th, 1995?
MR. FAULK: Let me stop you just a minute. I'm going to object to the way that -- Well, I'll wait until you finish with your chart. It's misleading because you didn't put the number of parts of the stomach that were listed and you did with respect to the other biopsies.
A. Here the numbers are not identified. It just says multiple.
Q. What does it say, sir?
A. It says multiple.
Q. Multiple what?
A. Soft pale tan tissue fragments.
Q. Multiple -- And I'm just going to put M-u-1-t. Multiple what?
A. Soft pale tan tissue fragments, which range in size from minute up to 3 millimeters.
Q. Mult -- You've got to slow down here. Multiple soft -
A. "Received in formalin labeled "fundus" are multiple soft pale --

Q. Pale.
A. -- tan -
Q. Pale as in p-a-1-e?
A. P-a-1-e, pale -
Q. -- slash, tan?
A. -- tan tissue fragments -
Q. Tissue fragments?
A. -- which range in size from minute up to 3 millimeters."
Q. And we don't know how many multiple -
A. No.
Q. -- soft pale tan tissue fragments; is that correct?
A. Correct.
Q. And what was found by the pathologist concerning H. pylori from those samples?
A. H. pylori was not commented upon.
Q. "No comment," I'm going to put, "re: H. P." Now, on January 6th, 1995, what type of biopsies were taken?
A. 195 or 196?
Q. I'm sorry. January -- January 6th, 1995, I thought we also had a sample somewhere amongst these records.
A. You could be right. Let's see.

Q. Yeah. It might be in the records that I have there, Doctor.
A. Okay. We've got a January 4, '95 that we've gone over. Okay.
Q. And what is the date of that document? Can you tell?
A. January 4.
Q. Okay.
A. That's when it was dictated.
Q. Okay. The January 6th?
A. Yeah. -
Q. Okay. So --
A. I think we're talking about the same -- you've got the same thing. It was done on -- His procedure was done on the 4th but typed on the 6th.
Q. Here we go. I'm going to put this little -- join together those two samples as being really one.
A. Okay.
Q. Okay. Now, let's go to the February 6th, 1996, biopsy work. Do you see that?
A. Yes.
Q. How many biopsies were taken February 6th, 1996?
A. Five.

Q. And what was mentioned on February 6th, 1996, from the five biopsies concerning H. pylori?
A. That's not commented on.
Q. Let me put that in there. "No comment re: H. P." Turn back please, Doctor, to the December 8th, 1994, biopsy work.
A. December 4. December 8, '94?
Q. Oh, I'm sorry. December 8th, 1994.
A. Yes.
Q. May I see that report for one second? I mean, I know I've seen it. I just want -- Doctor, you indicated that there were 11 slides or 11 parts of the stomach that were biopsied or samples collected on December 8th, 1994; is that correct?
A. Yes.
Q. How many of those slides or parts of the stomach for Mr. Barrett were found to have H. pylori-like organisms?
A. Well, I don't know from his report. In other words, he -- he's talking about B, which is one of them and that's when he mentions it. And he doesn't mention it again.
Q. So as we sit here today, looking at the medical records, the pathology from December 8th, 1994, H. P. -like organisms were found and attributed to one slide

based on the report based on its literal reading, correct?
A. Well, he mentions it under category B, in the proximal shave margin.
Q. And -
A. Now, whether it was in other reports, other areas, I don't know. He mentions it on that particular one.
Q. The pathologist did not mention the presence of H. pylori like organisms in any of the other ten slides, correct?
A. That's correct.
Q. Okay.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION BETWEEN MR. HYDE AND MR. WIMBERLEY, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
Q. Doctor, I'd like for you to -- And I've got it right here, so it'll make it easier. Looking at the November 1st, 1994, biopsy results -- or the pathology results, I counted a few more samples, few more biopsies than I think you originally counted. And I just want to make sure if there's some mistake in my reading or -- you know, or at least my ability to read this - document. But it looks to me like --

A. Wait a minute.
Q. -- there were more biopsies taken.
A. He starts out the sentence by saying, "Received in formalin labeled "antrum" are seven biopsies varying from 2 to 3 millimeters." Then he distributes them. In other words, they put them into what they call cassettes. And he says, submitted in to to as A I put some; submitted are two of them into B and so many into C and so many into D. And the way I interpret it is he started out with seven biopsies, and he distributed them amongst his cassettes.
Q. Okay.
A. Now, I don't know about his math here; but -
Q. Okay. But -
A. That's the way I would interpret this.
Q. Well, you've explained that to me: and I appreciate that. On the December 8th sample result, the H. P.-like organism was found in sample B; is that right?
A. Yes. The proximal shave margin B. And then he starts talking about that shave margin.
Q. Okay. There we go. And as Mr. Faulk pointed out, there were 11 parts of the stomach that were collected for this analysis; is that correct?
A. That's correct.

Q. Dr. Natelson, what types of cancers are specifically -- Well, strike that. What types of cancers do you contend are specifically caused by infection of H. pylori?
A. Certain lymphomas and certain gastric carcinomas would appear to be caused by H. pylori.
Q. And I'm certain of this, but I want to make sure. Mr. Barrett did not have gastric carcinoma, correct?
A. He did not have gastric carcinoma.
Q. Now, in any of the epidemiologic studies that you've reviewed, have you seen any comparison in the group of H. pylori infected individuals who have a lymphoma and compare what percentage of those lymphomas were large cell versus small cell?
A. All right. If you're talking about primary gastric lymphoma, in some of these articles, it comments what the numbers are. And I'd have to review that to see which -- which types are the most common. It's late and I'm getting sleepy. But both small cell lymphomas and large cell lymphomas are seen with Helicobacter infection.
Q. Do you know if the incidence of small cell versus large cell lymphomas differ amongst those individuals with H. pylori infection such that there are

more small cell lymphomas as compared to large cell lymphomas in H. pylori infected individuals?
A. Well, I mean, you have to say that the concept of MALT lymphoma has to do with small cell lymphomas as the initial phase of the illness -- the initial malignant phase and that the concept is that small cell lymphomas. proceed into large cell lymphomas. So it depends when in the course of the illness you decide to make the diagnosis.
Q. Have you seen any pathology or any diagnosis of Mr. Lester Barrett that would indicate that Mr. Barrett ever had small cell lymphoma?
A. We see gastric nodules within the stomach in this particular report. It's interesting to note that there are benign lymphoid aggregates scattered in deep zones of the edematous gastric wall. In other words, we have normal lymphoid tissue in that stomach. We also have what they describe as large cell lymphoma with a background of marked chronic active gastritis. And in the description, what we see is that in a particular - a typical lymphoma that's a large cell type, we don't see normal lymphoid follicles. In other words, the findings in this stomach suggest to me a progression from lymphoid follicle to a large cell tumor in the setting of chronic gastritis. That's what this report

shows.
MR. HYDE: I need to object to the responsiveness.
(By Mr. Hyde)
Q. I probably had a -- And you probably told me a lot of information. Any other time I'd probably understand or at least have a feel for what it is. But my question was very, very specific. Have you seen any pathology report to indicate that Mr. Barrett had specifically small cell lymphoma?
A. No.
Q. When you collect biopsies from someone with a gastric lymphoma, normally how many samples do you suggest should be collected?
A. Well, I don't normally make that suggestion. That's generally left up to the gastroscopist, depending what -- what that physician sees. One might be enough if it's a good sample.
Q. Doctor, I promise we will be done by 10:00.
A. Okay.
MR. HYDE: And why don't we do this, Ms. Court Reporter? Could you mark these, please?
Q. And I assume that those are your original.
A. Yes.

Q. If you have some stickies, she can take them back; and we can put a copy -- I mean, an exhibit sticker on the copy so that you can have these back in the original form unless you care. If you don't care, then we'll put --
A. I don't care.
MR. HYDE: Go ahead and put stickers on it real quick.
MR. FAULK: Separately?
MR. HYDE: Huh?
MR. FAULK: Separately?
MR. HYDE: Yeah. Well, no.
(AT THIS TIME NATELSON EXHIBIT N0. 17 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION. THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Doctor, would you identify generally the documents that are contained in Exhibit 17? What are they and of what use are they to you?
A. These are copies of articles from the medical literature that generally deal with gastric lymphoma and

lymphomas of what we call the MALT category. Some of them also deal with Helicobacter pylori and the association between Helicobacter pylori and lymphomas. Some have to do with non-Hodgkin's lymphoma in general and classifications of that illness. Some have to do with the relationship between Helicobacter pylori and gastric cancer. And that would be the sum and substance of these articles.
Q. And I think the last document in Exhibit 17 is the IARC document, correct?
A. Correct.
Q. Have you made any kind of summary document concerning the epidemiology that concerns non-Hodgkin's lymphoma and H. pylori?
A. No.
Q. And you've reviewed, I take it, all the epidemiological studies concerning non-Hodgkin's lymphoma and H. pylori; is that correct?
A. All? I would say certainly not. I've reviewed a substantial number of studies that I had in my file and some from the recent literature. And I continue to look at literature on the subject. But I -- I would be presumptuous to say that I reviewed all of the literature in this area.
Q. Did Mr. Faulk provide you with any of the

documents in Exhibit 17?
A. He provided me with I -- this manual that you have, this IARC.
Q. Uh-huh.
A. I alerted him to its existence, and he then procured it.
Q. Have you seen any documents in any of the scientific or medical journals that concern when you have a biological carcinogen and a chemical carcinogen, what procedure should be used in weighing the contribution of each of those carcinogens, that being a biologic and chemical carcinogen, as it concerns the formation of cancer in a person?
A. Well, it depends on, number one, what the cancer is and what type of exposure one has had to a potential carcinogen. I think it's difficult to answer that question. You'd have to know what type of exposure you have with the two possible etiologies. How close is the relationship? How frequent is the cancer after either exposure? There would be a number of factors involved.
Q. As it relates to your analysis of Mr. Barrett, you didn't have any benzene exposure data that specifically concerned Mr. Barrett.
A. Correct.

Q. And, see, my question dealt with have you reviewed any scientific papers that concern the weighting process when you have exposure to two carcinogens: one chemical, one biological
A. No.
Q. -- as to the role of those carcinogens in causing cancer?
A. I haven't reviewed any such paper.
Q. Would you consider H. pylori a very common infection in society?
A. Yes, and also depending on which society you're talking about. It varies around the world. But it is generally considered to be common.
MR. HYDE: Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
MR. HYDE: Go back on the record.
(By Mr. Hyde)
Q. Have you reviewed any serology studies concerning Mr. Barrett, specifically whether the antibody for H. pylori was present in Mr. Barrett's blood?
A. I did not -- If it's in there, I-didn't notice it. I don't recall that determination.

Q. Doesn't IARC suggest that most gastric lymphomas caused by H. pylori are the small cell type?
A. Well, we'll look at what it said. But you also have to keep in mind that -- when this was written, and these concepts are developing. This was written in 1994.
Q. Well, you'd certainly consider 1994 - a reasonably current document.
A. Reasonably current. But many areas of medicine change surprisingly rapidly. Let's look specifically to see what they say.
MR. FAULK: Off the record.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
A. On Page -
MR. HYDE: Well, let's go off the record and make sure you've got it, Doctor.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
MR. WIMBERLEY: Go back on.
A. It was the -
Q. Let me see if I can find it again. Really, if you --

MR. WIMBERLEY: Small cell.
MR. HYDE: Oh, yeah. Yeah. Yeah.
(By Mr. Hyde)
Q. Does it say in the IARC document that the small cell type of gastric lymphoma is the type of lymphoma most associated with H. pylori?
A. Well, it doesn't -- The paragraph I have in the summary doesn't say that. They simply talk about lymphoma and mucosal-associated lymphoid tissue lymphomas. And they don't talk about a specific type in the summary.
Q. Are those types of lymphomas typically small cell?
A. Generally speaking, small cell lymphoma is the more frequent lymphoma that one sees.
Q. Let me get to your report. I will tell you what.
MR. HYDE: Go off the record one second.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)
(By Mr. Hyde)
Q. Dr. Natelson, do you have any idea whether Mr. - Barrett's parents had cancer?

A. In my report I mention both his parents had some form of cancer, but the type was not mentioned in the records.
Q. And, again, you're not in any way associating that fact, which I don't know to be true, that his parents may have had some type of cancer, as any -- as having anything to do with Mr. Barrett's lymphoma, correct?
A. Well, I don't know what type of cancers they were: so there's not much I can do with that piece of information.
Q. Mr. Barrett also had some significant vascular problems or significant vascular disease in 1996, correct?
A. Yes.
Q. One of the side effects of chemotherapy, is it not, is an effect upon the heart: is that correct?
A. Yes.
Q. And it's possible that his vascular disease was caused as a result of his chemotherapy, correct?
A. No. I wouldn't agree with that statement.
Q. You see no possibility?
A. No possibility.
Q. Have you seen any scientific literature concerning vascular disease and chemotherapy?

A. With respect to the chemotherapy that he received?
Q. Yes, sir.
A. No.
Q. And did you do any research in that area for Mr. Faulk?
A. No.
Q. You have seen no evidence that Mr. Barrett had chronic gastric infection based on specific pathology.
MR. FAULK: Object. That mischaracterizes his testimony regarding the surgical pathology report.
Q. Other than the one sample collected on December 8th, 199 -- Well, let's -- I'm sorry. Let me rephrase that. I don't have many questions left. I'm trying to get this over with, but I don't want to rush this. You say in your report, "By contrast, the notion that benzene and other chemicals may cause lymphoma, in man, remains speculation." That's a correct reading, isn't it?
A. That's correct.
Q. Though you are aware of some literature that attributes benzene exposure to non-Hodgkin's lymphoma, correct?
MR. FAULK: Object. That

mischaracterizes his testimony.
A. Well, I'm aware of literature in which the association has been suggested because of epidemiologic data.
Q. Doctor, have you been asked to prepare any demonstrative aids relative to your testimony in this case?
A. No.
Q. And do you plan on doing such work as we sit here today?
A. Well, I've discussed it with Mr. Faulk in terms of diagrams: but I haven't prepared any.
Q. Have you in the past utilized demonstrative aids relative to your work as an expert witness?
A. No.
Q. What have you discussed with Mr. Faulk specifically concerning the demonstrative aids relative to your testimony in Mr. Barrett's case?
A. Well, we've discussed illustrating the concept of MALT lymphoma.
MR. FAULK: That's about as general as it gets.
(AT THIS TIME THERE WAS AN OFF-THE-RECORD DISCUSSION, AFTER WHICH THE PROCEEDINGS RESUMED AS FOLLOWS:)

Q. Do you know of any other risk factors for non-Hodgkin's lymphoma that in any way would be a risk factor for Mr. Barrett in the development of his non-Hodgkin's lymphoma other than what we've talked about already?
A. Well, I'd have to look again. I've forgotten from the records. We know -- And there are increasing reports in hepatitis C being associated with non-Hodgkin's lymphoma. And I think he had hepatitis testing done, but I just can't recall. But if he didn't have hepatitis testing done and one found he was positive for hepatitis C, that potentially could be a risk factor.
Q. As we sit here today, you have no evidence that Mr. Barrett had hepatitis C; is that correct?
A. No, I do not.
Q. Let me phrase it this way. Do you have any evidence that Mr. Barrett has or has ever had hepatitis C?
A. No, I do not.
Q. Have you examined the cost for the treatment of Mr. Barrett for his lymphoma?
A. Well, specific reference to his hospital bills, you're talking about?
Q. Yes, sir.

A. No.
Q. So you have no opinions as to whether the medical costs were reasonable or not; is that correct?
A. No. I have no opinions about that.
Q. And were you provided with Dr. Spindel's report) concerning what his opinion was as to what may have caused Mr. Barrett's non-Hodgkin's lymphoma?
A. I don't recall. If it's in that pile of documents, then at some time I saw it: but I don't recall seeing it.
(AT THIS TIME NATELSON EXHIBIT NO. 18 WAS MARKED FOR IDENTIFICATION PURPOSES AND IS FULLY DESCRIBED IN THE "EXHIBIT INDEX" HEREIN. SAME WILL BE FOUND AT THE CONCLUSION OF THIS DEPOSITION.)
Q. Doctor, I've had marked as Exhibit 18 Dr. Spindel -- one of Dr. Spindel's reports concerning Mr. Barrett. Do you specifically recall seeing this document prior to today's deposition?
A. I don't recall seeing this document.
Q. And Dr. Spindel states that in his opinion exposure to benzene is a risk factor concerning Mr. Barrett's non-Hodgkin's lymphoma, correct?
A. No. He doesn't say that at all.
, Q. Okay. Let me see it, please

A. (Tendering document.)
Q. Dr. Spindel states, "I recognize that benzene exposure is a risk factor in developing lymphoma under reasonable medical probability." He did say that, correct?
A. He's -- But not with specific reference to the patient.
Q. Yes. But he said what I said he said.
A. No. You said he said that -
Q. Okay.
A. You mentioned, I believe, the patient.
Q. I see where the confusion is.
A. Okay.
Q. Dr. Spindel in Exhibit 18 states, "I recognize that benzene exposure is a risk factor in developing lymphoma under reasonable medical probability," correct? That's what he said?
A. That's what it says there. But -- but that doesn't mean that it applies to this particular patient.
Q. Well, when it says, "Referencing Charles Lester Barrett," do you have any reason to believe that he'd be talking about anybody else other than Charles Lester Barrett?
A. Well, I mean, this -- this person writing the letter mentions what he did that -- It says he's a

practicing physician, that he's treated someone for large cell lymphoma. And then he has a paragraph that says benzene is a risk factor for developing lymphoma. But there might be many other risk factors, and he's not -- I don't see any place where he says this guy has lymphoma from this particular risk factor.
Q. Do you agree or disagree with the statement benzene is a risk factor in the development of Hodgkin's lymphoma?
A. I disagree.
Q. But certainly if the epidemiological studies evolve, that opinion is something that is subject to change, isn't it?
A. Well, over the years medical opinions change on many issues.
MR. HYDE: We're done.
MR. FAULK: Just a second. I may have -
MR. HYDE: Oh, okay.
MR. FAULK: -- just short redirect. Matter of fact, I probably do. We'll just go ahead and do it. It won't take long.
EXAMINATION BY MR. FAULK:
Q. Dr. Natelson, do you recall in your testimony earlier in this deposition -- I know it's been a

while -- that you referred to a level of -- I think it was 200 PPMs that was necessary to induce hematopoietic cancers by benzene?
A. Yes.
Q. Have you had an opportunity to think about that? And is that still your testimony?
A. Well, I think we also talked further after that statement was made; and I mentioned that what we're talking about is part per million years or cumulative exposure over time.
Q. And is that based on any materials that you've reviewed?
A. That's based on the opinions in part of Dr. Wong in some of the papers I've reviewed.
Q. And do you recall whether or not you reviewed a risk assessment done by Dr. Wong?
A. Well, that one particular paper involved risk assessment, yes.
Q. When did you first have an opportunity to review the opinions -- any opinions expressed by any of the Plaintiff's experts in this case?
A. Well, this is the first time I've seen this particular letter, which would be that opinion.
Q. And -
MR. HYDE: Off the record.

(AT THIS TIME THERE WAS AN
OFF-THE-RECORD DISCUSSION, AFTER WHICH THE
PROCEEDINGS RESUMED AS FOLLOWS:)
Q. You've reviewed an affidavit-by Dr. Gardner; is
that correct?
A. Yes.
Q. And did you review that within the last month?
A. Probably, yes.
Q. Was that the first time that you knew of Dr.
Gardner's opinions in this case?
A. Yes.
Q. And have you yet had an opportunity to review a'
deposition of Dr. Gardner?
A. No.
Q. Or a deposition of any of the Plaintiff's
experts?
A. No.
MR. FAULK: That's all I have.
RE-EXAMINATION BY MR. HYDE:
Q. Doctor, did you know that the depositions of
Dr. Lemmon and Dr. Bingham have already been
transcribed; and they're two of Plaintiff's experts?
A. I don't know either of those people. I don't
know anything about that.
Q. And you haven't received any testimony from

those individuals, correct?
A. No.
Q. I believe you've testified before that you knew Dr. Gardner; is that correct?
A. Yes, I know Dr. Gardner.
Q. And as a hematologist you have respect for him, correct?
A. Yes.
Q. What specific paper from Dr. Wong have you reviewed concerning risk assessment? I mean, can you identify that for me as we sit here?
A. No, because I have all his papers over in my other office. It's not among the papers I brought here today.
Q. And I take it those are papers that have been provided to you by lawyers representing defendants - some of them?
A. No. Those are papers that I've accumulated over the years that have to do with different subjects in hematology.
Q. As we sit here today, do you have an opinion as to what is a safe level of benzene exposure? I know you didn't in the Frias deposition. Do you have one today?
A. Well, I don't have a particular safe level. We're talking about -- As we said, a certain number of

parts per million years can be very dangerous and may cause acute leukemia; but that level should be very high.
Q. As we sit here today, do you know specifically of a safe exposure level to benzene with no risk?
A. With no risk associated to it?
Q. Yes, sir.
A. I'd have to say no.
Q. And certainly you agree that -- agree with the concept of individual susceptibility and that some individuals may be more susceptible to the effects of benzene as compared to others, correct?
A. Well, I don't know that to be a fact.
Q. Do you disagree with that?
A. Well, I don't -- I don't know -- I don't have an opinion on it.
Q. That's fair enough.
A. I don't know.
Q. So the record's clear, you have no opinion as to individual susceptibility of a benzene-related disease from benzene exposure; is that correct?
A. No. I don't -- I -- What we know is that benzene exposures that cause acute leukemia require generally very high levels in the range, as we said, cumulative part per million years 100 to 200 or so.

Now, someone might require 100. Some of them might require 200. But they require a bunch.
Q. Have you formulated any other opinions other than those stated in your report and those contained in this deposition as it relates to Mr. Lester Barrett?
MR. FAULK: I'm going to object to the question, as you did, with respect to the witness's last week. It's up to you to ask the questions to elicit the opinions. I think that question's too vague.
MR. HYDE: Good. That verifies my other objection. That's all the questions I have.
(AT THIS TIME THE DEPOSITION WAS CONCLUDED.)