4/13/04 Judge Casey take 1 of national versus Ashcroft TKR*PB, an an, an an an good morning.

THE COURT: I might just say at the outset that we went over the portions of the transcript that I believe the government intends to read this morning from deposition and I would urge both sides to take a little more pains in reviewing materials that you submit to the Court. You're all more professional than what you submitted last night, at least I hope so.

I am not going to bother to go into each and every one, but suffice it to say, one is, includes a question which was perfectly appropriate that was objected to by the plaintiff in the transcript but then the government lawyer rephrased it, all of which is absurd to submit to me because the question was clearly appropriate in the first place in any event it was rephrased and it was answered.

This is just a waste of time. You have the rulings on the questions and let's get on with the transcript.

MR. LANE: Your Honor, if I can, Shawn Lane for the government.

At this time what we would like to do is since we have a live witness here, Dr. Kanwaljeet Anand, we would like to present him as the government's next witness, if that's okay with the Court.

THE COURT: I'm always happy to have someone who is

breathe engine that box and is giving something live and fresh and not off a transcript.

MR. LANE: I suspected as much, your Honor. Thank you.

THE COURT: That's fine, go RAOEURT ahead.

MR. LANE: The government's next witness, we call Dr. Kanwaljeet Anand to the stand.

THE DEPUTY CLERK: Doctor, please take the witness stand and remain standing. Raise your right hand.

THE DEPUTY CLERK: State and spell your full name slowly for the record.

THE WITNESS: My name is Can wall SKWRAOET, K A N W A L J E E T, is Anand. A N A N D.

THE DEPUTY CLERK: Thank you, Doctor. Please be seated.

THE COURT: Doctor, can you give me that, how do you spell your last name again?

THE WITNESS: An in and, A N A N D.

THE COURT: Anand am I pronouncing it correct.

THE WITNESS: Yes, that's correct.

THE COURT: Mr. Lane, you may inquire.

MR. LANE: Thank you, your Honor.

DIRECT EXAMINATION

BY MR. LANE:
Q. Good morning, Dr. Anand.
A. Good morning.
Q. Could you tell Court what you do for a living?
A. I'm a pediatrician trained in the care ever critically ill infants and children.
Q. And are you licensed to practice medicine?
A. Yes, in the state of Arkansas.
Q. Are you board certified in any particular medical speciality?
A. I'm a diplomat of the American board of pediatrics and the sub board of critical care medicine.
Q. And what is critical care medicine?
A. Critical care medicine is the subspecialty within pediatrics that is focused on the care of critically ill children, severely ill infants and children.
Q. And why are you testifying here today?
A. I was asked to provide an opinion on this case by the U.S. Department of Justice based on my background and experience and research.
Q. And on what topic?
A. My area of training and research has been on the topic of development of the pain system during fetal and neo natal life.
Q. Doctor, before we get into your opinion on that issue, I

would like to ask you some questions about your background.
Where did you go to medical school?
A. I went to medical school in Mo hat ma Gandhi PH*E moral medical college in a place called indoor, I N D O R E, in India.
Q. What degree did you get from that college?
A. I get an MBBS, which stands for bachelor of medicine, bachelor of surgery, and is equivalent to the MD degree in the U.S.
Q. What did you do after medical school?
A. I did one year internship partly at PHA* hath are aa since she been SKROU HAPT,.
A. S Y E S H W A N T R A O, Hospital, in inn door, and partlyality hindu RA*U hospital in Del Hi.
Q. What did you do after your internship?
A. I did another year of postgraduate training in pediatrics which was part of a three year residency program, but I just completed one year.
Q. And why was that?
A. During that year I had applied for the Rhodes scholarship from India and received that scholarship so I left my pediatric residency and went to University of Oxford.
Q. What degree did you receive from Oxford?
A. From University of Oxford I received the D Phil degree which is doctor of philosophy.

Q. While at Oxford, what did you study?
A. The D Phil was from the faculty of medicine in O*FPL forward university and my work was primarily focused on research on the hormonal and metabolic responses of newborn babies undergoing surgery.
Q. When you use the term hormonal response, what do you mean?
A. Hormonal means the release of hormones or the release of endocrine mediators as a result of the surgical operation that is done.
Q. You also used the term metabolic response, what do you mean by that?
A. Many of the hormones produce changes in metabolism, changes in the way the body handles sugars and fats and amineo addieds and things like that so the metabolic effects of those hormonal responses is very important.
Q. What were the results of your research while you were at Oxford?
A. To summarize a number of different studies, basically my research showed initially that babies have a massive hormonal and metabolic response to a surgical operation. This was contrary to our expectations and that was the initial finding from the research.
Q. When you say contrary to your expectations, could you explain that for us?
A. Yes.

We had postulated that premature babies and even full-term newborns would be unlikely to mount a significant response to a surgical operation because they have imKHER endocrine glands, these are the glands that release the hormones and they have immature metabolic processes in their liver or other body organs. So, we had thought that there W-B a very dampened response from new born infants.

On the contrary, it was a huge response, three to five times that of the adult patient undergoing similar types of surgery.
Q. Did you reach any ultimate conclusions as a result of your research while at Oxford?
A. Yes.

After these results came out we postulated that this might be partly due to the basic physiology of the infant or partly due to the management that was provided during the surgical operation. And we did some clinical studies where we gave potent anesthetics to babies and we found that their stress response was markedly decreased as a result of giving deep anesthesia.

At that time the common -- the commonly prevalent medical practice was that newborn babies were operated upon without the benefit of anesthesia, they were given muscle relaxants and they were paralyzed and operations were done under minimal or no anesthesia at that time. And we showed

that giving anesthesia can reduce their stress response and can improve their clinical outcome.
Q. For your research and studies at Oxford, what was the age of the premature infans that were studied?
A. The premature infants we studied were from 25 weeks of gestation and higher.
Q. Did you do any clinical work while at Oxford?
A. Yes.

While I was at University of Oxford for three years I was working in the neo natal ICU, the intensive care unit, where premature and full-term babies are cared for.
Q. After your time at Oxford, what did you do, professionally?
A. I received my doctorate and then moved to Harvard medical school and Boston Children's Hospital for post-doctoral fellowship.
Q. What did your post-doctoral fellowship consist of?
A. I was in the department of anesthesia at that time and continued this line of investigation because I was intrigued by the fact that babies given adequate answer teasea have fewer complications in the post-operative period the days after the surgery.

So, I wanted to study a population ever babies that are critically ill and we SHRBGD babe yeas that were undergoing open heart surgery and we devised some nuance at the timic techniques and found that by giving them deep anesthesia we

could decrease their stress hormone response but we could also improve their survival and markedly lower the complications after the operation.
Q. You used the term deep anesthesia, what do you mean by that?
A. There are various different levels of anesthesia. You can have a light anesthetic which barely suppresses the responses to painful stimulation and SRUBG a deep anesthetic where there is a much greater suppression of the physiological and autonomic systems. These are systems within the body that help to maintain the body dynamic balance called home yo state EUS.

So, a deep anesthetic allows the body to undergo major types of surgery without having a huge stress response to that.
Q. While you were at Harvard in this post- doctorate research fellowship, did you do any teaching?
A. Yes, I did.

I was in the department of anesthesia and I was providing lecture OPBD neo natal anesthesia and analgesia. Analgesia means pain relief in newborn infants as an instructor in the department of anesthesia.

I was also running a bio statistics course for the residents and fellows in the department of anesthesia.
Q. What did you do next, professionally?
A. After the completion of this post doc fellowship I applied for residency training and was given a spot in the pediatric

residency training program at Boston Childrens' Hospital and Harvard med.
Q. What did that pediatric residency training program consist of?
A. It's a three-year training program which basingly allows medical graduates to train in the area of pediatric care, so it's different rotations, different disciplines of pediatrics we get exposed to.
Q. While doing that pediatric residency training program did you have any involvement in the issues of pain in premature babies?
A. Yes, certainly.
It is during that time that my thoughts about what is the real meaning of the stress response came to fruition and I put forward the first synthesis of the published data regarding the early development of the pain system, which was published back in 1987.
Q. While at childrens' Hospital did you have any clinical involvement in the treatment of pain?
A. I was a pediatric resident and I was certainly taking care of patients in, as a trainee. So wherever I could make an impact on the pain management of children I tried my best.
Q. After your residency at childrens' hospital, what did you do next?
A. I then moved to Massachusetts Jen RAL Hospital, which is

still within the Harvard medical school system and did a clinical training fellowship in neo natal and pediatric intensive care units at mass general hospital.
Q. At the conclusion of that, where did you go?
A. After this two year clinical training fellowship I moved to Emory University in Atlanta and I was appointed as an assistant professor of pediatrics, anesthesiology and psychiatry at Emory.
THE COURT: What year was that, Doctor?
THE WITNESS: That was in July of 1993.
Q. How long were you at Emory, Doctor?
A. I was at Emory for about four years, until September of '97.
Q. And while at Emory, could you give the Court an idea of what you did professionally?
A. Certainly.
I continued my research on pain in the newborn and tried to develop some animal models because having convinced my devil that there is the development of the pain system, I wanted to investigate methods that we could safely employ medicines to treat pain in early life.
and so developed some
animal experimental models in the newborn rat.
I was also working clinically as a pediatric intensivist in Atlanta.

Q. When you say pediatric intensivist, what does that mean?
A. That means I was taking care of children who were admitted to the intensive care unit at two different hospitals, one was *EGen tell STO*PB, E G E L S T O N, childrens' hospital and the other was Hughes spalding Childrens' hospital, both in Atlanta.
Q. In treating those patients, do us have to address the issue of pain?
A. Certainly.

Critically ill infants and children require multiple invasive procedures and monitoring lines and things like that and we have to pay a lot of attention to their pain and sedation requirements.

Q. After your approximately four years at Emory, what did you do professionally?
A. I was then appointed as chief of critical care medicine and the department of pediatrics at University of Arkansas for medical sciences and so I moved to Little Rock and was working at Arkansas childrens' hospital.
Q. Did you hold any other positions at Arkansas KH*EUPBZ' hospital?
A. Yes.

I was heading the critical care division and I was also the director for the fellowship training program in pediatric critical care medicine.

Q. And how long did you hold those positions at Arkansas?

A. I held both of those administrative positions from September '97 until July of 2003.
Q. And are you still at Arkansas?
A. Yes, I'm still at Arkansas.
Q. And ado you do there, currently?
A. I'm currently a professor of pediatrics, answers tease jolly, pharmacology and neuro biology at University of Arkansas for medical sciences. And I'm also pediatric intensivist at Arkansas Childrens' hospital.
Q. And how long have you been doing those particular two jobs at Arkansas?
A. Since September of '97.
Q. When you mentioned your position as a professor, you used the term farm pharmacology, could you explain what that term means?
A. Certainly.

Pharmacology is the study of drugs and what they do to the living organism and how the living organism responds and metabolizes those drugs.

Q. You also use the term neuro biology and what does that term mean?
A. Neuro biology is the discipline for the study of the peripheral and central nervous system within living organisms.
Q. When you say peripheral and central nervous system, can you give a little more full explanation of what that is?

A. Sure.
I'm sorry to use this jargon but the peripheral nervous system is simply the network of receptors and nerve fibers that bring information from the periphery, from the body organs from the surfaces, the skin and mucous membranes to the central nervous system.
The central nervous systems consistss of the brain, the brain stem and the spinal cord.
Q. In your current position, what do you teach?
A. I teach pediatric critical care to the residents and fellows in our department and I also teach medical students particularly the physiology and neuro biology of pain.
I also have some opportunities to teach anesthesia residents and emergency medicine residents in the pain management and those kinds of areas.
THE COURT: Doctor, what is the difference between resident and a fellow?
THE WITNESS: A resident is someone who has completed their medical school and is undergoing either a two or a three-year postgraduate training in a major speciality like pediatrics or anesthesiology.
And then after completion of the residency people can go for a fellowship to get subspecialty training.
So, someone who is trained in pediatrics may then further specialize in pediatric critical care or other

subspecialties of pediatrics.
THE COURT: Thank you.
Q. Doctor, at the University do you hold any particular position in connection with neuro biology of pain?
A. Yes. I'm also the director of the pain neuro biology laboratory which is located at Arkansas childrens' Hospital research institute.
Q. And what does that do?
A. My lab is basically focused on the research looking at the short-term and the long-term effects of pain during early life.
We also have ongoing studies on the effects of different pain relieving medications and their impact on lock-term behavior and so on.
That's the experimental part of the are search.
There are some clinical studies being done as well, primarily looking at the effects of both short-term and long-term of pain relieving medications using premature babies.
Q. You had mentioned some current research, what are you currently involved in researching?
A. My clinical research mainly deals with the effects of commonly used analgesic agents or pain relieving medications such as morphine or TPEPB TA mill in premature babies. And we are studying babies all the way from 23 weeks of gestation onwards to 32, 33 weeks of gestation.
Q. You used the term analgesic, how does that relate to the

term anesthesia, is it the same or are there differences?
A. Well, analgesic simply means an intervention or a medication used for relieving pain. Many of these medications are also used in higher doses to produce a state of obtunded consciousness in terms of anesthesia, and so many of the drugs that are used for providing anesthesia in smaller doses can be used as analgesics.

There is a considerable overlap, however there are some drugs that are purely analgesics that cannot be used for anesthesia and there are some drugs that are purely answer at the timeicss so they cannot be used for analgesic.

So there is an overlap between the types of medications used in these two areas.

Q. Doctor -RGS you had also mentioned that you currently care for patients, could you describe what your current care is for patients in your position?

A. Certainly.

I care for patients in the pediatric ICU at Arkansas childrens' Hospital and my patients include the entire gamut of severe illness during infancy and childbirth and adolescence.

So, all the severe infections, major trauma, post operative care. All those areas are -- all those patients are provided care in the pediatric ICU.

Q. What are the age ranges for the patients that you treat?

A. Our patients can be anywhere from tiny newborn infants to

adolescents up to 16 or 18 years of age. Sometimes we have older patients as well. Pretty clearly if they have had care provided in childrens' Hospital since their infancy for chronic conditions.

But generally from -- there are even some premature infants that we care for in the pediatric ICU but mostly full-term or older infants and children.

Q. When you say premature, what are the age ranges, gestational age ranges for those infants?

A. Generally the patients that are admitted to the pediatric ICU are premature infants that have been discharged from the neo natal ICU and may have gone home for a day or two and they have some recurrent illness, they can come back to the pediatric ICU.

So there are some of the more mature premature children.

Q. Do you at PHER anesthesia to your patients?

A. During the case of providing critical carry do provide, on occasion, anesthesia if one of my patients requires a surgical operation of some sort.

I will routinely provide deep sedation to these children under *R undergoing invasive procedures.

And I also work on what's called the sedation service where we provide deep sedation or light anesthesia to children all over the hospital wherever they're having procedures

performed on them.
Q. Personally what's your role in administering anesthesia to these patients?
A. It comprises of evaluating these patients, particularly when I am on the sedation service I will go and evaluate these patients, take a full history and physical exam, talk to the parents, and then formulate a plan of action of how we are going to give sedation and how we are going to avoid some of the complications that may be associated with that.
I get the parents' consent after full information and discussion and then I provide the drugs, I monitor the patient during the sedation or light anesthesia and then at the end of the procedure I will stay with the patient until they are fully awake or they're back to their baseline.
And then after that I will go back and do a post anesthetic evaluation.
So these are primarily the pre anesthetic, the anesthesia and the post anesthetic evaluations are what is the recommended practice for anesthesiologist.
Q. Are you a board certified anesthesiologist?
A. No, I'm not.
Q. What's the difference between, if any, between what you do and what a board certified anesthesiologist does?
A. A board certified anesthesiologist is someone who has gone through three years of residency training in anesthesiologist

and they deal with a wider range of answers at the timeics that are provided. As a pediatric intensivist during training in critical care medicine we also learn to provide deep sedation and anesthesia but in a very limited number of drugs in a limited area.
That's the limit of -- there is some degree of overlap in the two types of training, although anesthesiology is a separate discipline and incorporates a lot more than what is taught in critical care.
Q. Doctor, I would like to ask you generally about your research work. Have you published any articles?
A. Yes. I have about 200 -- a little over 200 publications so far.
Q. And how many of those are peer-reviewed articles?
A. They're close, between 55 and 60 peer-reviewed articles.
Q. And could you tell the Court what's meant by the term peer-reviewed article?
A. These are articles that are submitted by researchers to leading medical journals. The journal Ed I tore will send the manuscript to a number of reviewers who are experts in that area of research and will solicit their comments and criticism and then as authors we have to respond to those comments and criticisms and sometimes this process of back and forth takes, makes a lengthy period of time, after which the article is accepted or rejected.

And if it is accepted, then it's published.
Usually there is a lag time between completing the research studies and the actual pub indication, there is sometimes two or three years after the studies have been completed.
Q. Doctor, in general, what kind of topics do you write about in the articles that you author?
A. My research has mainly focused on pain, particularly its -P indication in early life and its management.
I have also dealt with some of the ethical issues around pain and focused on strategies for the management of pain in newborns and small children.
Q. Have you written any chapters in textbooks, Doctor?
A. Yes, certainly.
Multiple chapters in textbooks of anesthesiology, of pain management and other areas.
Q. Doctor,I think we are getting a little bit of feedback from the microphones, if you can move back a tiny bit, that's perfect.
Doctor, do you have any involvement in the national institutes of mental health?
A. Yes. I'm part of the maternal fetal research network that is fund by the NIH, in particular the NIM STKPWHRRBGSZ what is that?
A. This is a collection of researchers from multiple different

countries and we are all focused on the area of fetal physiology, fetal stress response, maternal stress and how that has an impact on the fetus.
And we have regular meetings every six months and sometimes more frequently than that to discuss this evolving area of research.
Q. Do you perform any peer-review of scientific papers?
A. Yes, certainly.
I'm on the editorial board for the journal called critical care medicine. Until last year I was also on the editorial board for a journal called biology of the neo TPHA*EUT.
But in addition to these two assignments, I do perform peer review for a number of different journals in pediatrics, in anesthesiology, in neuro biology, in behavioral neuro science. All those areas of journals.
I routinely perform a lot of peer review.
Q. Doctor, have you testified as an expert witness before?
A. Yes.
As stated in my expert report I have testified in four different cases in the past four years as an expert witness.
Q. In what areas have you testified?
A. I have been classified as an expert in the area of pediatric critical care and in the pharmacology of answers at the timic and analgesic drugs.

Q. Have you ever testified, putting aside this case, in any case involving the regulation of abortion?
A. No, I have not.
MR. LANE: Your Honor, if I may approach?
THE COURT: You may.
Q. Doctor, you have been handed what's been marked Government Exhibit C-5, can you tell the Court what that document is?
A. Yes. This is a printout of my curriculum vitae.
Q. And does an up-to-date and current copy of your CV?
A. This is a copy of the CV that was supplied in January of this year and there have been a few additions since then.
Q. What are those additions?
A. There have been a couple of papers that have been published since then or have been accepted for publication since January.
I have also received an award from the royal college of pediatrics and child health in the UK.
MR. LANE: Your Honor, at this time we would like to offer Government Exhibit C-5 into evidence.
THE COURT: Any objection.
MS. WIGMORE: No objection, your Honor.
THE COURT: It will be received.
(Government's Exhibit C-5 received in evidence
MR. LANE: At this time, your Honor, the government would like to tender Dr. Anand in the fields of fleet O knowledgey fetal pain and pharmacology of anesthetic drugs.

MS. WIGMORE: Your Honor, this is Ms. Wigmore, as you know we have objected to the testimony of Dr. Anand on the basis that it's irrelevant, not reliable, that it should not be admissible under federal Rule of evidence 403 and we have also challenged his his call physicians to he have as an expert about anesthesiology.
We understand the Court has denied that motions but we simply wanted it stated for the record.
THE COURT: It wasn't in the record already, Ms. Wigmore.
MS. WIGMORE: It may be I want to make sure that we preserve.
THE COURT: You knew full well it was in the record, did you not?
MS. WIGMORE: In the trial it has not been mentioned so I just wanted to make sure.
THE COURT: It is in the record of the case though.
MS. WIGMORE: Thank you before and we also object to the characterization of his expertise as in fetal pain.
He has testified about expertise in pain and stress responses but not studies about fetal pain in particular, so we object to that.
THE COURT: Thank you your arrow there but your objections are noted and overruled.
You may proceed, sir.

MR. LANE: Thank you, your Honor.
BY MR. LANE:
Q. Doctor, can you give us a definition of what you mean by pain?
A. Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or *R are described in terms of tissue damage.
Q. Doctor once TKPWREPB I apologize for saying this but don't get too close to the microphone?
THE COURT: The microphone, Doctor has a tendency, we don't hear it as much up here but it tends to distort your voice a little bit, so if you keep about three or four fingers between your mouth and the microphone I think you will find that at least for those out in the courtroom the projection of your voice will be a little clearer.
THE WITNESS: Thank you. Thank you, your Honor.
MR. LANE: Thank you, your Honor.
Q. Is there a particular source for your definition of pain?
A. Yes. This is the official definition from the international association for the study of pain.
MR. LANE: Your Honor, if I may approach?
THE COURT: You may.
Q. Doctor, I have handed you a binder that has a number of exhibits inT most of which we won't get into here today, but I would like to refer you to Government Exhibit P-7 in that

binder, if you could.
A. I can see it.
Q. And can you tell me what that document is?
A. This is a printout from the international association for the study of pain which is titled IASP pain terminology.
Q. What is the international association for the study of pain?
A. This is a highly respected world body with more than 7,000 members, all of whom are focused on the study of pain. It's a multi disciplinary organization so there are pediatricians and anesthesiologist and neuro PWHROPBLG KWREUFTs, fizz KWROL gists, etc., different scientistss all focused on the study of pain.
Q. Do you consider that to be an authoritative body?
A. Certainly do.
Q. RUZ a member of that body?
A. Yes, I am a member of IASP.
Q. How do you --
THE COURT: Are there any obstetricians who are members?
THE WITNESS: Yes, there are. There are several obstetricians who are members of the IASP as well.
THE COURT: Go ahead. I'm sorry. HRRPBLGTS certainly, your Honor.
Q. Doctor, how did you become a member of that organization?

A. I applied for membership and I had to receive the nomination of two other members that are in good standing at the IASP.

And then my membership application was reviewed by the committee on membership and they made their own inquiries and after a few months my membership was confirmed.

Q. Doctor, looking at Exhibit P-7, I would like to refer you to the second page of that document about halfway down the page under the heading pain terms, there is the word pain listed in some text after that.

What is that text that comes on to page 2?

A. That is the definition of pain that I had referred to a minute ago from the IASP.

And if I can read that text, it says, pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

Q. By the term sensory experience, can you explain what's meant by that?

A. Yes.

Pain is a bodily sensation. It's a sensation that is trance TKAOUSed through receptors carried by nerve fibers and is processed in the brain.

Q. This definition also refers to it as an emotional experience; what's meant by that?

A. Pain is an emotional experience in so much that it is characterized as unpleasant and noxious in character for the most part. And so, it generates an affective or emotional response for the person who is undergoing pain.

Q. Doctor, below the definition you just read a few seconds ago there is a note that says the inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-ref leaving treatment.

Do you agree with that statement?

A. I certainly do.

I had a significant role to play in that note being added to the definition.

Q. Could you explain your role in adding that note to the definition?

A. Yes.

Back in the late ' 80s and ear 90s when I was trying to advocate for greater research on pain and analgesia during early life I was faced with this problem that people felt what babies are experiencing are SEUPL ply reflexes and is not really pain or subjective suffering of any sort and that was because the definition of pain was described in terms of self-report, in terms of linguistic ability. And apart from that self-report sorts of evidence were not admitted into the definition of pain.

So, I wrote an editorial which was published in October of 1996 in the journal -- the official journal of the IASP and that was titled new per speck TEUFBZ on the definition of pain where we challenged the definition of pain and we said that it excludes those who do not have linguistic ability paly including premature and full-term newborn infants or young children or people with dementia or people with other neurological problems whereby they're not able to express their pain and convey their pain as -- that they are suffering.
Q. When did the society add this note to the definition of pain?
A. It was almost five years later in May of 2001 that this note was added.
No those five years we made multiple presentations at world Congresses of pain, at meetings of the American pain society and all of these were -- all of these arguments were reviewed by the committee on tax on O my and they finally added that note in 2001.
Q. You just referred to the committee on tax on O my, can you explain what that is?
A. This is the committee which is part of the IASP which basically helps define all the terms associated with pain.
Q. Looking again at the second page of this exhibit, below the note we were just discussing there was another note that mentions that pain is always subjective. Can you explain what

that means?
A. Certainly.
What this means is that pain, like any other experience, has a special importance and significance for the person who is undergoing that experience.
So it's a subjective experience pertaining to the subject who is experiencing it.
THE COURT: In other words you can't see it, can you, Doctor?
THE WITNESS: No, you can't see it.
THE COURT: The person who is not experiencing it can't see it.
THE WITNESS: Can't say it.
THE COURT: See it.
THE WITNESS: That's right.
THE COURT: With thinks highs.
THE WITNESS: Absolutely.
THE COURT: I couldn't see it any, but.
Others who have vision cannot see pain, isn't that correct?
THE WITNESS: That is correct.
THE COURT: It's only the person experiencing the pain who can feel it, correct?
THE WITNESS: That is absolutely right; and that's why this definition was so important because up until the

definition was provided by the IASP, pain was always linked to a proximate stimulus. So unless there is a stimulus people said there cannot be pain where there are many types of pain where you don't need a stimulus, a headache, for example.

And so, this definition brought to the forefront the fact that if someone is saying that they are in pain then the definition provides for the fact that they are in pain and that has to be accepted.

Q. Doctor, in your opinion can pain be experienced without tissue damage?

A. Yes, it can.

There are many types of pain that are not associated with tissue damage but they may be described in terms of tissue damages.

For example, the pain of angina may not have any tissue damage but there is, you know, a tearing or a pressure kind of pain that people feel during angina.

There are other types of pain that can be perceived without tissue damage.

Q. If there is no reaction to pain does that mean that a person does not experience pain?

A. Well -- and that's where the art of pain medicine comes in, is patients can either magnify their pain or they can suppress their pain response.

So, stoic people can completely hide the fact that

they may be in pain.

Also, you can have the perception of pain but not have a reaction to it under different clinical situations.

Q. Doctor, I would like to turn to your opinion in this case, do you have an opinion as to whether a fetus can feel pain?

A. Yes. Fetuses that are beyond 20 weeks of gestation can feel pain.

Q. And what is the basis for your opinion?

A. My opinion is based on multiple lines of evidence looking at the anatomical development of the pain system, the functional correlates of the developing fetus, the physiological responses of fetuses and their behavior.

All of these areas contribute to my opinion.

Q. Is your opinion to a reasonable degree of medical certainty?

A. Yes, it is.

Q. Doctor, I would like to take, before we discuss your opinion on fetal pain, I want to ask you, generally about the main anatomical structures responsible in humans for the perception of processing of pain.

First, could you define what you mean by anatomical structure?

A. These are the receptors and the nerve fibers and the areas in the brain which form the anatomy of the network associated with the pain system.

Q. Can you briefly describe the primary an anatomical structures that are required for human being to experience pain?
A. Certainly.
The pain is initially transTKAOUSed through specialized receptors that may be located on the skin or mucous membranes or may be located on the internal organs or deep in muscle and those receptors get activate and they send their impulses along nerve fibers to the spinal cord.
The area within the spinal cord that is associated with processing of pain is called the dorsal horn, it is the back part of the spinal cord, it is a collection of nerve cells within the spinal cord.
From the dorsal horn the pain impulse goes up to the supra spinal or centers located above the spinal cord, mainly in the brain stem and the that will PHUS and then finally to the cortex and other sub cortical areas. You.
Q. You used a few terms there doctor and I would like to go through a few of them.
Could you describe what the dorsal horn is?
A. The dorsal horn is basically a collection of nerve cells that is contained within the spinal cord in the posterior, the back part of the spinal cord or the door TAL SART of the spinal cord.
(continued on next page) TWM 4/13/04 NAF v. Ashcroft, take 2, can Anand on

direct by Mr. Lane<]
Q. What is the thalmus?
A. The thalmus is a collection of nerve cells which is the area of pain perception is first registered in the brain. That is located below the cerebral cortex, the gray matter on the surface of the brain.
Q. Doctor, you segued to my next question. Can you explain what the cerebral cortex is.
A. Yes. The cerebral cortex is the thinking, planning part of the brain where all of these sensory stimuli and their mother responses are coordinated from. So these are about two billion nerve cells that are located on the surface of the brain, and that is called the cerebral could be text.
Q. Are there any other apanatomical structures that are involved in the proprocessing of pain?
A. Yes. From the spinal cord up to the thalmus, the pain fibers have connections with some collections of nerve cells called nuclei in the brain stem, and these help to coordinate the changes in heart rate or respiratory rate or other things, bodily functions, as a response to pain. And the thalmus is where the final processing is distributed to multiple areas of the brain. These may include the limb PWEUBG steam or the a mig today la where emotional processing occurs, it may include the hypothalmus where a stress response is incorporated, or it may include thepy po campus which helps formulate the long-term

memories associated with pain. So these are the subcortical structures. And then the cortex.
Q. Doctor, I would like to go through each one of these main an Tom K-L structures and ask you when they develop in the fetus. What about the receptors for pain?
A. The fetus during development has sensory receptors that appear in the area around the mouth at about 7 weeks of gestation. They spread to other parts of the body, covering almost the entire skin surface apart from the top part and the back part of the head by 14 weeks. And by 20 weeks of gestation, all of the skin surfaces and mucus membranes have sensory receptors manifested in them.
Q. You had mentioned sensory fibers. When do those develop in the fetus?
A. The nerve fibers that connect these receptors with the final cord are developing. You see, the way the reSERPTS develop is that from the final cord these \notify\nerve out growths go towards various parts of the body. They grow into the limbs that are forming and finally reach the target, whether that is the skin or the mucus membrane. Once the nerve fibers have reached their target, that is when the receptors are expressed.
So the fact that there are receptors proves the fact that those receptors are connected with the nerve fibers.
Q. When does this connection between the fibers and the

receptors occur in the fetus?
A. As the receptors appear, they are simply the nerve EPBGTSDZ that have reached their target organ, like the skin, for example.
Q. Are these sen ris \notifies\nerves connected to the skin receptors by 20 weeks?
A. Yes, certainly they are.
Q. Are notify fibers covered with any particular covering in an adult human?
A. Yes. In the mature nervous system these nerve fibers are my linated, basically, that means they are covered with a my lin sheath. What this does, it increases the speed of conduction along the nerve fibers. Previously it was thought that babies don't feel pain because their nerve fibers are not mile TPHAEUTd. However, it is now known thatl 80 percent of noxious information is transmitted even in the adult by fibers that are unmile TPHAEUTd. These are called the C fibers, C as in cat, C fibers.
Q. Doctor, could you explain when the dorsal horn of the spinal cord develops in the fetus.
A. Certainly. The dorsal horn of the final cord starts developing at the end of the first trimester, so about 12 to 13 weeks of gestation, and rapidly matures with the differentiation of the nerve cells KWRAGT area with the expression of different chemicals that are used for

transmitting impulses in the dorsal horn. By 20 weeks of gestation it is a fairly mature structure.
Q. At what gestational week is the thalmus developed in the fetus?
A. The thalmus actually starts developing at about 6 to 8 weeks of gestation. Then these cells differentiate, and by 16 to 18 weeks of gestation the thalmus is a fairly mature structure. Certainly by 20 weeks of gestation the thalmus is well connected both from the spinal fibers from below as well as fibers connecting the thalmus with higher centers.
Q. You had mentioned the cerebral cortex. Can you tell us when that develops sufficient to process and perceive pain.
A. The cerebral cortex also starts developing, all of these changes in the developing brain occur in parallel. So the core text starts developing at about 8 weeks of gestation. As cells migrate out to the our attention mantle of the surface of the brain, those numbers increase. Those cells are directed to a very precise anatomic location, and even within that location they are placed in particular layers within the cerebral cortex.

By 20 weeks of gestation, most of the migration of cells has occurred, they have already formed connections within the cortex, and they have formed connections with incoming fibers from the thalmus.
Q. Doctor, are the anatomical structures needed to perceive

and process pain present and functional in a fetus by 20 weeks' gestation?
A. Yes, they are.
Q. Is there anything missing in the system that would perceive and process pain at that gestational age?
A. This whole system is undergoing maturational changes at different levels. That maturation proceeds during maturation and even after birth and even during childhood and up through adolescence. That is a pattern called brain PHRAS isty, whereby depending on the precise experiences t pain system changes its structure and function. S- S- but by 20 weeks of gestation, all the components of the pain system are functional and they are connected up together, they have come on line in order to perceive pain.
Q. Doctor, you had mentioned anatomical indicators as one of the bases for your opinion, but you had also mentioned functional indicators. Can you explain what you mean by functional indicators.
A. Certainly. Starting with the receptors in the skin and mucus membranes, those receptors, when they first appear, they are fully mature in their properties. They have the same threshold of their membrane. They have the same firing frequencies, etc., very similar properties to those of receptors in the adult.

The nerve conduction occurs along thinly mile TPHAEUTd

and unmy linated nerve fibers. That is also functional and mature. There is processing within the doral horn. There is processing at the thalmus and at the cortical level, and all of those components are functional, as can be seen from nerve conduction studies or from the electricitial changes following the stimulation of the sis testimony. There is something called the so mat to sensory evoked potential, which shows that there is an elecry cal impulse that reaches up to the cerebral cortex and you can actually examine the cortical component of an evoked potential, a potential that is evoked by sensory stimulation.

Q. Doctor, as a functional matter, does the fetus respond to any other stimuli other than pain?

A. Certainly. There is a huge amount of literature showing that the fetus responds to sound and is able to identify and habituate or dishabituate to sound. The fetus is responding to light. The fetus can respond to taste. For example, if you inject a sweet substance, sweet-tasting substance like sack rin, for example, into the amniotic fluid, the swallowing activity of the fetus increases and they respond very actively to the sweet taste within the amniotic fluid. If you inject something that has a bitter taste, then their swallowing activity stops. So those are other modalities that show that the central nervous system is functioning.

The other ways in which the developing brain has been

studied is by recording fetal EEG, which is electroenselfgraphy. The electrical pat earns from the brain. Those electricitial signals start S- at about 19 to 20 weeks of gestation. That is another area of evidence for the TPUPBGTing brain in the fetus.

Q. Doctor, you had mentioned that the fetus responded to sound. Can you give us an example.

A. Certainly. There are numerous studies that have looked at this. I recall an incident where a colleague of mine was pregnant at about 22 weeks of gestation, and she said that her husband was trying to put up a swing set for their older child and dropped one of the pipes onto their driveway, which made a loud clanging noise. She said at that time the fetus had a typical startled response. You see, when new-born infants after birth are exposed to a lot of sound, they will throw out their arms and legs and will have what is called the moral reflex. She said at 22 weeks of gestation, this fetus had a complete moral reflex. This is a pediatrician.

So there are other studies that have looked at this, whereby people have studied fetal behavior in response to a car horn, for example, within a few feet from a pregnant mother. Those kinds of studies have looked at fetal responses to sound and light and so on. [> mo ro reflex.

MS. WIGMORE: Your Honor, I object and move to strike the doctor's TEP about the conversation with the pregnant woman

and being hearsay and lacking personal knowledge.
THE COURT: I will grant the motion. S-
Q. Doctor, can you tell us about what effect, if any, fetal mother behavior has on your opinion about a fetus's ability to feel pain?
A. Certainly. That is another correlate of the functioning, developing brain. The fetus has various types of movements in utero which are initially quite reflexive and Curran domly. But as the fetus develops more and more, these movements become coordinated and have some degree of -- have a much greater degree of coordination, for example. There is an ultrasound study that was done whereby a fetus in its random movements within the amniotic fluid had grasped its umbilical cord, and as a result of that obviously there may have been a decrease in the blood flow to the fetus and the fetus was seen to push away the umbilical cord. So there is some degree of evolving behavior in the fetus that has been studied on ultrasound.
There are also studies showing states of wakefulness and sleep in the fetus developing, and those correlate with the patterns of EEG that have been monitored at the same time.
Q. Doctor, I would like to turn to the physiological indicators for pain that you mentioned earlier. What did you mean by that?
A. There are various responses that occur within the physiology of the body. When a fetus is subjected to a painful

stimulus SP-P.
Q. What kind of responses are you talking about?
A. Those are mainly responses that have been studied in the form of the release of hormones or changes in the circulation within the fetal body.
Q. Based on your review of these studies, when do these responses first appear?
A. The earliest fetuses that seem to mount a hormonal or a cardiovascular response to painful procedures has been documented at about 16 weeks. But by 20 weeks of gestation those responses become very robust and reproducible.
Q. Doctor, I would like to ask you if there is any particular studies performed on the issue of stress hormones.
A. Certainly. There is a number of studies that have been done looking at different stress hormones, like bet dean more feign or cat a col means. These are adrenaline and nor adrenaline. These are stress hormones. S- they have been measured in the fetus that is being exposed in an invasive procedure. Cortisol is another hormone that has been measured. There is a series of studies published.
Q. Is there any particular study that is particularly relevant to your conclusion about stress hormones?
A. There is actually one paper which I feel has had a major impact on my opinion, and that was published by Norman Fisk and his colleagues from imperial College, London, in 2001.

Q. Doctor, I would like you to turn to Government Exhibit G8, which is in the binder before you.
A. Yes, I have it.
Q. What is that document?
A. This is a printout of the paper by sir Nicholas Fisk ***[STRIKE]*** -- sorry, Nicholas Fisk and his colleagues, titled the effect of direct opioid annual TRAOEZia on hormonal and HAOEPL oh dynamic host response to intrauterine needling.
Q. Is this the article you referred to?
A. Yes. This is one of the more recent studies from this group.
Q. Could you explain what this study looked at.
A. Certainly. This is a highly' specialized team of researchers. They have studied fetal responses for more than 10 years. In this particular study they took fetuses from 20 weeks to about 35 weeks of gestation who required a blood transfusion in utero. There are two ways of providing the blood transfusion. Either one can insert a needle through the fetus's abdomen into their peritoneal cavity and then PAO*ES through the capsule of the liver into a vein that is located inside the liver, it is called the intrahe patic vein. That is one way of actesing the fetal circulation in order to give a blood transfusion.

What they found was that fetuses undergoing this approach of blood transfusion had a very robust hormonal

response to the pain associated with the needling. Also, the magnitude of the hormonal response was directly proportional to the duration for which the needling occurred.

Another way of providing the blood transfusion is to insert a needle into the imbull cal vein, where it comes off of the placenta you can insert a needle over there and give the blood transfusion. The umbilical cord is not innervated, so there is no major pain that can occur as a result of that. And the fetuses did not have a hormonal response.

What these researchers did was in fetuses that were undergoing PHREULT blood transfusions, they had the same fetus undergo a transfusion in the intrahe patic vein without any analgesia and it randomly gave for the other transfusion a dose of fentanyl, which is an anesthetic drug, prior to the blood transfusion. They found that the hormonal response was blocked by giving proper analgesia directly to the fetus.

So basically this study was a rather complex study, but what it showed is if you have a painful way of giving a blood transfusion, it produces a big hormonal response and what is called a hemodynamic response, a change of circulation. If you have a nonpainful way of giving the blood transfusion, there is no response. If you use the painful way of giving the blood transfusion and give a pain-relieving agent prior to the transfusion, then you can PWHRAOBG this hormonal and hemodie dynamic stress response.

Q. Doctor, when you said a pain-relieving agent delivered to the fetus, how was that delivered for purposes of this study?
A. In this study they gave a dose of fentanyl, 12.5 micrograms per kilogram, to the fetus directly into the circulation, the blood circulation of the fetus.
Q. Doctor, can you tell us what studies have been performed on circumstance latory response changes in fetuses in response to pain.
A. A number of studies have looked at circulation in the fetus and how it changes during painful stimulation, mainly noting an increase in blood flow to the brain as soon as 70 seconds after a painful stimulus occurs.
Q. How do we know that pain is causing these responses and not some other stimulus or other factors?
A. That is a good question. These are nonspecific responses and would occur in relation to other types of stimulation. For example, blood loss can also lead to a cortisol response or a cata col mean response. However, these responses were documented immediately following a painful stimulus, and they had good controls. They had a control situation whether the lack of the painful stimulus produced no response, a painful stimulus produced a robust response. Based on that temporal sequence, we can relate those responses to the painful stimulation that had occurred.
Q. Doctor, I would like to ask you some questions about your

opinion as it pertains to the scientific method. Can you tell the Court what is meant by the term "scientific inference.?"
A. Certainly. In science, generally we, being a skeptical scientist, we can never prove anything. But we can disprove something. So what we start out with is a hypothesis, and we try to disprove that hypothesis. For example, in this situation the researchers started out saying that the fetus does not respond to pain, but their data showed that there is a significant response, so the null hypothesis was rejected.
This way of deductive thinking is called scientific inference, where you look at a pattern of data within a certain experimental paradigm and then figure out what that data means. That is called scientific inference.
Q. Is inference, scientific inference, a widely accepted tool in the scientific community for drawing conclusions?
A. Certainly.
Q. Is it based on scientific evidence?
A. It is.
Q. Can you explain to the Court how your opinion -- in what ways it is based upon inference.
A. Basically, from these multiple lines of evidence that show the fetus actively responding to different types of sensory stimuli, I have inferred that the pain system is developed enough to be functional and that the fetus is experiencing pain as a result of invasive procedures.

Q. Doctor, can you explain the term "extrapolation" as it pertains to scientific research.
A. Yes. In the scientific method we will try to extrapolate from one experimental paradigm to another experimental paradigm. For example, suppose there is a mechanism of pain that works in adults. If this truly is a mechanism, then there should be other evidence that we can obtain from other age groups or other patient populations by extrapolating that mechanism. So extrapolation is a well-developed tool in the scientific method.
Q. Can you explain how your opinion -- how you used extrapolation in your opinion in this case.
A. Until the area of fetal pain, I have used extrapolation in two different ways. One is to extrapolate from the studies that were done in animals or experimental animals. Keeping in view that the neurological maturity or the state of mat RAEUGS of the brain and nervous system is corresponding with that of the human fetus, some degree of extrapolation was used in that sense.
Also, extrapolation was used simply on the fact that if there is a pattern of fetal response, hormonal or metabolic or circumstance latory response, and if that same pattern of response is seen in older children or adults, who then report that they are experiencing pain, then you can extrapolate to the fact that the fetus would be experiencing pain.

Q. Doctor, let me ask you, are there differences between fetuses and an infant born at full term?
A. There are certainly huge differences between a fetus at different stages of maturity and the full-term infant, yes.
Q. What effect, if any, does that have on your opinion in this case about a fetus's ability to feel pain?
A. What we have noted from these multiple lines of evidence is that the pain system has a very low threshold, meaning that the fetus has a much greater sensitivity to pain during the early development of the pain system, and later on that threshold rises or the sensitivity decreases to pain. This is seen throughout development. So in premature neoTPHAEUTS who is 23, 24 weeks of gestation, they have a much lower threshold for pain compared to a full-term infant. A full-term infant has a lower threshold to pain as compared to, say, a 1 or 2-year-old child. And during childhood as well there is a progressive increase in the threshold of pain.
So my opinion is that between 20 and 30 weeks of gestation there is the greatest sent activity to pain.
Q. Doctor, can you explain the scientific reasons why that is so.
A. There are many reasons to explain this increased sensitivity to pain. Firstly, there is the early development of the receptors and the density of these receptors is much greater in the fetal skin as compared to an older child or

adult. These receptors have connections with the spinal cord whereby the excitetory mechanisms are fully developed by the inhibittory mechanisms or mechanismss that may modulate the incoming no, Judge should say information develop later on, after about 32 to 34 weeks of gestation. So it is that early period there is a greatest sensitivity to pain.
Q. You mentioned inhibittory mechanisms. What do you mean by that?
A. Inhibittory mechanisms are basically the mechanisms within the spinal cord that help to modulate incoming painful stimuli and also descending inhibittory fibers. These are fibers from the brain stem, from the thalmus, that grow down the spinal cord and make connections with the dorsal horn. The primary functions of these fibers is to block incoming painful information.
If I may give an example. Suppose you are shot in the leg and you are trying to escape. The brain will be able to switch off the painful stimuli coming from your leg to allow you to escape from a dangerous situation. But once you are in a safe place, then that pain will return because the block is removed. So there is the ability of the higher centers in the brain to completely block the incoming painful stimuli. That ability develops after 32 to 34 weeks of gestation.
Q. Doctor, are there any studies supporting your view about the increased sensitivity to pain in the fetus from 20 to 30

weeks?
A. Yes, there are. There is multiple lines of evidence that support that.
Q. Is there a consensus in the medical community on this issue?
A. Yes, there is. The people who are associated with the area of pediatric pain are well aware of the increased sensitivity during the earlier part of gestation.
Q. Doctor, can you apply your findings on fetal pain to fetuses who suffer from an anomaly?
A. It depends on where the anomaly is located.
Q. Can you explain what you mean by that.
A. Sure. If a fetus has an anomaly of the brain or the spinal cord or the nerves that participate in pain processing, then these studies would not apply to those fetuses. For example, a fetus may have a condition called congenital hydrocephalus whereby there is an increased amount of fluid within the brain that collects. Those fetuses may have an abnormal way of processing pain.
There are other fetuses with chromosomal abnormalities that have an abnormal brain development, and, again, those fetuses would respond differently.
Q. Based on your opinion, can you tell us how those fetuses would respond to pain.
A. You see, I am somewhat limited in my ability to answer that

question, because these fetuses have not been studied in any great degree. For any scientific study what people try to do is to exclude abnormalities of the nervous system in order to see what is the normal response. So there is limited information in that area.

There are some studies that have been done in premature infants, premature infants who have documented injury to the brain resulting from bleeding in the brain or a Roth away of white matter, which is the fibers in the brain. And there are some recent studies showing that their pain response was no different from other premature infants with the same neurological maturity who have no damage in their brain.

So if we were to extrapolate from these recent studies t it would suggest that there are minimal differences between fetuses who have abnormalities versus those who don't. Although, the information in that area is very limited.

Q. Doctor, I would like to ask you a few questions about the term "conscious's" as it relates to pain ***[STRIKE]*** "consciousness" as its RAOETS to pain. What is consciousness?

A. Consness is the substrat um for every experience -FPT without consciousness, experience is not possible. If I could use a metaphor, we go to the movie theater and we see a story, multiple characters, many events, their interrelationships and interactions, etc. That is all happening as part of the movie. But that is dependent on the screen. If the screen is not

there, then the movie doesn't exist.

Similarly, consness is the screen on which this three-dimensional movie of all of nature is being played.

Q. Is consciousness necessary for the experience of pain?

A. Yes, it is.

Q. Do you have an opinion as to whether a fetus is conscious, is able to feel pain at 20 weeks' gestation?

A. The multiple areas of evidence that we have noted from fetal behavior, from their responses, etc., suggest that the TPAETS is conscious, is able to relate to its environment in a conscious perceiving way.

Q. What are those multiple lines of evidence?

A. Those are the lines of evidence that we have discussed about fetal responses to sound, to light, to taste, to touch, fetal responses to pain, the KORLTS of the functioning of the brain. Even in the adult human, consciousness is very difficult to measure. All that we know is it is correlated with shifting patterns of activity within the cerebral cortex.

Similarly, we have data from fetuses at 19 to 20 weeks of gestation showing the onset of shifting patterns of electrical activity. We have different states of consness: Wakefulness versus sleep, as adult \humans\hums, and similar forms of behavioral states have been noted during fetal life. SP-P.

So if you put all of the evidence that favors

consciousness on the one hand and suppose you propose the hypothesis that the fetus is unconscious, there is little or no evidence to suggest that the fetus is unconscious.
Q. Doctor, let me ask you, does a fetus have any capacity for memory?
A. Yes. There are studies that have looked at learning and memory during fetal life. There was a study done whereby women were given a capsule which was tasteless and odorless, but this capsule contained cue minute, an herb. They were asked to take one capsule with their meals for a number of days during their pregnancy. When their babies were born, these babies were able to have an orienting response to the smell of cue PH*EUPB, even though the mother had no taste or smell because these were capsules that they swallowed.
So similar studies have been done looking at where the mother was asked to read a certain story during her pregnancy, and when she read the same story after the baby was born, there was an orienting response: The baby calmed down, etc. However, if she read the same story in a different tone, then the baby was able to show a reaction to these changes in the tone of the mother, even though that was the same story.
So there is a whole host of studies that have been done in this manner showing that there is learning and memory during fetal life. That, again, cannot occur without consciousness.

Q. Is there a consensus in the medical community that consciousness begins at 20 weeks?
A. This is a very controversial area. People have come up with markedly different opinions in this regard, as to what does consciousness begin.
Q. Within the community that studies the issue of fetal pain, is there a majority view on when consciousness begins in the fetus?
A. Yes. Having spoken and having interacted with many scientists who are focused in this area of studying the fetus, there is a consensus that consciousness would begin around mid gestation. So 20 to 22 weeks of gestation. Although, there are divergent opinions.
For example, in the mid nineties there was a British parliamentary group that proposed that the fetus is conscious from 6 weeks of gestation, whereas a working part of the royal College of obstetrics and gynecology concluded that a fetus is conscious after 26 weeks. There are many pediatricians who believe that consciousness may manifest at the time of conception, whereas other ped TREUGSs believe consness doesn't occur until a full-term baby is born.
So there are divergent views on this topic. I think the truth lies somewhere this the middle, which is what my opinion is. At 2 to 22 weeks is the onset of fetal consciousness.

THE COURT: Mr. Lane, is this a convenient time to take our break?
MR. LANE: Certainly, your Honor.
THE COURT: Court will stand in recess for 10 minutes.
(Recess) 4 take 3 continuing direct of Dr. Anand
THE COURT: Mr. Lane, you may inquire.
MR. LANE: Thank you, your Honor.
Dr. Anand, I would like to turn now to your opinion regarding fetal pain and the partial-birth abortion procedure; what is your understanding of the partial-birth abortion procedure?
A. A very rudimentary -P one. I am not an obstetrician and I have not performed this procedure before, but from the descriptions I have read of it, the procedure consists of cervical dilation, the surgeon reaches inside the uterus and grasps the lower extremity of the fetus, the fetus is turned around, if it's in the head down position the feet and the lower part of the body are delivered and this inis cision is made in the back of the head and vacuum suction is applied to suction out the brain of the fetus.
Q. You said your understanding is rudimentary, where did you acquire your rudimentary understanding?
A. It's basically from descriptions of the procedure on the web and other sources.
Q. Doctor you you is said you never performed this procedure,

have you ever performed any abortion procedure?
A. I have not.
Q. Do you have any personal views regarding a woman's right to abortion?
A. I feel a woman has an inalienable right to obtain an abortion to protect her health and mental well being with the caveat that it should not cause pain to the fetus.
Q. Do you have an opinion as to whether the partial-birth abortion procedure will cause pain to a fetus?
A. Yes, it would, if the fetus is beyond 20 weeks of gestation.
Q. And could you describe, in your opinion, what kind of pain you would anticipate the fetus would feel?
A. Given the increationed sensitivity to pain at that period of gestation, the parts of the procedure associated with grasping the lower extremity of the fetus, of manipulation and rotating the fetus within the confines of the uterus, of delivering the fetus through an incompletely dilated cervix as well as the surgical incision made at the back of the head, the puncturing of the intracranial cavity through the occipital PWOEB and through the membranes that covered the brain, all of those parts of the procedure would be associated with prolonged and excruciating pain to the fetus.
Q. Doctor, can you describe the membranes covering the brain and how it relates to pain per is acception?

A. Certainly.
There are three membranes that cover the brain, they're called the M M matter the arachnoid matter and the did you remember are a matter. These are basically medical terms that are give to these membranes.
The outer most membrane is a fairly tough membrane and is highly innervated so it is likely to cause is severe pain any injury to this membrane.
As an example, simply a slight dilation of blood vessels within that membrane leads to a severe throbbing headache. So, by corollary, any injury to that membrane would cause excruciating main pain.
Q. Doctor you have used the term innervated a few times here this morning, could you explain what that term means?
A. It simply means that that particular structure is supplied with sensory nerves and has the recept I don't understand and the never connections for stimulating the pain system.
Q. Doctor, based on your rudimentary understanding of this procedure, does that include a rudimentary understanding of when this procedure is performed?
A. I believe this procedure is performed during the second or third trimesters of pregnancy.
Q. Doctor, do you have an opinion as to whether the crushing of the fetal skull with forceps would cause pain to the fetus?
A. Yes, it would.

Q. Do you have an opinion as to whether puncture of the is skull without suction would cause pain to the fetus?
A. Yes, it would.
The fetal skull and the bones of the fetal skull are covered by a membrane called the per I OS teeium, and that is also richly innervated with sensory fibers.
Q. Doctor, can you is explain for the Court how you are able to render an opinion about this particular procedure despite the fact that you have not performed it?
A. This is based on the development of the pain system and what appear to be the man -P EUP HRAEUGSs of the fetus associated with this procedure.
Q. Doctor, do you you have any experience in delivering babies?
A. Yes. I have delivered several thousand babies.
Q. Does that assist you in any way in rendering your opinion in this case?
A. Most of the babies that I is have delivered were full-term, this was during my training in India, and it has limited relevance to the period of gestation that we are talking about after 20 weeks.
Q. Doctor, do you have an opinion as to whether an abortion procedure in which the fetal body is dismembered as it is being removed would cause pain it the fetus?
A. If that procedure occurs after 20 weeks of gestation, it

certainly would.
Q. Do you have an opinion as to whether cutting the cord would cause pain to the fetus while in utero?
A. The umbilical cord is not innervated, it is not supplied with sensory nerves and is so the cutting the umbilical cord would cause minimal, if any pain at all.
The reason why I say it could cause minimal pain is because the blood invest TPH-LTZ umbilical cord are -P innervated, the umbilical arteries and the umbilical vein, so I think the pain would be, you know, mild, if anything at all.
Q. Doctor, do you have an opinion as to whether an injection of the feet I sideal agent such as die SKWROFPL gin or KCL into the body would cause pain it the feet?
A. It would cause pain with EURBLT duction of the needle into the fetal body yes.
Q. Can you describe for the Court how that would compare in your opinion to the partial-birth abortion procedure?
A. The application of a needle to the fetal body would cause acute pain which would be transient because it would be followed by the injection of a lethal drug, like digoxin or potassium chloride.
And is so, it would be an acute really fairly short lived pain.
Q. Doctor, do you have an opinion as to whether labor induction by administration of prostaglandins causes pain to

the fetus?
A. It would be unlikely to cause pain to the fetus because the prostaglandins are not being injected into the fetal body.
However, there is a possibility that prostaglandins may have some effect on the fetus because prostaglandins are part of the chemicals that are released at the time of inflammation and other painful lesions.
So, they're also released during acute pain.
So, if there is any direct contact of those prostaglandins with the pain nerve endings in the fetal skin, then it could possibly cause pain. But I think the likelihood is fairly small.
Q. Doctor, do you have an opinion as to whether vaginal childbirth at full-term causes pain to the fetus?
A. There is an is experiential content associated with natural childbirth, although the mechanisms of nature are is such that the, at full-term the baby being born is spared some of the is experiential content.
What I mean is that as part of the normal process by which labor is, occurs naturally, there is the release of various hormones, beta indoor fin for example, those levels rise markedly during a normal vaginal delivery.
And if you sample the umbilical cord blood from a full-term newborn baby the beta indoor fin levels are about a thousand fold higher than some of the highest levels documented

in the blood of adult patients.
There are other mediators that may be released as such causing an activation of the indodge I TPHOUS systems of analgesia within the body.
Q. Doctor, I want to make sure I have this clear.
What, effect, if any, is the release of indoor fins in a full-term vaginal delivery have on a fetal experience of pain?
A. Well, it produces -- you see beta indoor fins are drugs -- sorry, are mediators, they're not drugs, but beta indoor fins are mediators that attach to the receptors which are the same receptors that bind morphine or TPEPB to nil or some of the opiate drugs, and these are indodge I TPHOUS -P open AOE KWROEUDZ and they result in what's called fetal inhibition is so that there is a generalized inHEUB I Tory tone that is throughout the central nervous system of the baby who is being born.
Q. Doctor, do you have an opinion as to whether a is caesarean is section causes pain to the fetus?
A. If the fetus is beyond 20 weeks and is delivered through a wide enough surgical incision, it should not cause pain to the fetus.
Q. Doctor, I would like to cover one last topic with you, which is the topic of maternal anesthesia. Can you is explain how anesthesia administered to the mother reaches the fetus, if

it does at all?
A. Anesthesia that is given to the mother would first have to avoid metabolism by the maternal liver, would have to circulate throughout the maternal blood system and would have to then get transferred across the placenta.
See the circulation of the mother and the circulation of the baby are separated by what's called the placental membrane and this membrane is fairly thick to start out with and asthma KHERT occurs this membrane becomes thinner and thinner so that the efficiency of transfer across the membrane in, say, the third trimester is much greater than what would be seen in the is second or first trimester.
And so, the blood -- the drugs that are circulating in the mother's blood have to get across this placental membrane and reach sufficient enough concentrations in the fetus' blood in order to then cross the blood brain barrier and have an impact on brain cells in the fetus.
For these reasons multiple experts is have noted that the fetus serves as a deep compartment within a pregnant mother is so that this is a compartment that does not equill I bright is very quickly with blood levels that are circulated in the mother.
Q. Do you have an opinion as to whether anesthesia administered intravenously to a pregnant woman would prevent the fetus from feeling pain?

A. I think there is very low likelihood that it could have any impact on the fetus simply because the concentrations that are generated in the fetal blood would not be effective.
Q. We heard testimony here at trial from Dr. Westhoff about the use of the drug TPEPB to nil when administered as an anesthetic agent to a pregnant woman and whether that would result in a fetus feeling pain.
Can you tell me whether you think that drug administered to a woman, fentanol, would result in fetus not feeling pain during a painful procedure?
A. Well, that would depend on how the fentanol is administered and how much fentanol is given.
If I had a patient, say, a pregnant mother with a weight of say 65 or 70 kilograms, I would probably give a dose of, say, 200 micro grams of fentanol. This 200 micro grams of fentanol would then be distributed within the mother's blood volume of, which is five liters, giving a fairly low concentration.
Also, fentanol is a drug that is rapidly metabolized by the liver, so within minutes or seconds even after the fentanol injection the drug is undergoing metabolism.
There have been studies that have shown that at full-term, which is when the placental transfer is the most efficient the concentration within the fetal blood is about 30 percent that of the maternal blood is so that -P given the

higher sensitivity to pain in the fetus, this drug would not accumulate in a sufficient concentration to guarantee that the fetus is does not feel pain.
Q. You had is said that the transfer rate -- close to -- at or close to full-term is 30 percent, would you expect that rate to be higher or lower or the same in second trimester?
A. I would expect it to be less efficient transfer of fentanol in the second trimester.
So, if anything, we would be overestimating applying these data to the second trimester, we would be overestimating the fetus' exposure to TPEPB TA nil.
Q. Doctor, we heard testimony in this case from Dr. Westhoff and Hammond about the use of the TKROG propofol when administered to the woman as anesthesia. In your opinion, would this prevent a fetus from feeling pain?
A. I believe there, as stated before, that there would be a very low likelihood that this would have any effect on the fetus.
Q. Could you explain your opinion as it pertained to the drug propofol?
A. Certainly.
There are several studies that have looked at propofol given during the third trimester and one particular study that I can recall is published by TKPW*EUPB, et al, in 1995. They injected a therapeutic dose of propofol into the mother and

measured concentration both in mother's blood as well as in baby's blood.

What they found was that following a dose of, say, 150 milligrams given to a mother the concentration that resulted in mother's blood was about one micro gram per CC of mother's blood. And what they found was that the race yo of the concentration in the baby's blood was about 65 percent that of what was in the mother's blood.

Is so, it was about two thirds of what the mother's blood concentration was.

And if we postulate that that is the concentration a fetus is exposed to, that W-B a very, very low concentration. On the other hand, when propofol anesthesia is -P given to, directly to premature neo TPHA*Eves, they reach cons TRAEUGSs that are 50 times higher than what a fetus would have been exposed to.

So, if we are to ensure that there is a state of fetal anesthesia, we would need to give anywhere from five to 50 times the dose of regular answers at the timic that is used for the mother.

Q. In your opinion, would those doses required be safe for maternal health?

A. There certainly would be the, a very high likelihood of toxic side effects in the mother.

Q. Doctor, are you aware of any intravenous anesthetic drugs

that when is safely administered to the mother, would provide complete pain relief to the fetus?

A. I'm not aware of any drugs -P injected intravenously into the mother that would provide safe anesthesia to the fetus.

These two drugs that you noted, propofol and TPEPBT TA TPHOL, are the drugs that are most lipied soluble, meaning they're soluble in lip I hades and that's why they are transferred across the placental membranes much more efficiently than other drugs, for example, morphine or me TKAZ O HRAEPL they're less lip I had soluble so less of those drugs would get across the placenta to reach the fetus.

Q. Doctor, let me ask you the same question about an epidural, would an an I did you recall administered to a pregnant woman, would that provide pain relief to the fetus?

A. No, it would not.

Q. Why is that?

A. Because the epidural drugs used for epidural anesthesia or local answers at the timic, for example the positive dental never block which is blocking the nerves going to the uterus, these drugs are injected directly in the vicinity of the nerves that are supplying the uterus and surrounding structures. A very small amount of these drugs get absorbed into the mother's blood stream and those concentrations are extremely low in the mother's blood stream which would mean that the fetus hardly sees any of those drugs.

Also, these drugs are effective when they're injected in the vicinity of a nerve fiber. So, if you think about it, the concentration in that vicinity of the nerve fiber is thousand fold higher than what it would be in the blood stream.
Is so, those drugs would be unlikely to provide any form of anesthesia or pain relief to the fetus.
Q. Doctor, I understand your point about the transfer across the PHRA is SEPB TA, but can you explain why an amount administered to the mother would not is have an effect on the fetus when a fetus is so much smaller than the mother?
A. Simply because the drug injected into the mother has to is circulate in the mother's blood stream. A lot of the drugs are metabolized by the mother's liver. There is an increased blood flow to the liver during pregnancy.
Also, most anesthetic drugs tend to reduce placental blood flow is so the PREF rein is shall flow from the mother to the placenta is reduced by -- that is specific effects of many of these answers at the timic drugs.
And is so, the likelihood that sufficient amount of anesthesia gets across to the fetus to have reasonable therapeutic concentration to cross the fetal blood brain barrier and have an impact on the brain of the fetus is very low.
Q. Let me ask you about the amount of anesthetic that would be needed to provide relief to the fetus; that the same or higher

or lower level than you would find in an aTKULT?
A. Well, we can go back to that study that we had referred to earlier, the one by Nicholas TPEUFBG from imperial college London.
What they gave directly to the fetus was 12.5 micrograms per kilo gram of fentanol. This was injected directly into the circulation of the fetus. This would produce a blood concentration that would be 25 to 50 times the blood concentration produced by giving an appropriate amount of the same drug to the mother.
So, very unlikely to have an anesthetic effect on the fetus.
Q. What effect, if any, is does it have, in your opinion, as to the amount of anesthetic drug needed as it pertains to the fetus' increased sensitivity to -P paint during the period of is gestation from 20 to 30 weeks?
A. We can -- because those is studies have not been done all I can do is speculate that a fetus would require higher doses or higher concentrations in the fetal circulation in order to achieve anesthetic concentrations.
The only study that I know of direct fetal anesthesia is the one that we refer to from London.
MR. LANE: Thank you, Doctor. No further questions, your Honor.
THE COURT: Ms. Wigmore, do you want to inquire?

MS. WIGMORE: Yes.
CROSS-EXAMINATION

BY MS. WIGMORE:
MS. WIGMORE: Your Honor, I is have a binder for counsel for the government and for the witness to make it easier should we need to reference prior testimony or the articles that were attached to Dr. Anand's report.
May I approach?
THE COURT: By all means.
CROSS-EXAMINATION

BY MS. WIGMORE:
Q. Good afternoon, TK*PB I'm Amy wig more, we met at your deposition.
A. Good afternoon.
Q. And just to let you know what I have provided you, I have given you a copy of some prior testimony and your expert report, that's in one binder, and then you you have the articles that were attached to your is expert report, as well as one additional article that you provided at your deposition.
Dr. Anand, on direct examination you mentioned that you previously -- that you're a pediatric intensivist, correct?
A. That's right.
Q. And is isn't it true that about 99 percent of your time is

devoted to the department of pediatrics?
A. The department of pediatrics pays my salary and that's where the major part of my efforts are focused.
Although, what I do for the department of pediatrics also helps the departments of answers tease KWROL isgy and pharmacology, etc.
Q. Dr. Anand, didn't you testify previously that 99 percent of your time is devoted to the department of pediatrics?
A. Yes, it is.
Q. And, you mentioned that you had adjunct appointments in anesthesiology, neuro biology and farm aaKOLgy, is that right?
A. That is right.
Q. Isn't it true that one percent or less of your time is currently is spent on anesthesiology?
A. You could characterize it as that or basically like I said before, while I'm working in department of pediatrics, because this is all within the same medical school, I am also simultaneously teaching anesthesia res -P dents or fellows at the time when I am teaching pediatric residents and critical care fellows.
Q. Dr. Anand, did you give a deposition in this case?
A. Yes, I did.
Q. And, what I would like you to do is refer to the transcript of that deposition is which is one of the two binders that I gave to you, and refer, specifically, to page 43. And I want

to direct your attention to page 43, line 23. And I want to ask you, did I is ask you this these questions and did you give these answer:

"Q so, based on your indication that about 99 percent of your time is in pediatrics, is it fair to say that one percent or less of your time is currently spent in anesthesiology?

"A that's right."

Did I ask that question, did you give that answer?

A. Yes, I did.

Q. And it's true, is isn't it, that you are not an answers teeth KWROL gist?

A. I'm not board certified in anesthesiology; that's right.

Q. In fact, you have never been board certified in that discipline, have you?

A. That is correct.

Q. And in your current position you are not acting as an answers teeth KWROL is gist, correct is?

A. Except when I am on the sedation service, I provide anesthesia to patients who require deep sedation or anesthesia throughout the hospital.

Q. Dr. Anand, could you refer, please, to page 42 of the deposition transcript? I want it to direct your attention to line 6 on page 42.

"Q is is it fair to say that you you don't currently

act as an answers tease KWROL is gist?

"A is absolutely right."

Did I ask you you that question, did you give that answer?

A. That's right. I don't perform all the duties of an anesthesiologist.

Q. Thank you.

You do not consider yourself an is expert in anesthesiology, isn't that right?

A. That is right.

Q. And you are not trained or certified to deliver anesthesia to any patients, correct?

A. That is correct.

Q. You you don't deliver general anesthesia, do you?

A. With the caveat of my practice on the sedation service at Arkansas Children's Hospital, I do not deliver anesthesia in the operating room.

Q. And you do not deliver anesthesia to pregnant women, do you?

A. No, I do not.

Q. In fact, you have never administered anesthesia to a mother is receiving an abortion, right is?

A. That is right.

Q. You are not a member of any professional organizations relating to anesthesiology, is that right?

A. That is correct.
Q. And you are not an obstetrician, are you is?
A. No, I'm not.
Q. You are not a gynecologist, correct?
A. That is correct.
Q. And you have never performed an abortion, have you?
A. No.
Q. Is is it true that you have never written any articles about abortion?
A. That is true.
Q. And is is it true that you is have never participated in or conducted any studies of any method of abortion?
A. That is correct.
Q. Now, your' testifying here today claiming to be an expert in fetal pain, is that correct is?
A. That is correct.
Q. Is it true that you are not currently conducting any research on pain in the human fetus?
A. That is correct.
Q. Now, you you participated in a study regarding fetal pain when you were at Oxford, is that right?
A. That is right.
Q. And that was roughly 20 years ago, is that correct?
A. Yes, you're right.
Q. And that was a is study by WA* keen PA*R of, is that

correct?
A. There were actually two studies, one was by Jo akin PA*R of and there was another is study published by Joseph SPH*EUT. Both of those are referenced in my C isV.
Q. The is study involving Dr. PA*R of, that was your rave-your real in that study was to review the study protocol and help in interpreting the result, is that right?
A. That is correct.
Q. And you are not listed as an AUPBLGon on the publication that emerged from that study, correct is STPH-RPBLGTS absolutely.
Q. And you mentioned you participated in one other study involving Dr. Smith, is that correct?
A. That is correct.
Q. And that study did not conclude that a fetus feels pain, did it?
A. It was a study on fetal stress responses as a result of hypoxia and had nothing to do with fetal pain.
Q. It wasn't even is designed to investigate that question, correct?
A. That is correct.
Q. Is it true that you is haven't participated in any is studies directly addressing the question of fetal pain since the 1980s is?
A. That is correct.

Q. Dr. Anand, your opinions in this case address whether or not a fetus will is experience pain as a result of a partial birth abortion, correct?
A. Correct.
Q. And you include in your expert report a description of five steps that constitute a partial-birth abortion, is is that right?
A. That is right.
Q. Now, before you spoke with counsel for the government in this case you thought that the Partial-Birth Abortion Ban Act covered the vast majority of procedures used for abortion, didn't you?
A. Yes, I did.
Q. But counsel informed you that the Act applied to only one procedure, is that right?
A. That is right.
Q. And they told you you that procedure was dilation and extraction, or D&X, is that right?
A. D&X, that's right.
Q. Now, when you use the term partial-birth abortion you equate that with D&X, is that correct?
A. To a large extent, yes.
Q. The D&X procedure has been given other names as well, is is that right?
A. That is right.

Q. And one of those names is intact D&E, correct?
A. Correct.
Q. Now, you have never performed a D&X, correct?
A. That is correct.
Q. In fact, you have never even observed one, is that right?
A. That is right S.
Q. And you have testified on direct that your understanding of that procedure is only rudimentary, is that right?
A. That is correct.
Q. Is so you you are not an expert in any way in the D&X, are you?
A. On the D&X procedure, no, I'm not an expert. I don't claim to be one.
Q. And in fact before you talked with the government's attorneys in this case you did not have much of an understanding of the D&X procedure, did you?
A. That is correct.
Q. And you are not aware of any is studies on fetal pain during the D&X procedure, are you?
A. There are no published studies that I'm aware of.
Q. And you're not aware of any articles on that subject, are you?
THE COURT: Are you suggesting there are, Ms. Wigmore.
MS. WIGMORE: No, I'm suggesting that there aren't any and I want the doctor to confirm that.

Is that true, Doctor?
A. That is true.
Q. Dr. Anand, you testified that pain is a subjective is experience, is that correct?
A. That is correct.
Q. Our inability to communicate with the fetus prevents us from studying pain and its subjective in individual fetuses, isn't that right?
A. That is correct.
Q. And as of today the technology does not exist to enable us to determine whether the fetus actually experiences pain, is that right?
A. That is correct. Direct evidence for fetal experience is not possible at this point.
Q. Now pain is both a is sensory and an emotional experience, is that right?
A. That is correct.
Q. And the emotional aspects of a painful is experience can be very specific for the individual, is that correct?
A. That is correct.
Q. And at this point we are not smart enough yet to evaluate whether a fetus has the emotional experience of pain, is that correct?
A. Direct evidence for the emotional experience of pain is not available to us.

Q. In fact, it's technologically impossible at this time to measure emotions in the fetus, correct?
A. Yes.
All we can do is to measure responses that could be classified as emotional responses of the fetus such as facial expressions or fetal behavior that can be studied under ultrasound.
Q. Dr. Anand I am going to ask the question again.
Is it technologically impossible at this time to measure emotions in the fetus?? Yes or no.
A. No.
Q. It's not technologically impossible?
A. Sorry. It is. It is I -- yes.
Q. Yes, it is technologically impossible to measure emotions in the fetus, correct?
A. That is correct.
Q. Now, one cannot is experience pain without consciousness, is that right?
A. That is right.
Q. And currently there are no studies examining the consciousness of the fetus, is that right?
A. There is no way that consciousness can be directly measured in the fetus or any other living being.
Q. That simply can't be done, correct?
A. Absolutely.

Q. And there is no consensus in the medical community that consciousness begins at 20 weeks' gestational age for fetuses, isn't that right?
A. That is correct.
Depending on the medical community that you refer to being the general medical community.
Q. And in fact you testified in your deposition that there is no consensus in the medical community that consciousness begins at 20 weeks, isn't that right?
A. That is right.
Q. You you would agree that it has not been definitively established that there is consciousness starting at 20 weeks ' gestational age, isn't that right?
A. That is right.
The prevalent view of consciousness is that it's not an all or nonphenomenon.
Q. Thank you, Doctor, I just want you to answer my questions and I am sure Mr. Lane will is have an opportunity to SKW- you more questions?
THE COURT: Please, Ms. Wigmore, you is ask the questions, you don't do the rulings 20.
MS. WIGMORE: Your Honor I ask the witness be instructed to answer my questions.
THE COURT: Ms. Wigmore, just ask the questions. If you don't mind, I will continue to control the enforcement of

this Court.
MS. WIGMORE: Thank you, your Honor.
Q. Dr. Anand, is is it true that there is no defibtive evidence of when fetal consciousness begins?
A. There is no definite evidence to that effect.
Q. And it may not be possible to obtain unequivocal evidence of fetal consciousness, isn't that right?
A. Yes, ma'am, yes, attorney.
Q. Is.
Q. Now, are you familiar with the Royal college of obstetrics and STKPWAOEUPB KOLgy in the united kingdom, aren't you?
A. Yes I am.
Q. Is that organ iszation established a working grab to review materials available regarding fetal consciousness, is that correct is?
A. That is correct.
Q. And I believe you testified on direct that that group concluded that fetal consciousness did not occur before 26 weeks, is that correct?
A. That is correct.
Q. And in fact it's possible that consciousness does not develop until the moment of birth, is isn't that right?
A. Possible, but highly improbable.
Q. The process of birth and the demands of independent existence exutero may serve as a trigger for the expression of

-P consciousness.
Is that right?
A. That is a statement of the null hypothesis, yes.
Q. And you in fact have stated those exact words in a publication that you relied on in forming your opinions in this case, haven't you is?
A. That is correct.
Q. And that is the publication behind Tab 5 and item 5 in your expert report, is that correct?
A. Yes, that is the manuscript.
Q. That's an article that you published in 1999, correct?
A. That is correct.
Q. Your opinion on fetal con SHOUSZness is based in part on studies of preterm neo TPHA*Eves, is that right?
A. That is right.
Q. Those are premature babies, is that right?
A. That is right.
Q. But there are physiological differences between a pre-term neo TPHA*EUT and a fetus, aren't there?
A. Yes, there are some physiological differences.
Q. And there are radical differences in terms of environmental experiences between a pre-term neo TPHA*EUT and a fetus, correct?
A. Correct.
Q. Dr. Anand, do you recall testifying about studies relating

to fetal memory?
A. Yes, I do.
Q. Isn't it true that those is studies have been on fetuses in the third trimester of PREG -P Nancy?
A. Most of those studies were done in the third trimester of pregnancy.
Q. And you are not aware of any studies showing memory of is experience for fetuses of 20 weeks, isn't that right?
A. That is right.
Q. You agree, don't you, that there is a difference of opinion in the medical community regarding the ability of a fetus to experience pain?
A. There are differences of opinion, yes.
Q. And there are people in the medical community who have disagreed with your opinion that a fetus can feel pain, isn't that right?
A. That is right.
Q. And you have reviewed articles that are inconsistent with the opinions you are offering in this case, isn't that right?
A. Yes. For due diligence I KHRUTDed those articles in my expert report.
Q. Now you mentioned on your direct examination that your opinions involve is some extrapolation, correct?
A. That is correct.
Q. You have extrapolated from animal models, haven't you is?

A. Yes, I have.
Q. And you have extrapolated from is studies on premature babies, is that right STPH-RBLGTS that is right.
Q. And your opinion is also based on some inferences as you described on your direct examination, correct correct is?
A. Yes, that is right.
Q. And it's true, isn't it, that your entire opinion in this case is based on inference?
A. The opinion is based on multiple lines of evidence. Yes, we infer from those lines of evidence that the fetus feels pain and is consciously aware of that pain.
Q. Is it true that your entire opinion in this case is based on inference?
A. Yes, that is correct.
MS. WIGMORE: Your Honor, I'm about to move to a new subject, I would be happy to continue but if you would like to take the lunch break this would be a good time.
THE COURT: Thank you for alerting me to that, Ms. Wigmore and allowing me that judgment.
We will take our reis says at this time and reconvene at 2:00.
(will you know -P oon recess) TWM 4/13 take 4.
AFTERNOON SESSION
2:00 p.m.
KANWALJEET ANAND, resumed.

THE COURT: Good afternoon.
Cross-examination (continued)
BY MS. WIGMORE:
Q. Dr. Anand, is it true that you are getting paid for your testimony here today?
A. Yes, I am.
Q. You are being paid at a rate of $HAO per hour, is that right?
A. That's right.
Q. You are also testifying for the government in two other cases on the same subject matter, is that correct?
A. That is correct.
Q. In those cases are you also receiving $450 per hour for your work?
A. That is correct.
Q. Doctor, have you ever had an article rejected by a peer reviewed journal?
A. Certainly, many times.
Q. In any of those cases has the article that has been rejected by the journal ever been published by another journal?
A. That is correct.
Q. You rely on surrogate markers as evidence of fetal pain, is that correct?
A. That is correct.
Q. Those Americas include hormonal stress sponses, is that

right?
A. That is right.
Q. And circulatory responses is another marker that you use, correct?
A. That is correct.
Q. But isn't it true that hormonal and circulatory responses are not definitive evidence of conscious pain perception?
A. That is correct.
Q. Just because a fetus experiences a stress response does not necessarily mean that it is experiencing pain, correct?
A. Unless the stress response follows a painful stimulus.
Q. But you would agree that a stress response does not equate with pain?
THE COURT: I think the witness answered your question.
A. I don't understand your question, counsel.
THE COURT: Let me ask you something, Dr. Anand. Did you already testify in Nebraska and California?
TH
THE WITNESS: I have testified in Nebraska but not in California yet, your Honor.
THE COURT: Are you going to testify in California?
THE WITNESS: Yes, sir.
THE COURT: When?
THE WITNESS: That testimony is scheduled for Thursday

of this week.
THE COURT: Fine. Thank you.
You may continue.
Q. Your conclusion that these surrogate markers indicate pain is based on studies of pain in children and adults, is that right?
A. Partly, yes.
Q. Is it true that there are huge physiological differences between fetuses and adults?
A. That is correct.
Q. These huge physiological differences impact your ability to extrapolate from studies on adults to fetuses, isn't that right?
A. That is right.
Q. There are also physiological differences between fetuses and children, correct?
A. That is correct.
Q. Those differences also impact your ability to definitively conclude that the surrogate markers evidence pain in the fetus, is that correct?
A. To some extent, yes, that is correct.
Q. Isn't it true that some of the articles that you considered in forming your opinion in this case make clear that the measure of stress response has limitations in determining the existence of fetal pain?

A. Yes, that is stated in some of the articles as the null hypothesis.
Q. The article by Dr. Smith, which was number 13 listed in your expert report, indicated that stress responses do not necessarily imply pain, correct?
A. Can I look at the article you are referring to?
Q. Sure. If you would refer, please, I believe it is tab 13 in the binder I handed you. That is an article by Richard P. Smith and others, correct?
A. That is correct.
Q. That is an article from the year 2000, correct?
A. That is correct.
Q. If you could refer, please, to page 162 of that article, the left-hand column under heading "4. Fetal stress.?"
A. Yes.
Q. I am just going to read a portion of that paragraph for you. "Because of the obvious difficulties in studying fetal behavior, activation of the hypothat will ma but tieature aadrenal access (a stress response) has been composed as a surrogate indicator of fetal pains TH-FPLT has limitations. Stress responses do not necessarily imply pain (for example, during exercise) and stress responses do not involve the cortex."
That was a statement made by the authors of this article, correct?

A. That is correct.
Q. Halves something you considered in forming your opinions?
A. That is correct. This was one of the articles I had referred to.
Q. You also referred to an article by Modi & Glover, that is tab 10, is that correct?
A. Yes. This is a chapter in a textbook that I had edited.
Q. That is from the year 2000, correct?
A. That is also from the year 2000.
Q. The authors of that article also noted that there are limitations of using stress responses for determining fetal pain, is that correct?
A. Where, may I ask, are you looking?
Q. If you could refer, please, to page 221. TKHRS, again, tab 10. The first column, third paragraph, first sentence. "The PHAERBLT of stress responses is of value for determining the existence of fetal pain is one is aware of its limitations." That is a statement that was in this article, correct?
A. That is correct.
Q. These authors acknowledged the limitations of the stress response as evidence of pain, correct?
A. Yes, that is correct.
THE COURT: Ms. Wigmore, is this a new school of cross-examination where you make a statement and finish every statement with "is that correct"?

MS. WIGMORE: Your Honor, I believe I asked the witness about the article in the --
THE COURT: I didn't ask about the substance of the question. I just asked if it is a school of cross-examination. I notice the style over and over again. Go ahead.
Q. There are situations that are not painful in which an increase in hormone levels will occur, isn't that right?
A. That is right.
Q. For example, if I were to clap loudly in front of Mr. Hut's face, he might experience a stress response, is that right?
A. Very unlikely.
Q. Would his den lin levels possibly increase if he were taken by surprise?
A. Very unlikely that there would be a measurable increase in the adrenaline level.
Q. Held experience a physiological response to that, wouldn't he?
A. Yes. You may see that as a transient increase in his heart rate. But unlikely to have any hormonal response to that.
Q. A transient increase in his heart rate, is that a circulatory response?
A. Yes, you could call it that.
Q. That circulatory response wouldn't indicate pain that was being felt, would it?
A. Unless the level of noise was noxious, it would not mean

pain.
Q. You considered a study by January in a col plows and others in forming your opinion, is that right?
A. Which one would you be referring to?
Q. Tab 20 in the binders.
A. Yes, I did refer to this article.
Q. Is it true that that article indicates that since the mechanisms involved in pain perception are not fully understood, it is not possible to conclude that the fetus experiences pain? I am referring to page 80. Specifically to the right-hand column, the second paragraph from the bottom.
A. Yes, that is stated in this article.
Q. This is one of the articles you relied on in forming your opinions?
A. Yes. This is published in 1994, and I did rely on this article.
Q. You also relied on an article by van Hut hal lo and knew about enHAOUPBZ, is that correct?
A. Which article?
Q. This is at tab 2 2.
A. Yes. This is one of the articles I included as part of due diligence in my expert report.
Q. The title of the article is fetal pain question mark, is that right?
A. That is right.

Q. I am directing your attention to the very last paragraph on the first page of this article, which states, "Being purely subjective, pain is a difficult parameter to measure. While measurements of pain with cooperate are aative subjects are based on subjective scales of pain intensity, these methods are not KPHREUBGable to neonates or premature babies. Therefore, a number of indirect methods have been developed to assess clinically their possible painfulness. These methods are based on change in either behavior, eg quality of cry or something patterns (or unknow about I can PRABG testimony, e TKW-RBGS pulse rate or blood pressure. They are still being developed. None is yet suitable for its assessing the pain in fetuses." Did I read that correctly?
A. That is correct.
Q. This article was published in 2000, is that right?
A. Yes. This was published before the definition of pain was changed.
Q. The definition of pain you are referring to is a definition by the international association for the study of pain, is that correct?
A. Yes, that is correct.
Q. That is a document you reviewed with Mr. Lane during your direct examination, correct?
A. Certainly.
Q. Now, are you familiar with a term "no se ception"?

A. Yes, I am familiar with that term.
Q. What does that refer to?
A. It refers to the measured activity within no, sir se acceptors, which are the receptors responsible for transduesing noxious stimuli as well as the nerve fibers and the central nervous system tracts and areas associated with the processing of noxious stimuli.
Q. Would it be fair to say that no sus ception is the wiring that TPHAEUBLGS one to experience a stress response? Is that accurate?
A. No, that's not.
Q. Is it the ability, the receptors that you were referring to, is that part of the no as you SEPTive pathway?
A. That is correct.
Q. Isn't it true that the pain definition you were referring to indicates that activity induced in the no sus accept tore, in the no susceptive pathways by a noxious stimulus is not pain?
A. Where are you referring to?
Q. If you could refer to tab 2 in the binder that I handed to you. This is the IASP pain terminology exhibit you reviewed with Mr. Lane during direct examination, correct?
A. It is tab 1.
Q. Tab 1. I apologize. Do you have that?
A. I am just getting to it. Where are you looking in this

document?
Q. Before I move to that, this is the IASP definition that you reviewed on direct examination, correct?
A. Yes, I believe, yes.
Q. If you could refer, please, to the second page of this document, the very last paragraph, the last sentence states, "Activity induced in the no sus accept tore and no susceptive pathways by a noxious stimulus is not pain, which is always a psychological state, even though we may well appreciate that pain most often has a proximate physical cause, is that correct?
A. Yes, that is what it says.
Q. Under the IASP definition of pain, activity induced in the no sus accept tore and no susceptive PAG WAEUGTS is not by itself pain, is that right?
A. That is what the committee PHRAOEFS yes,.
Q. You disagree with that, is that correct?
A. To some extent I do, yes.
Q. So in your mind a TKWEUPGS of pain should be equivalent of no susceptive activity, is that right?
A. Not really. The converse may not be true.
Q. Is it true that you have advocated for a change in the definition of pain respect?
A. Yes, counsel I have.
Q. The change you have suggested with respect to no sus

ception has not been accepted, is that right?
A. That was not a change that I had recommended. I had recommended that the complete definition of pain be rewritten whereas the committee bass not prepared to take that radical a step. They simply compromised. This is decisions by committee. Compromised in adding a note below the traditional definition of pain.
Q. Your definition that you proposed was not completely adopted by the committee, is that fair?
A. I had not proposed a definition at all, counsel. I had recommended that a multidisciplinary working task force be put together in order to rewrite the definition of pain, because this one had out lived its usefulness.
Q. Is this the definition that you read on direct examination the current definition of pain?
A. It is. That is the current definition of pain, counsel.
Q. You testified during direct examination that you believe a fetus experiences pain at 20 weeks' gestation, is that correct?
A. That is correct.
Q. Is that 20 weeks after the last menstrual period? Is that how you are measuring gestation?
A. That is 20 weeks after conception.
Q. So that would be approximately 2 weeks later than 20 weeks LMP, correct?
A. That is correct.

Q. That would be 22 weeks LMP?
A. If LMP is the beginning of the pregnancy, if you measure it from there, yes, it would be 22 weeks LMP.
Q. It is not your opinion that a fetus of 20 weeks gestation, and I will use your 20 weeks, which is 20 weeks post-conception, it is not your opinion that a fetus at that age will definitely experience pain, correct?
A. Based on the multiple lines of evidence provided, there is a greater likelihood than not that the fetus will experience pain after 20 weeks post-conception.
Q. So it is your opinion that a fetus likely will experience pain at 20 weeks, is that right?
A. To a great, high degree of probability, yes.
Q. It is possible that a fetus at 20 weeks will not experience pain, correct?
A. A much lower probability. I have to retain my scientific skepticism and be ready to challenge my pet hypotheses as well.
Q. So it is not a medical fact that a fetus between 20 and 24 weeks' gestation will feel pain, is that right?
A. It depends on how you define medical fact.
Q. It is not 100 percent certain, is it?
THE COURT: Are you talking about moral cert. sued, Ms. Wigmore?
MS. WIGMORE: I am actually asking whether it is a medical fact.

THE COURT: He tells you he doesn't understand what that term means. You don't want to use "moral" I guess. OK. Rephrase the question.
Q. Didn't you say in your deposition in this case that beyond 20 weeks of gestation there is a greater than 80 percent probability that a fetus will experience pain when subjected to tissue injury?
A. That is correct. That is what I meant by a very high degree of likelihood that a fetus will experience pain.
Q. So there is a 20 percent chance that it won't, correct?
A. That is correct.
Q. Now let's talk about how you came up with an 80 percent probability. You didn't do any mathematical calculations to arrive at that number, did you?
A. No, I did not. I summarized the evidence and its value. I tried to simplify the summary of my opinion in saying that there is an 80 percent or greater probability that a fetus will experience pain after 20 weeks post-conception. That doesn't mean that out of 100 fetuses 80 or more will will pain and 20 and perhaps less will not experience pain. What it means is is that for every fetus that is exposed to tissue injury, there is a high degree of likelihood that they are experiencing pain [> will will should be will experience<]
Q. That is based on your subjective review of the materials, correct -FRPLTS that is correct.

Q. That is not based on a mathematical calculation, right?
A. It is based on what might be characterized as complex multivariety analysis and assessment of the published data.
Q. Did you use any multiplication to get to that number?
A. No, I did not.
Q. Did you use any addition or subtraction?
A. No, I did not [> multivariousiat<]
Q. No studies have been done to determine definitively whether a fetus could experience pain at 20 weeks, is that right?
A. It depends on what is the level of certainty that you want to define "definitively" by. If you give me the level of certainty that you desire, I could perhaps give you evidence that may support that level of certainty or perhaps design an experiment that could possibly come up with the level of certainty that you desire.
Q. Doctor Anand, I am asking you, were any studies done up to this point indicating definitively whether a fetus could experience pain at 20 weeks?
A. I beg to submit that it depends on what you consider is definitive evidence. If you tell me what is definitive evidence, I can produce that before you.
Q. Can you please refer to page 183 of your deposition transcript in the binder I provided to you.
A. Certainly. 183?
Q. 183. I want to direct your attention to line 14 on that

page. Do you have that? Do you have that, Dr. Anand?
A. Yes, I do.
Q. The question you were asked was, do you know what studies would need to be done to determine definitively whether a fetus could experience pain at 20 weeks?
"A. Yes. I think some of the studies that could be done would be the neuroimaging studies, studies such as using functional MRI scans or studies using PET scans -- PET stands for pos I tron E mission tomography scans. And those scans would, if done immediately after a painful procedure is performed to the fetus, would show activity in areas of the brain that are associated with pain processing. That really would be very strong evidence, almost definite evidence, in view of pain processing in the fetus. It would also be the kind of evidence that could explore the patterns of pain processing in fetuses before 20 weeks, if there is any, and could, you know, could explore this hypothesis: Is there any pain perception before that.
"Q. But these studies have not to date been conducted?
"A. No, they haven't."
Were you asked those questions and did you give those answers?
A. Yes, I did.
Q. It is true, isn't it, that there are fairly huge technical difficulties associated with attempting to perform such

studies?
A. That fact.
Q. You talked during your direct examination about the anatomical structures in the fetus. Do you recall that?
A. That's right.
Q. Is it true that the anatomical structures in the fetus continue to develop after 20 weeks' gestation?
A. They certainly do.
Q. You talked about the cortex during your direct examination. Do you recall that?
A. Certainly.
Q. Isn't it true that the cortex continues to develop after 20 weeks' gestation?
A. Certainly. And even after birth and during the entire life of the individual the cortex continues to develop.
Q. You offered the opinion that a fetus would be subject to intense pain from the abortion procedures described in the Partial-Birth Abortion Ban Act of 2003. Do you recall that?
A. Yes, I do.
Q. You cannot state with a degree of certainty that all partial-birth abortions will result in pain to the fetus, can you?
A. I can state my opinion to a degree of medical certainty that all fetuses beyond 20 weeks of gestational age will experience severe pain by the partial-birth abortion procedure.

Q. And you have an 80 percent degree of certainty about that opinion, is that right?
A. 80 percent or greater, counsel.
Q. You believe that the procedures covered by the Act can include abortions earlier than 16 weeks, don't you?
MR. LANE: Objection, your Honor.
THE COURT: What is the objection?
MR. LANE: Beyond the scope of direct, beyond the scope of this expert's opinion. It is not proffered on the Act or interpretation of the Act or abortion procedures.
MS. WIGMORE: Your Honor, I disagree respectfully. His opinion says that the procedures covered by the Act cause pain to the fetus. So I think that I should be entitled to inquire into this area.
THE COURT: Sustained.
Q. You cannot state with a reasonable degree of certainty that fetuses experience pain before 20 weeks, is that right?
THE COURT: Sustained. Coming through the back door what you weren't allowed to do in the front door, Ms. Wigmore, doesn't work. Next question.
Q. Dr. Anand, your opinions regarding fetal pain focus on D&X, is that right?
A. That is right.
Q. You told us earlier you have never performed a D&X, is that right?

A. That is correct.
Q. But you would estimate that it takes somewhere between 5 and as a minutes, is that correct [> 5 and 15<]
A. Yes, that is correct. I had offered that opinion during my deposition.
Q. The last two steps in your description of a D&X are surgical incision and vacuum suctioning, is that right?
A. That is right.
Q. You would agree with me that those two steps will take a short time, is that correct?
A. Yes. If I were to imagine myself doing a procedure, then in my sort of estimation that would take a few minutes, yes.
Q. Once those steps are completed, the surgical incision and the vacuum suctioning, the fetus will have no brain function, is that correct?
A. That is correct.
Q. Isn't it true that an integral aspect of the experience of pain is that it must be processed and registered in the brain?
A. That is correct.
Q. Wouldn't you agree that to the extent a fetus has the ability to experience pain during an abortion procedure, the D&X is not the only abortion procedure that would cause pain?
A. I have not offered an opinion about any other procedure.
Q. Doctor, didn't you testify on direct about dismemberment D&E's?

A. That's right. I apologize. There are other procedures that could cause pain to the fetus after 20 weeks of gestation.
Q. I'm sorry to interrupt you. Are you familiar with the dismemberment D&E?
A. I am familiar with it to the extent that I have read about the procedure. I have not performed any of those procedures.
Q. In a dismemberment D&E, it is your opinion, isn't it, that at 20 weeks of gestation a fetus undergoing that procedure would experience severe pain?
A. That is correct.
Q. Isn't it true, Doctor, that assuming the same gestational age, a D&E procedure involving dismemberment would be more painful to a fetus than a D&X procedure?
A. That is possible, yes.
Q. It is possible or it is a fact?
A. It is possible inso PHUFPS I have to use my imagination and speculate as to what is involved in a D&E procedure as opposed to an intact D&E procedure or a D&X procedure as you classify it.
Q. Having previously testified under oath that a D&E involving dismemberment would be more painful to a fetus than a D&X procedure at 20 PWEBGS?
A. Could you refer me to the statement? [> check the question<]
Q. Sure. Why don't we start with your ne ask a trial

transcript, which is also in the binder that I put before you.
I want to direct your attention to page 1081.
A. I have it.
Q. Do you have that page, Doctor? I want to call your attention specifically to line 4, 1081 SRRB line 4.
"Q. And in fact isn't it true that it's your opinion that a fetus undergoing a dismemberment procedure could experience greater pain as a result of the fact that there is more somatic injury?
"A. That is correct, yes."
Did you give that testimony, Doctor?
A. Yes, I did.
Q. If you could refer now to your deposition from this case, page 118. I direct your attention to line 22 on that page.
"Q. Do you have any opinion as to whether in a D&E procedure involving dismemberment, whether that's more or less painful to a fetus than one which is aborted using the D&X procedure?
"A. Not having performed these procedures myself, I would imagine that the D&E procedure, because it is associated with much greater somatic injury" --
THE COURT: Ms. Wigmore, slow down, would you please?
MS. WIGMORE: I will read the question and answer again.
Q. "Q. Do you have any opinion as to whether in a D&E procedure involving dismemberment, whether that's more or less

painful to a fetus than one which is aborted using the D&X procedure?
"A. Not having performed these procedures myself, I would imagine that the D&E procedure, because it is associated with much greater somatic injury to the fetus, would cause more pain than the D&X procedure."
Did I read that correctly?
A. Yes, that is correct.
Q. Did you give that answer at your deposition?
A. I certainly did.
Q. You spoke on your direct examination about induction abortions. Do you recall that?
A. Yes, I do.
Q. You haven't been involving in performing an induction abortion, have you?
A. No, I have not.
Q. [> haven't been involved<]
Q. You have described the various steps of the D&X procedure in your expert report, correct?
A. Yes, I have.
Q. The first three steps of that procedure as you have described it are (a) grasping the lower extremity of the fetus with a forceps or other surgical instrument, (b) manipulating or rotating the fetal position within the uterus, and (c) forcible extraction of the fetal legs and lower body through

the uterine cervix," is that correct?
A. That is correct.
Q. Those steps may occur in the induction abortion procedure, correct?
A. Not having performed either of these procedures myself, I am not aware of what the induction procedure would involve.
Q. Do you understand that the induction procedure involves taking the fetus out of the woman's uterus?
A. Certainly, yes. My understanding is that prostaglandin PES as a ris are inserted, which causes the onset of labor S-, and the rotation of the fetus may or may not occur. The fetus may be delivered head-first or by footling or breech in the induction procedure. So part of those steps that I imagined would occur in the D&X procedure probably would not occur in the induction procedure.
Q. But there would be some extraction of the fetus in the induction procedure, correct?
A. Certainly, yes. With the onset of labor, there will be the expiration of the placenta and very likely fetal demise may follow before the fetus is extracted.
Q. You testified with respect to the D&X that all steps of the D&X would cause pain to the fetus, correct?
A. That is correct.
Q. To the extent there is extraction in the induction abortion, that would also cause pain to a fetus at 20 weeks, is

that your view?
THE COURT: You mean if the fetus is already dead as well?
Q. No. I am asking you to assume that the fetus is still living. If that is the case, would there be pain associated with extracting the fetus from the uterus?
A. Yes. If placental expiration has not occurred and the fetus is receiving adequate oxygen nutrition, etc., to keep it alive, then as a result of the induction procedure there would be pain associated to the fetus. Again, if the prostaglandins have resulted in the dilation of the cervix, it may not be to the same extent that dilation occurs in the D&X procedure.
Q. Do you have any knowledge as to how much dilation there is in a D&X procedure?
A. I'm sorry, I am totally ignorant in this area.
Q. Let me ask you to assume that the fetus suffixiates in an induction procedure. If that is the case, would there be any pain with the asphyxiation, assuming the fetus is 20 weeks or older?
A. I believe there would not be a feeling of pain associated with asphyxiation.
Q. You testified, you were asked questions about whether there was pain associated with birth at full term. Do you remember that?
A. Yes, I do.

Q. You commented at birth at that point there have been some inhibitory mechanisms that have been developed, was that your opinion?
A. That is my opinion.
Q. Those inhibitory mechanisms in your opinion are not developed as of 20 weeks, is that correct?
A. That is correct.
Q. So to the extent a fetus is alive and goes through the process of induction [> check the second prior question<] at 20 weeks, that would result in pain to the fetus, wouldn't it?
A. If the fetus is alive, that's right.
Q. You also testified on direct that cutting the umbilical cord would not be painful. Do you recall that?
A. I do.
Q. Can't cutting the umbilical cord result in a stress response to the fetus?
A. The stress response probably would not occur because fetal demise occurs before the hormonal or hemodynamic response can be generated.
Q. Is it your view that the stress response would not occur if the umbilical cord were cut?
A. True.
Q. Could you refer, please, to your Nebraska trial transcript, page 1080. I direct your attention to line 1 on 1080.
"Q. And you were asked about whether cutting the umbilical cord

would cause pain to the fetus, and I believe your testimony was probably not or very little, is that correct?
"A. That is correct.
"Q. Are you offering an opinion as to whether it's always possible to cut the umbilical cord prior to removal of the fetus during a surgical abortion?
"A. I'm simply offering an opinion on the degree of pain that would be caused.
"Q. And a fetus in that situation would, however, likely mount a stress response, is that correct?
"A. If that fetus were to survive long enough, yes, there would be a stress response to the blood loss associated with cutting the umbilical cord."
Were you asked those questions and did you give those answers?
A. I certainly did.
THE COURT: Are you suggesting that is inconsistent?
MS. WIGMORE: Yes, I am, your Honor. He testified --
THE COURT: You are suggesting it?
MS. WIGMORE: I am.
THE COURT: The Court doesn't necessarily agree.
Q. To the extent there is a stress response associated with cutting the umbilical cord, that is not evidence of pain, is it?
A. Like I said, if the fetus were to survive enough to mount a

stress response, that stress response, if it could be measured, would not be associated with pain but would be associated with acute blood loss that has occurred.
Q. So no all stress responses are equated with pain, is that correct?
A. That is correct.
Q. [> so not all<]
Q. I believe you testified on direct examination that to the extent the fetus is able to feel pain, injecting a needle into the fetus's heart will cause pain, is that correct?
A. That is correct.
Q. So an injection of digoxin or potassium chloride into the fetal body will certainly cause pain to the fetus in your view, is that right?
A. Yes, from the point of entry of the needle into the fetal body to the point when fetal demise occurs as a result of cardiac arrest.
Q. To the extent that the injection causes poisoning of the fetus, could that cause pain to the fetus?
A. My opinion is that it would simply be the pain associated with the needle puncture. I am not aware that the digoxin injection or potassium chloride injection per se could cause pain. If they were delivered into the fetal circulation without the need for an invasive procedure SP-P.
Q. Just so I am clear, are you saying that you don't know one

way or the other whether the actual chemical potassium SKHROEURD or digoxin would itself cause pain?
A. That is correct.
Q. Your conclusions on anatomical development do not hold true for fetuses with brain anomalies, is that right?
A. That is right. Those fetuses have not been scud studied to any great extent.
Q. And you can't extrapolate your findings about pain to fetuses with brain anomalies, is that right?
A. Yes, that is correct.
Q. So if a fetus had a condition known as anencephaly, that fetus would not experience pain, is that right?
A. It would depend on the degree of anencephaly that the fetus has. If there are fetuses that have an advanced development of their thalamus, hippo campus, limbic system, there would be a subcortical substrate for experiencing pain in those fetuses. S- there are fetuses that are completely enas a TPALic where there is not even the fusion of the spinal cord or the brain stem. In those fetuses I presume there would not be any perception because the thalamus has not developed.
Q. So you cannot testify with a reasonable degree of certainty that fetuses with brain anomalies at 20 weeks will experience pain, is that right?
A. I do agree with you.
Q. You personally have not conducted any studies measuring the

effects of anesthesia on fetuses, is that right?
A. That is correct.
Q. You do not personally administer anesthesia to pregnant women, is that right?
A. No, I don't, although I serve as a reviewer for several journals when these articles are submitted for publication.
Q. Perhaps I confused. I was speaking of your experience in actually administering anesthesia. You don't do that to pregnant women, do you?
A. I don't.
Q. There is a huge amount and variability in terms of how an anesthetic is administered and the dosage amount, is that right?
A. Yes. That depends on the practice patterns of the STHAOES KWROLGT.
Q. You are not aware of any studies on anesthetic agents administered to a woman during a D&X procedure, are you?
A. No, there have been no published studies as far as I am aware.
Q. Isn't it true that there is limited information addressing the delivery and efficacy of anesthesia to fetuses during the second trimester?
A. That is correct. This is a relatively underinvestigated area.
Q. And there have been no conclusive studies looking at the

amount of maternal anesthesia that would be needed to curb pain in a fetus, isn't that right?
A. I beg to submit that those studies would be unethical, because they would expose the mother to toxic doses of anesthetic drugs. So no IRB committee would approve those protocols.
Q. You say that those studies would expose the mother to toxic amounts of drugs. But isn't it true that there has been no study about the amount that is needed?
THE COURT: Your question suggests that doctors should do something unethical in order to study it?
MS. WIGMORE: No. Actually I am just asking how old one know how much SHAOERB is needed without having done the study.
THE COURT: Rephrase the question.
Q. Doctor Anand, has any study been done to determine how much anesthetic is needed to transmit anesthesia from the mother to the fetus?
A. There are no direct studies of producing an anesthetic fetal anesthetic state because of the toxicity that would involve to the mother. S- however, anesthesia has been administered to premature babies who are from 23 weeks of gestation and upwards. And we do have some idea of the blood levels that would be required to produce a state of anesthesia in those babies. So we would extrapolate from premature

infacts of the same neurological maturity to fetuses of that neurological maturity about the production of a fetal anesthetic state.
Q. You have already testified that there are physiological differences between preterm neonates and fetuses, is that right?
A. That is correct, although there are little, if any, neurobiological differences between fetuses and preterm neonates of the same neurological maturity.
Q. Doctor Anand, you would agree, wouldn't you, that there is a huge gap in our knowledge regarding the effects of maternal anesthesia on the fetus in the second trimester of pregnancy?
A. That is correct.
Q. In forming your opinions regarding the effects of anesthesia, you assumed that methods of local anesthesia are routinely applied for D&X, didn't you?
A. Yes, that is my estimation.
Q. You don't actually administer anesthesia for D&X, right?
A. No, I don't.
Q. You don't observe as anesthesia is administered for D&X, correct?
A. That is correct.
Q. And you haven't read any studies or articles about what type of anesthesia is administered for D&X, have you?
A. There are none in the literature that I could locate.

Q. So you don't have a basis for knowing what methods of anesthesia are routinely applied for D&X, do you?
A. To the extent that one relies on discussions with colleagues who are in the anesthesia department and summarizes their opinion, that is how my impression was formed.
Q. In forming your opinions, did you talk to doctors who perform D&X?
A. I haven't spoken with any doctors who performed a D&X, but I have spoken with STHAOES KWROLGTS who are practicing obstetric anesthesia, and I have also read through some of the testimony that was heard by Congress several years ago, as well as read articles on the technique of anesthesia used for termination of pregnancy, the studies that are published, although they don't pertain to the D&X procedure, they pertain to the induction of labor procedure.
So from all those sources of information, I feel -- and I am not an expert in this area -- I feel that there may be a lot of procedures that are performed using local or epidural anesthesia.
THE COURT: Doctor, have you already read some of the expert statements of plaintiffs and their experts in this case?
THE WITNESS: I have not seen any expert testimony, your Honor.
THE COURT: Or expert statements?
THE WITNESS: There was one expert statement which was

a rebuttal statement that was sent to me. It was about half a page in length, back in the second week of February. That was all I was able to read. That was a statement from Dr. Creinin, I believe.

THE COURT: All right.

Q. Doctor, would it surprise you to learn that there are doctors who use general anesthesia for D&X?

A. No, it would not surprise me.

Q. General anesthetics readily cross the placental barrier and fetal blood-brain barrier, isn't that right?

A. It depends on what drugs are being used for general anesthesia.

Q. I want to direct your attention, Doctor, to page 10 of your expert report, which is in the binder before you.

A. Which tab is that?

Q. It should be the very first document in the testimony binder. Is it there?

A. I have it here.

Q. I want to refer you specifically on page 10 to the fourth sentence. Did you say in your expert report that general anesthetics (inhalational anesthetics and certain opiates such as if I understand it nil and SUF if I understand it nil) can provide some degree of pain relief to the fetus because they readily cross the placental barrier and fetal blood-brain barrier"? Is that a statement that you made?

A. Yes.

Q. Isn't it true that during open fetal surgery under maternal general anesthesia, inhalation agents are considered to provide adequate fetal anesthesia?

A. Where are you referring to?

Q. I am not referring to anywhere particularly right now. Is that a true statement or not a true statement?

A. I don't perform fetal surgery, so I am not qualified to comment on that.

Q. So you don't know one way or the other whether general anesthesia delivered to the mother will affect the fetus?

A. I believe there are inhalation an anesthetics. These are the anesthetic gases such as hal oh that I know, isofluoroAEUPB, ceive oh fluoroAEUPB and similar anesthetic gases, would E qui liberate fairly quickly across the something barrier and would produce some level of anesthesia in the fetus S- [> placental barrier?<]

Q. Doctor, do you recall testifying on direct examination that the article by Fisk had a particular impact on your opinion?

A. Yes, I do.

Q. If you could turn, please -- actually, it may be easier to use the binder that Mr. Lane gave you. This is Government Exhibit G8.

A. I don't have that binder.

Q. I will pass it up to you.

MS. WIGMORE: Your Honor, may I approach?
THE COURT: You may.
Q. Again, it is tab Gl.
A. Yes, I have it.
Q. This is an article that had impact on your opinions, is that correct?
A. It certainly did.
Q. Could you refer, please, to page 14 of that article. I want to direct your attention to the third paragraph on that page, first sentence, which says, "Although the human fetus in the last half of gestation has the necessary neuro connections for no sus ception, it is not known whether the human fetus experiences pain." That is a statement that you relied on in forming your opinions, isn't it?
A. I certainly did.
Q. If you could refer to the last sentence of that same paragraph, which states, "Because the relation between stress responses and pain is not clear, it is not possible from our data to conclude that the human fetus experiences pain in utero." Did I read that correctly?
A. Yes, you did.
Q. That is part of the article that had a significant impact on your opinions in this case, Doctor?
A. It certainly did.
Q. You testified at your deposition that the MRC report, the

expert group on fetal pain, was another document that supported or confirmed your opinion, is that right?
A. Yes, that is correct.
Q. If you would turn to the very last tab of your binder, the article binder, I believe you will find that article.
A. Yes, I have it.
Q. I want to direct your attention specifically to page 4, section 4.1.
A. Yes.
Q. Specifically, to the third and fourth sentences of that section, which begins, "Much public concern." Do you have that?
A. Yes.
Q. Those sentences read, "Much public concern has arisen because of the possibility that a fetus may feel pain. Such a possibility is founded on the existence of reflex movements and neural activity produced by sensory stimulation. Despite the usefulness of such reflexes in understanding spinal cord and PRAEUPB stem pain processing, it would be a mistake to equate them with true pain experience, which must involve the cortex and develop post natally looping with memory, anxiety, and other cognitive brain functions." That is a statement that was in another article you relied opin forming your opinions in this case, Doctor?
A. This was not part of the articles I relied on in making my

expert report. It was offered to me on the day before my deposition, and I actually read it on the day of the deposition.
Q. You testified, didn't you, that this document confirms your opinion?
A. It certainly does. The conclusions of this MRC working group were very similar to the conclusions I have stated in my expert report.
Q. Let's turn to the conclusions, Doctor. If you could turn to page 11 of the article, at the top of that page there is a heading that says "9. Conclusions.?"
A. Yes, I have it.
Q. In the second sentence, that reads, "the basic molecular and cell ular mechanisms of fetal and neonatal pain are still poorly understood as are the effects of anesthetics or analgesics." Did I read that correctly?
A. That is correct.
Q. And that is consistent with the opinions you have to offer here today?
A. Yes, to some extent.
MS. WIGMORE: Thank you, Doctor. I have no further questions at this time.
THE COURT: Mr. Lane, do you have any redirect?
MR. LANE: Yes, just briefly, your Honor.
REDIRECT EXAMINATION

BY MR. LANE:
Q. Good afternoon, Dr. Anand.
A. Good afternoon, counsel.
Q. During the course of your cross-examination you had made a statement that consciousness is not an all or nothing thing. Could you explain what you meant by that.
A. Certainly. The prevalent notion in the medical community is that consciousness is not an all or none phenomenon. It is not like a switch that is off one minute and on the next. It is more like a dimmer, where there is a gradual increase in the levels of consciousness.
Perhaps to use a common metaphor, when one arises from a deep, dreamless state of sleep, there are stages of TKROUSiness coming to full consciousness. That is how it is believed that KOPGSness develops in utero, that early levels of consciousness gradually increase to the level of consciousness that can be noted in fetuses.
Q. Doctor, I would like to turn your attention to what was called your witness binder and your deposition testimony on page 42.
A. Sir, 42 of the deposition?
Q. Page 42 of your deposition, yes. During your cross-examination, lines 6 through 8 were read in of your deposition, saying "It was fair to say you weren't an STHAOES

KWROLGT." For purposes of completeness, I would like you to read in lines 9 through 18 of your deposition, the question and answer, if you could.
A. The question is, "Have you ever acted as an STHAOES KWROLGT?"
The answer is, "In the course of my practice as a pediatric intensivist, there are lines of activity that would classify what I have done as acting as an STHAOES KWROLGT. So there are procedures performed on infants and children where I have provided anesthesia, and in that sense you could say that I'm acting as an STHAOES KWROLGT. But those functions that are common to the fields of STHAOESiology and critical care medicine."
Q. Thank you, Doctor.
Doctor, you were asked about a number of articles during your cross-examination. I am not going to make you revisit all of them, but I would like to ask you a few questions. The first was about an article found at tab 5.
A. I have it.
Q. You were read in cross-examination a portion of that article talking about birth as a trigger to consciousness. I would like to ask you if you could provide a context for that statement in the course of this article of which you are an author.
A. Certainly. The style of writing in a number of these

articles is to first state the opposite view and then to examine that view in the light of the evidence that has been generated. In this article where we discuss the development of consciousness in the term neonate, in the preterm neonate, and in the fetus, at one point we say that perhaps an argument could be that the process of birth serves as a trigger for consciousness.
However, if consciousness is triggered by birth, there is insufficient data to recommend that that is actually the case. And we go through those lists of arguments within this article.
We finally conclude in this article, as I have in my report submitted, that consciousness likely develops around mid gestation in the human fetus.
Q. Doctor, this methodology of stating the opposite conclusion and then looking at evidence, does this apply to any of the other articles that were mentioned on cross-examination?
A. It certainly does. Medical writers will frequently state the opposite viewpoint and then plug away at it until they are able to TREPBGT hypothesis. That is integral to the scientific method.
Q. Doctor, during cross-examination it was discussed that you had not recently studied the issue of fetal pain in utero. Have you done any recent work on fetal pain with premature infants and neonates?

A. I have worked extensively on the pain experienced by premature infants.
Q. What gestational ages have you worked with?
A. The smallest preterm infant was of 22 or 23 weeks [> invent<]
Q. Doctor, finally I would like to ask you a question about this MRC report which was just discussed. You had said it, in your view, confirms your views and opinions in this case. Could you explain that for the Court. That is found at the last tab I believe of the article binder.
A. Certainly. This was a view that was put together in August of 2001. Like some of the other evidence that has been examined was relevant to the information available in 2001. And this MRC expert group was charged with the task of defining areas that the MRC, which is the medical research council, should invest in the future to advance this field. The conclusions of this task force were very similar to the conclusions that I have made. They relied on the same neuroanatomical and neurophysiological maturations. They came up with very similar conclusions in terms of the effects of analgesic drugs on stress responses in animals and human fetuses, and they put together the potential areas for future research. Many of those areas since then have been investigated, and data since 2001 has been available. As you might recall, the article by Nicholas Fisk and colleagues was

published after this report came out. And there are other articles that have been published since then.
MR. LANE: No further questions, your Honor.
MS. WIGMORE: Just a few.
THE COURT: Any recross, Ms. Wigmore?
MS. WIGMORE: Just a few questions, your Honor.
THE COURT: Go right ahead.
RECROSS-EXAMINATION

BY MS. WIGMORE:
Q. Dr. Anand, Mr. Lane asked you about your article at tab 5 in the articles binder. Isn't it true that you stated in that article that it may be impossible to obtain unequivocal evidence for fetal consciousness?
THE COURT: May I have that question read, please.
(Question read)
THE COURT: I don't think it is his article, is it?
MS. WIGMORE: Yes, your Honor.
THE COURT: It was authored by the witness?
MS. WIGMORE: That's correct.
THE COURT: All right.
THE WITNESS: Yes, I am the first author on this article, your Honor.
THE COURT: All right.
A. You are absolutely right, counsel. The consciousness is

the substratum to all experience. Consciousness, by definition, is beyond thought. In order to measure something beyond thought is impossible, even in the adult human. So how can I tell that the people in this room are conscious? From their behavior. If their eyes are opened, if they are occasionally moving f they show understanding on their face, if they have any emotional reactions to the proceedings in this room, I would surmise that they are conscious. But can I measure their consciousness? I can't. Can they measure their consciousness? No, they can't.

It can be experienced. It is like silence. Can you measure silence? It can't be measured but it can be experienced. And that is what applies to the human fetus as well.

Q. Doctor Anand, the people in this room can tell you about their feelings, can't they?

A. They certainly can. And if a fetus could talk, they could tell us about their feelings.

Q. Doctor, in that same article, tab 5, if you could refer to page 68, the bottom paragraph in the first column, I want to refer you to the last two sentences, which begin, "All the lines of evidence reviewed above suggest the presence of consciousness from about 20 to 22 weeks of fetal life. Accumulating data may confirm or refute these tentative projections, although current practice should incorporate the

use of effective pain management for all premature and full-term new PWORPBS." Did I read that correctly?

A. Yes, you did.

Q. So in this article you referred to the presence of consciousness from about 20 to 22 weeks as tentative projections, is that right?

A. Yes. This article was submitted for publication in June of 1998 and was published in '99.

Q. You mentioned on your redirect the theory that many authors will set forth contrary conclusions in their articles and then come around and reject those. Did I get that right?

A. That is correct.

Q. Let's refer back briefly to a few of the articles that you and I talked about, starting with tab 10. That is the article by Modi and Glover for the chapter of the book by those individuals?

A. That is correct [> or the<]

Q. Those individuals do not conclude anywhere in this article that fetuses experience consciousness at 20 weeks, do they?

A. They certainly propose the likelihood of consciousness. Again, this chapter was published in the year 2000, and the evidence has accumulated since then. STKPWHRL TKR*L --

A. As it applies --

THE COURT: Please don't interrupt again, Ms. Wigmore. You may finish your answer, Doctor.

THE WITNESS: Thank you, your Honor.
A. As I had stated for the review article that I had authored in '99, those were tentative conclusions. But since then there has been accumulating data and there is a lot more known about fetal behavior and the various studies confirming previous tentative conclusions.
Q. Thank you, Doctor. What I want to know is did these authors in this document state that fetuses experience consciousness at 20 weeks?
A. I would have to read the article, counsel. If you would give me a minute.
Q. Sure.
A. May I read to you from this article?
Q. Sure.
A. This is on page 218, the right-hand side column. It is the first paragraph from the top. "We do not know when, if at all, consciousness begins during fetal life. Even in the adult, the physical basis of consciousness is far from understood. Most evidence suggests that consciousness is associated with activity in the cerebral cortex. Greenfield has emphasized that one should not think of consciousness as an all or none phenomenon but rather like a dimmer switch. This concept of evolving consciousness might well apply to the developing fetus in whom conscious experience is both unlikely to be the same or have the same physical basis as in the adult. Frogs, for

example, do not have a developed verbal cortex, lacking layers 4 to 6. If they are conscious at all, their experience may be associated with activity in a much less complex neuronal network, possibly more analogous to the fetal subplate zone."
Q. Are you finished, Doctor S-
A. I think that should suffice, yes.
Q. It is true, isn't it, that these authors concluded that we do not know when, if at all, consciousness begins during fetal life? Is that right?
A. That was the first sentence in that paragraph STKHR then if you refer to page 219, second paragraph, last sentence, they concluded, "This evidence supports clinical observations that the no sus SEPT EUFR system is functional at 24 weeks but provides little assistance in establishing the existence of pain perception at earlier gestations," is that right.
A. That is correct. That was the state-of-the-art in the year 2000.
MS. WIGMORE: Thank you, Doctor. I have no further questions.
THE COURT: Doctor, thank you very much. You may step down.
(Witness excused)
THE COURT: Is the next portion of the government's case the reading of the deposition transcript?
MS. GOWAN: No, it is not, your Honor. The government

proposes to call Laureen Tews.
THE COURT: Do you want to start? We are about ten minutes away from our usual afternoon break. Which would you prefer?
MS. GOWAN: At the convenience of the Court.
THE COURT: My, my. Wonderful. Why don't we get Ms. Tews in here and get her started.
MS. GOWAN: Defendant calls Ms. Laureen Tews.
LAUREEN TEWS,
called as a witness by the defendant,
having been duly sworn, testified as follows:
THE CLERK: Please state and spell your full name slowly for the record.
THE WITNESS: It is Lauren Ann Tews,LAUREEN ANN TEWS.
THE CLERK: Thank you. Please be seated.
THE COURT: Ma'am, how SPOU spell your last name?
THE WITNESS: TEWS.
THE COURT: Thank you, ma'am. You may inquire.
DIRECT EXAMINATION S-

BY MS. GOWAN:
Q. Ms. Tews, where are you employed?
A. I work for the National Abortion Federation.
Q. How long have you worked for the National Abortion Federation?

A. Since August of 1997.
Q. What is your title?
A. I'm the medical abortion initiative director.
Q. What are your duties and responsibilities as the medical abortion initiative director?
A. I am responsible for directing our educational programming for healthcare providers in terms of the safe and effective use of early medical abortion.
Q. Were you designated by the National Abortion Federation in accord with Rule 30(b)(6) of the Federal Rules of Civil Procedure to testify in this case?
A. Yes, I was.
Q. Were the areas that you were designated to testify about the purpose of and the development of content for NAF policies concerning NAF annual meetings, NAF risk management meetings, conferences, and seminars?
A. Yes.
Q. Were you also designated by NAF to testify concerning NAF policies about medical education programs that are presented, supported, sponsored, endorsed by or in any way affiliated with NAF?
A. Yes.
Q. Were you also designated to testify about NAF's creation and maintenance of documents, audiotapes, videotapes, and other information in recorded form relating to the presentation by

Dr. Martin Haskell entitled "Dilation and extraction for late second trimester abortions" at the NAF risk management seminar in September of 1992?
A. Yes.
Q. Were you also designated by NAF to testify in connection with that NAF risk management seminar, the recording on audiotape and/or videotape of Dr. Martin Haskell's presentation, including identification of the voice of Dr. Martin Haskell?
A. Yes.
(Continued on next page) 4/13/04 Judge Casey direct of Law reason TAO*Z, by Ms. Gowan.
BY MS. GOWAN:
Q. And did you testify on those subjects at a deposition in this case?
A. Yes, I did.
Q. And were you authorized to do so?
A. Yes.
Q. Is NAF accredited to provide continuing medical education by the accreditation counsel council tore continuing medical education?
A. Yes.
Q. Is that counsel known as A C C M E?
A. Yes, it is.
Q. When was NAF accredited by A C C M E to provide continuing medical education?

A. In June of 1981.
Q. Has it held its accreditation status since that time?
A. Yes, it has.
Q. As far as you are aware, are physician's required to accumulate a certain amount of continuing medical education in order to satisfy their state licensure requirements?
A. Yes. It's dependent on the state.
Q. And does NAF provide physicians with continuing medical education credit if the physicians attend NAF-sponsored annual meetings?
A. Yes.
Q. And does NAF provide physicians with continuing medical education credit if the physicians attend risk management meetings?
A. Yes.
Q. Is that would be NAF risk management meetings?
A. Yes.
Q. And does NAF distribute certificates after ten dance to attendees upon request to verify attendance, that I remember ten dance for purposes of obtaining credit?
THE FOREPERSON: They turn in to us an evaluation form, yes.
Q. And is NAF required by the ACC M E to keep records relating to the meetings for which credit is given?
A. Yes.

Q. And as part of its aFred I TAEUGS, is NAF required to have a committee that oversees the general medical education activities that NAF provides?
A. The ACCME requires that there be an -- that we report on the organizational framework in which our CME program exists and at NAF we do have a medical education committee of our board of directors.
Q. And does that committee oversee the general medical education ABG TEUFPTS that NAF provides?
A. Yes.
Q. And does NAF hold risk management meetings or seminars?
A. Yes.
Q. And at least since the mid-1990s are those meetings held once a year?
A. Yes.
Q. Prior to that time were they held in two smaller meetings each year?
A. I believe I recall that from the documents that I reviewed in preparation for my deposition.
Q. And these meetings are held at various locations within the United States and Canada, correct?
A. Yes, that's correct.
Q. And the meetings are attended by NAF members, physicians, nurses, nurse practitioners, clinical staff and administrators, right?

A. Yes.
Q. And are the meetings planned by the NAF medical education committee?
A. The planning process begins during the medical education committee meetings.
Q. And does the NAF medical education committee discuss various topics for the purposes of determining what might be presented at a risk management meeting?
A. Yes.
Q. Does the medical education committee responsible for setting the overall goals for the medical education program that NAF sponsors for its members?
A. Yes.
Q. Are those goals then implemented by NAF staff members who help plan the risk management meetings, the chair of each particular program and the factual TEU for the program?
A. Right, that combination of folks help to implement the manning of the risk management meetings.
Q. And does the factual TEU for the program include the presenters of various papers or presentations at any given risk management meeting?
A. Yes.
Q. And do the faculty members or presenters sometimes provide to NAF the material that the factual TEU member would be presenting in advance of the meeting?

A. Sometimes that's the case.
Q. And when the faculty members provide such information to NAF, does NAF then compile that information in a syllabus for distribution at the meeting?
A. Yes. The faculty submit occasionally submit certain material for us to include in the syllabus, which is a compilation of faculty material.
Q. And then you bind that material into one syllabus, correct?
A. Yes, that's correct.
Q. And is that then Xeroxed and paid for by NAF?
A. Yes.
Q. And then those materials are sent for distribution at the meeting, is that correct?
A. Yes, that's correct.
Q. Distribution to the attendees?
A. Exactly.
Q. And from time to time NAF pays faculty members, as is typical at many medical meetings and hon or rarea for participation in the meeting, correct?
A. That's not the typical practice but we do occasionally provide an honoraria for certain faculty from from time to time.
A. Correct.
Q. From time to dime does NAF pay for the hotel charges for the faculty members who attend the risk management meeting?

A. Again, that's not typical but from time to time we do occasionally do that for certain TPABG um TEU.
Q. And NAF charges a registration fee for its members had they attend risk management meetings, correct?
A. Yes.
Q. For a two-day meeting currently that fee might be in the REUPBth of $300 to $ 500 is that right?
A. That's the estimate that I gave during my deposition.
Q. And T-GS not unusual, is it for NAF to offer a faculty member free registration for the day of the meeting at which the faculty member is speaking, is that right?
A. Yes, that's correct.
Q. And at the risk management meeting NAF staff are onsite to facilitate the running of the meeting, correct?
A. Yes, a group of staff members would be.
Q. Assist by staffing registration desk, checking in the REPBLGS STRAPBTS, helping the faculty with audiovisual problems and answering logistical questions and the like, right?
A. Yes.
Q. And the purpose of the risk management meetings is to meet the continuing educational needs of NAF members, is that right?
A. Yes.
Q. And the focus of the risk management meetings is clinical in nature, right?
A. Generally there is a clinical focus track. Occasionally

there might be another track that is not clinically focused.
Q. And at the clinically focused track there is information that's presented about and discussed concerning medical issues, is that right?
A. Yes.
Q. And is it fair to say that the various aspects of providing abortion care are the general subject matter discussed at these meetings?
A. That's correct.
Q. Now, NAF also holds annual meetings, correct?
A. Yes.
Q. And, again, one of the goals of the annual meetings is to ensure that the educational needs of NAF members are met, correct?
A. Yes.
Q. The annual meetings tend to be a little more comprehensive than the risk management seminars, is that right?
A. Yes; there is more content.
Q. And continuing medical education credit is also given to attendees who wish to attend the annual meetings, correct?
A. The medical track of the annual meeting is accredited for CMES.
Q. Now, prior to 2000 it was typical for portions of the risk management meetings and the annual meetings to be audio taped, is that right?

A. For portions, yes.
Q. And prior to 2000 NAF would contract with outside local vendors who would make the tapes of the presentations at the risk management meetings and the annual meetings, correct?
A. Yes.
Q. As I understand the the meetings are no longer taped and that's for security RBZ, is that right?
A. You could characterize it in general as security reasons.
Q. But prior to 2000 aspects of the meetings were taped on a regular basis by NAF, correct?
A. Yes.
Q. And NAF's practice was to get bids from three vendors for the taping project, is that right?
A. Our current practice when we work with vendors is to get three bids, correct.
Q. And was that the practice prior to 2000, if you know?
A. I don't know that specifically. It wouldn't surprise me.
Q. And NAF's practice, prior to 2000, was to enter into contracts that would specify vendor responsibilities and NAF responsibilities, is that right?
A. With regard to the audio taping?
Q. Yes.
A. Yes.
Q. And under the contract the vendors were permitted to sell the tapes onsite to attendees at the meetings, is that right?

A. That's my understanding.
Q. And NAF would receive copies of the tapes, correct?
A. Again, that's my understanding.
Q. And the tapes were available for order through NAF by members, correct?
A. Yes.
Q. And NAF would charge the members who, subsequent to the meetings, would order copies of the tapes, correct?
A. I believe so, yes.
Q. And NAF keeps a copy of the tapes of its meetings in the NAF resource center in its offices in Washington, D.C., correct?
A. We have copies of some of the previous meetings' audio tapes, those sets of audio tapes are not necessarily complete.
Q. And the copies that you do have, the sets are kept in a case with a cover on the case that has a sleeve for each tape, is that right?
A. The sleeve is -- the sleeves that I have seen relate to the set of tapes, not to each individual tape.
Q. And the sleeves identify the particular annual meeting or seminar at which the underlying tape is related, is that right?
A. That's correct.
Q. For example, the cover of the sleeve in which a tape is kept might say NAF annual meeting 1998, or NAF risk seminar management 1992 and the like, correct?

A. Yes.
MS. GOWAN: Your Honor, may I approach the witness?
THE COURT: Surely.
BY MS. GOWAN:
Q. Ms. Tews, I'm showing you what was marked as Gover Government Exhibit 66A at your deposition in this case, it is a document entitled second trimester abortion from every angle, fall risk management seminar, September 13th-14th, 1992, Dallas, Texas. Presentations, bibliography and related materials.
What is the logo that appears at the bottom of the first page of this document?
A. That is NAF logo.
Q. And is that the copyright symbol right below that logo?
A. It appears to be, yes.
Q. And is this the cover sheet for the syllabus from the fall risk management program that was presented in Dallas in September of 1992?
A. I believe it is.
Q. And if you take a look at the second page, could you tell us what that is?
A. That's the table of contents.
Q. And if you count down six entries, could you tell us what the paper is that's listed there in the table of contents?
A. Second trimester D&X, 20 weeks and beyond, Martin Haskell, M. D., D&E for late second trimester abortion, Haskell, page

27.
Q. And then if you turn to the next page, is that the Haskell article appearing on page 27?
A. Yes, it appears to be.
Q.
MS. GOWAN: Your Honor, I will represent to the Court and I have discussed this with plaintiff's counsel, that Government Exhibit 66A appears in the Congressional record for the Partial-Birth Abortion Ban Act of 1995 hearing before the committee on SKWRAOD issue reUnited States Senate 10 4th Congress first session on HR-1833, November 17th, 1995. That appears at pages 1 through 12 of the Congressional record.
May I approach, your Honor?
THE COURT: You may.
Q. Ms. Tews, I'm showing you an audio cassette that has been marked as Government Exhibit E; could you please read for us the title that's marked on that audio tape?
A. It's a second trimester sec TPHAOEBGZ D&E 14 to 19 weeks, 20 weeks and beyond. NAF-2/september 13-14th, 1992, Dallas, Texas.
Q. Is there a Bates Number on that audio cassette?, a NAF number?
A. On the backside, yes.
Q. Could you read that for us, please?
A. It says 1NAF 028907.

Q. And as far as you know, was that videotape produced to the government by the national abortion federation in discovery in this case?
A. This audio tape?
Q. Yes. Sorry. Thank you?
A. Because it has a NAF Bates label I'm assuming it was, yes.
Q. And did you listen to portions of the audio tape that we've TPHARBGD as Government Exhibit E?
A. I listened to portions of an audio tape from this meeting on this topic.
Q. And were the portions that you listened to relating to Dr. Haskell's presentations?
A. Yes.
Q. And did you listen to the entire presentation made by Dr. Haskell as reflected on that tape?
A. Yes, in preparation for my deposition.
Q. And do you know, Dr. Haskell?
A. Yes, I do.
Q. And have you ever spoken with him?
A. Yes.
Q. And is Dr. Haskell a NAF member?
A. Yes, he is.
Q. And was Dr. Haskell a NAF member at the time of the 1992 risk management seminar in Dallas, Texas?
A. I believe, he was.

Q. And when you listened to Government Exhibit E, did you recognize Dr. Haskell's voice on the tape?
A. I did not.
Q. And in preparation for your 30B 6 testimony which called for identification by NAF of the speakers on the tape, did you take steps to determine whether Dr. Haskell's voice was on the audio tape?
A. Yes, I did.
Q. And you spoke with colleagues who identified his voice, correct?
A. That's correct.
Q. And as NAF's Rule 30B 6 witness you testified that Dr. Haskell is a speaker whose voice is captured on the audio tape, correct?
A. Yes, that's correct.
Q. And is that your testimony here today, Ms. Tews?
A. Yes, it is.
Q. And you were also able to identify Dr. Michael Burnhill as the person who introduces Dr. Haskell at the meeting and whose voice is also captured on the tape, correct?
A. Yes, I believe that's correct.
Q. Now this audio tape was made under contract between NAF and an outside vendor, is that right?
A. Yes, it was.
Q. And does this audio tape fairly and accurately represent

the presentation that Dr. Haskell made at the September 13th through 14th, 1992 risk management conference in Dallas, Texas?
A. I was not in attendance at that meeting but I have no reason to believe that it doesn't accurately represent what Dr. Haskell said at that meeting.
Q. And at the time in 1992, as the regular practice of NAF to contract with a vendor to make tapes of presentations such as Dr. Haskell's presentation at NAF risk management seminars, correct?
A. I'm sorry, it was the regular practice of NAF to --
Q. It was the practice for NAF at the time to contract with vendors to make tapes of the presentations of faculty members such as Dr. Haskell who present papers at Avenue annual seminars and meetings, right?
A. At least some of the presentations, correct.
Q. And the tape were kept in the course of NAF's business and in its resource center, right?
A. That's where the tapes that we have currently are kept.
Q. And copies of the tapes would be provided to members, NAF members on request for a charge, is that right?
A. Yes.
MS. GOWAN: May I approach, your Honor?
THE COURT: You may.
Q. Ms. Tews, I'm showing you what has been marked as government's trial Exhibit K-1. If you would take a moment to

look at that.
This is a two-page document, is that the national abortion federation logo at the top of the first page of this document?
A. That is a logo that we've used in the past.
Q. And this is, document is dated June 18th, 1993; if you turn to page 2 do you see it is signed by Barbara? And Barbara is identified as Barbara RA*Dford, executive director?
A. Yes, I see that.
Q. Do you know Barbara? Barbara radford?
A. I don't know her penal TKPWHREU.
Q. Do you know whether she was the executive director of NAF in or about June of 1993?
A. I'm assuming she was from the title underneath her name.
MS. GOWAN: Your Honor, the government would move into evidence Government Exhibit K-1. There was no objection interposed by plaintiffs in the pretrial order.
THE COURT: Any objection.
MS. PARKER: No objection, your Honor.
THE COURT: It will be received.
Q. Ms. Tews, could you please read for us the salutation of this letter and the first two paragraphs? And I would urge you to please read slowly.
A. Dear NAF member:
Many of you have called in recent weeks regarding the

distribution of an inflammatory anti abortion flyer depicting graphic details of the dilation and extraction (D&X) abortion procedure. We would like to provide you with some accurate information on this procedure, as well as some guidelines in discussing this and any other abortion procedure with the press and public.
First of all, the D&X procedure was presented as part of the NAF second trimester abortion from every angle risk management seminar held in September of 1992. The surgical method described differs from a classic dilation and evacuation (D&E) procedure only in that it does not rely upon dismemberment to remove the fetus. Rather, the surgeon grasps and removes a nearly intact fetus through an adequately dilated cervix. This is a small variation in a basic surgical procedure that has been performed for over 15 years.
The workbooks and TAEUPDZ from this meeting are available to all NAF members who would like additional details."
MS. GOWAN: Your Honor, pursuant to Federal Rule of evidence 803.6, the government moves the admission of Government Exhibit E as a record or data compilation in tape form of events at a regularly scheduled NAF meeting organized for the purpose of providing continuing medical education as NAF is accredited to do and was and is the practice of NAF to hold.

The government asserts as an alternative ground for the admission of this exhibit --
THE COURT: Go ahead, put it on the record.
MS. GOWAN: 801(d)(2)(B) as a party admission by adeposition.
MS. PARKER: Your Honor, the plaintiffs object.
THE COURT: All right, you're overruled. It will be received.
MS. PARKER: Your Honor, may I be heard?
THE COURT: Sure.
MS. PARKER: For my grounds?
This tape is a compilation, it's therefore hearsay within hearsay. Even if the government has established the first level of hearsay, these compilations contain statements on them, embedded statements for which there needs to be a separate hearsay exception and none is available.
Ruleel 01D 2 does not provide a basis. There is no evidence that NAF adopted the statements made by outsiders on these tapes or relied on them for any purpose and there is therefore no separate basis for the embedded statements contained in the compilation.
THE COURT: They were sold, were they not, provided at a price to members who requested them?
MS. PARKER: Your Honor, they were sold but they contained numerous statements on them and there has to be a

separate hearsay basis for each statement contained on their tape and none is available.
THE COURT: Overruled.
Is this an appropriate time, Ms. Gowan.
MS. GOWAN: Yes, your Honor.
THE COURT: To take our break?
MS. GOWAN: Yes.
THE COURT: All right.
(recess).
THE COURT: Ms. Gowan, you may inquire.
MS. GOWAN: Your Honor, at this time we would like to play for the Court Government Exhibit E in evidence.
What I would like to do is just play the first few seconds of the tape, which identifies the meeting and then fast forward to Mr. , excuse me Dr. Haskell's presentation.
THE COURT: Do whatever you want. The other side, plaintiffs wishes to play something I'm sure they well counter your presentation, it seems to be the standard course here.
Go ahead.
(audiotape played).
MS. GOWAN: Your Honor, while we are using the counter to get the space, I had the office, using its outside contractor, prepare a transcript of the tape. I'm not going to offer the transcript into evidence but I did want to provide a copy to counsel to the extent they would like it as the tape is

being played, and also to the Court.
THE COURT: Fine. All the time and need in a jury where you have one, in this case it is assistance to the Court. If plaintiffs have any objection as to the accuracy of the transcript they can object but I'm sure they're going to follow along now.
MS. GOWAN: We are just about there. We will be hearing the end of side one and then we will flip the tape and hear considerable portion of side 2.
THE COURT: Very well.
(audiotape played).
MS. GOWAN: I think, your Honor, it will flip automatically.
THE COURT: Very well.
MS. GOWAN: Your Honor, I apologize, it is just the lead in here. It is coming. My expertise is not tech technology. That's all right, the Court is technically challenged too.
MS. GOWAN: Then you have sympathy for me.
Here we go.
(audiotape played).
(continued on next page) TWM 4/13 take 6 Lawrence Tews on direct<]
MS. GOWAN: Thank you, your Honor. I have no further questions for Ms. Tews.
MS. PARKER: Your Honor, just a couple .
CROSS-EXAMINATION S-

BY MS. PARKER:
Q. Good afternoon, Ms. Tews. Ms. Tews, at NAF presentations, does NAF make an effort to present different views on the same topic at its meetings?
A. Yes. It is typical that a range of techniques or therapeutic options would be presented at our meetings.
Q. And do these opposing views ever appear on the NAF tapes of the meetings?
A. Sure.
Q. Are and a half tapes with opposing views ever sold?
A. Yes.
Q. Who are the NAF tapes sold to?
A. Generally, they would have been sold to our members or attendees of the meeting.
Q. Are they sold to the general public?
A. No, they are not.
Q. Do the views presented at the meetings by the faculty at the meetings, reflect NAF's organizational views?
A. No, they do not.
Q. Does NAF authorize its members to speak on NAF's behalf at NAF meetings?
A. No.
Q. You said that the medical education committee assists with meeting planning when Ms. Gowan was asking you questions, is

that correct?
A. Yes.
Q. Does the medical education committee assist the faculty in preparing their presentations for NAF meetings?
A. No. The faculty generally are preparing their presentations inTKPEPBLT. We choose our faculty because they are experts.
Q. Does the medical education committee assist in preparing materials in advance of the presentations at the meetings?
A. No, they do not.
Q. Dot faculates submit their materials to any NAF staff for comment prior to presenting them at the NAF meetings?
A. Generally, no.
Q. Do the faculties submit their materials to the medical education committee for comment prior to presenting them at NAF meetings?
A. As far as I know, that's not the case.
THE COURT: Ma'am, you weren't here for this program that was played on the audiotapes, so you don't know whether that one was submitted in advance by Dr. Haskell or not?
THE WITNESS: Your Honor, in preparation for my deposition, I reviewed a file of materials related to the planning of that meeting, including correspondence with faculty who were presenting at that particular meeting, and there was no indication that there was advanced review, or there was not

a copy.
THE COURT: You weren't there?
THE WITNESS: No, I was not. I reviewed the meeting files.
THE COURT: So there was no way you could know one way or another?
THE WITNESS: Again, your Honor, in preparation for my deposition, I reviewed the files.
THE COURT: Ma'am, were you there?
THE WITNESS: I was not.
THE COURT: So you have no idea of whether he walked in and gave them an advance outline or full text or the sound or videotape, because you weren't there, right?
THE WITNESS: Again, your Honor, I reviewed the files --
THE COURT: You read some correspondence. You keep telling me that, ma'am. You weren't there, right?
THE WITNESS: I was not at the meeting in 1992, no, I was not.
THE COURT: Were you working for NAF at the time?
THE WITNESS: No, I was not.
THE COURT: Go right ahead with your questioning.
Q. Ms. Tews, did you give a deposition in this case?
A. Yes, I did.
Q. Was that deposition conducted pursuant to Rule 30(b)(6) of

the Federal Rules of Civil Procedure?
A. Yes, it was.
Q. Are you familiar with a deposition notice that was served by the government for your deposition?
A. Yes, I am.
Q. In conjunction with the deposition, did you have a duty to prepare on the topics listed in that deposition notice?
A. Yes, I did.
Q. Was among those topics the typical procedures for NAF's in meetings and the presentations made at those meetings?
A. Yes, it was.
Q. Can you describe for the Court what you did to prepare for that deposition. -FPLGTS sure. In preparation for my deposition, I reviewed documents related to our meeting planning since the early 1990's, I spoke with current and former colleagues, I listened to audiotapes that were outlined in the notice of deposition. I spoke with my lawyers and also watched a videotape.
Q. During the course of that preparation, did you learn any evidence to indicate that the particular presentation by Dr. Haskell was reviewed in advance by anyone on the NAF staff?
A. No, I did not.
Q. Did you find any evidence that the presentation by Dr. Haskell was reviewed in advance by anyone on the NAF medical education committee?

A. No, I did not.
Q. Is it typical for the NAF staff to review in advance presentations made at NAF meetings?
A. No, that is not typical.
THE COURT: How could this witness testify, as she wasn't there, what happened in 1992?
MS. PARKER: Your Honor, she was a Rule 60(b) 1K3W4R6 witness with a need to gather that information.
THE COURT: But you haven't established that she knew anybody that was there.
MS. PARKER: Your Honor n conjunction with Rule 30(b)(6) --
THE COURT: I heard you, ma'am. I am blind, yes, but not deaf. It still doesn't give her knowledge of a time that she wasn't there. Go ahead.
Q. Ms. Tews, in the clinical context, as far as you are aware, once a faculty person has been chosen to give a presentation, has NAF ever refused to allow that presentation to go forward at a meeting?
A. No, not that I am aware of.
Q. Does NAF check the accuracy of the views presented by faculty at its meetings?
A. Again, we don't typically review the content of the presentation of faculty members given ahead of time.
Q. Who is responsible for developing the content of the

faculty presenters' presentations at NAF meetings?
A. The faculty.
Q. You said that you sometimes pay honoraria to the faculty who present at NAF meetings?
A. It is not typical, but we sometimes do.
Q. In 1992 what was NAF's practice with respect to honoraria?
A. It was very uncommon to provide honoraria for faculty, and that was especially the case of TPH-F AF members who were presenting at the meeting, members who would have been in attendance at the meeting regardless of their faculty status.
Q. I'm sorry. Did you say it was common or uncommon?
A. It was uncommon.
Q. Do the same faculty present at every NAF meeting?
A. No, they do not.
Q. Are there some faculty who only make a single presentation at a NAF meeting and then never present again?
A. Yes.
Q. Is Dr. Haskell an employee of NAF?
A. No, he is not.
Q. Was he an employee of NAF at the time he spoke at the 1992 risk management meeting?
A. No, he was not.
THE COURT: Did he get paid?
THE WITNESS: I don't know the answer to that question, but it would be very atypical.

THE COURT: I didn't ask you that, ma'am. I asked you a very simple question. You have talked a lot and your counsel brought you through it about all the 30(b)(6) preparation you made. The question is, did you go back and check to find out whether or not he was paid?
THE WITNESS: I did review the records that we had in preparation for my deposition --
THE COURT: Ma'am.
THE WITNESS: And I did not see any indication that he was paid in those files.
THE COURT: Did you go through all the checks?
THE WITNESS: No, I didn't see any checks --
THE COURT: Did you go through the hotel bill to see if it was paid?
THE WITNESS: No, I did not.
THE COURT: Next question.
Q. Other than presentations by faculty, what, if any, other things are contained on the tapes of the NAF conferences?
A. The tapes that I have heard include questions and answers. So, for instance, the attendees of the meeting generally have an opportunity to ask questions of the faculty after a presentation, and that might appear on an audiotape. You heard on that audiotape that there is introductory material from the facilitators of a panel.
Q. On the tape that we have just listened to, do you know

whether there were any questions and answers taped on that same tape?
A. In preparation for my deposition, I did listen to that audiotape, and I believe that there were questions that followed Dr. Haskell's presentation.
Q. Were there any other presentations on that same tape?
A. Yes, I believe there were.
Q. On the tape we just listened to, it sounded as if Dr. Haskell made reference to a videotape that he was showing at the same time?
A. Yes, it did sound like that.
Q. Does NAF have that videotape?
A. No.
Q. Would it have been typical for NAF to review such a videotape in advance of a prese
presentation?
A. No, not at all.
THE COURT: She wasn't there. You could only extend this witness so far, ma'am.
MS. PARKER: I asked her whether it was typical.
THE COURT: She wasn't there. She wouldn't know. What is typical now may be one thing, but she wasn't there.
MS. PARKER: Your Honor, given that the government has introduced these as business records, the typical practice of the organization --

THE COURT: But she can't testify to it.
MS. PARKER: -- it relevant. She testified on direct to the practice of the organization for purposes of --
THE COURT: She went back and found files. She can't testify as to the program if she wasn't in attendance.
MS. PARKER: Your Honor, he information formed the basis for the government's admission of these tapes as business records.
THE COURT: Records and files that were under her control but not what practice was when she was not an employee and wasn't present.
MS. PARKER: I believe on direct the government elicited much about the practice of the organization.
THE COURT: Next question. I am not going tot argue with you. I have ruled.
MS. PARKER: I have no further questions, your Honor.
THE COURT: Any redirect?
MS. GOWAN: Just very briefly, your Honor.
REDIRECT EXAMINATION

BY MS. GOWAN:
Q. Ms. Tews, the risk management meetings have initial planning that occurs with the medical education committee meetings with the board of directors, correct?
A. Yes, that's true.

Q. At those meetings, various topics are discussed by the medical education committee about what might be an appropriate topic to cover at a risk management meeting, correct?
A. Yes, that's correct.
Q. There was some discussion about who might be appropriate to chair the risk management meeting, correct?
A. Yes.
Q. Then based on those conversations, the planning of the meeting moves forward, correct?
A. Yes, that's correct.
Q. The majority of the members on the committee are physicians, aren'tr they?
A. Yes, that is correct.
Q. They might also include members of the board who have particular expertise or interest in education or medical education, right?
A. Uh-huh.
Q. It is the general function of the medical education committee to review evaluations from attendees that have been submitted at prior annual meetings and risk management meetings to generate topics that might be appropriate for subsequent meetings, correct?
A. The medical education committee generally reviews summaries of evaluations from previous meetings.
Q. That the for the purpose of helping to decide what topics

might be generated for the following meetings, correct?
A. That is one of the purposes for reviewing summary evaluations.
Q. In addition to reviewing the evaluations from prior meetings, the committee might review some past topics that have been covered to assess if there are topics that have not been covered that might be relevant for a number of years and that might be renewed at NAF meetings, correct?
A. Yes, that's correct.
Q. The committee might be aware of research that is being done or emerging technologies that would be appropriate topics for a risk management meeting, correct?
A. Yes, that's correct.
Q. The committee then votes on a meeting top *EUG for the seminar, correct?
A. As I discussed in my deposition, I am not sure if there is a formal vote, but there is a decision that is made by the medical education committee about moving forward with the planning of the risk management meeting.
Q. Directing your attention to page 21/linel of your deposition in this case:
"Q. Does the -- does a committee then vote on a meeting topic?
"A. Does the med Ed committee then vote?
"Q. Yes.
"A. It's my discussion that there's some discussion whether

there is a formal show of hands. I'm not clear on that, whether there is a formal vote.
"Q. Is it as you say the med Ed committee, are they the ones that make a decision about what the topic for the risk management meeting would be?
"A. Generally, I believe that's how the topics are determined."
Were you asked those questions and did you give those answers at your deposition in this case?
A. Yes, I did.
Q. During the course of the discussion about the topics, there would also be discussion about who would be appropriate to chair that meeting, correct?
A. Yes.
Q. You reference some documents or correspondence that you uncovered in connection with your 30(b)(6) preparation in this case, and one of those was a letter from Dr. Martin Haskell to Dr. Burnhill at NAF, correct?
A. I believe it was addressed to Dr. Burnhill, not at the NAF address but at his professional address.
Q. Correct. And Dr. Burnhill was the one who introduced Dr. Haskell at the seminar that we just listened to, isn't that right?
A. Yes, that's correct.
Q. In that letter didn't Dr. Haskell outline what it is that Dr. Haskell proposed to present at a NAF annual meeting or

seminar?
A. Yes, that's correct.
Q. Didn't he outline that his proposal was to describe a technique for late second trimester/early trimester abortions intact extraction without induction?
A. I can't recall the specific wording of that letter, but that is the general content, I believe.
Q. Wasn't the idea, as expressed by Dr. Haskell to Dr. Burnhill, that the purpose would be to educate providers about D&E techniques for late second trimester and third trimester abortion?
A. Again, that is the general content that I remember.
Q. And relate Dr. Haskell's experience with the method and describe the method and selection criteria?
A. That's right the general content that I recall.
Q. Didn't Dr. Haskell propose to present a case study, present a video of intraoperative ultrasound techniques, propose to speak on cervical preparation and operative sequence?
A. I can't recall if that was in the letter. It appears as if you are reading it from the letter. And that is the general content of the letter.
MS. GOWAN: Thank you. I have no further questions.
THE COURT: Any recross?
MS. PARKER: No, your Honor, nothing further.
THE COURT: Ma'am, you may step down.

(Witness excused)
THE COURT: According to my watch, it is about 6 minutes of 5:00. I guess we will recess for the day and reconvene at 9:30 tomorrow.
Before we go, Ms. Gowan, I understand my clerks have been talking to you Mr. Hut. Is it your understanding, which surprised me, that you will only be addressing the stay? I thought also there was a mandamus before the Second Circuit on next Tuesday.
MS. GOWAN: Your Honor, yes, the mandamus petition will be before the Second Circuit on Tuesday, as well as the stay issue.
THE COURT: I thought they agreed to address, as the Seventh Circuit did, the substance of this production respect. Otherwise, we would be faced with a dilemma that I don't even wish to entertain.
MS. GOWAN: Your Honor, that's right. The posture, because of the nature of the Presbyterian appeal, is a little unclear, and it is possible that the Second Circuit could still have a merits briefing that would be different than a stay briefing and a mandamus briefing.
Certainly it is the government's view that the mandamus petition by New York Presbyterian Hospital was just a merits appeal that had been repackaged, if you will, in the form of a mandamus petition. And we did, in our opposition to

the mandamus petition, address the merits.
THE COURT: You did?
MS. GOWAN: We did.
THE COURT: All right. I can't imagine, although it would never cease to amaze me, but I can't imagine understanding that a trial was about to commence, that --
MS. GOWAN: We certainly did, your Honor. We put in our full briefing on that. We also argued lack of appellate jurisdiction in our papers.
THE COURT: All right. That is for the ladies and gentlemen of the 17th floor.
MS. GOWAN: In our view, the decision by the ladies and gentlemen of the 17th floor will certainly be tantamount to a decision on the merits, and we certainly hope the circuit will agree with that view, and we intend to urge that view on the Court on April 20th.
THE COURT: All right. Might I ask, are we doing transcripts in the morning? Not that I wish to pry, but just serve a general idea. Or do we have a witness starting off tomorrow?
MS. GOWAN: Your Honor, saved by the bell. ACOG today, and we will start with a live witness tomorrow, and hopefully we will have ACOG in the afternoon [> no ACOG today, I guess<]
THE COURT: I suppose that all points of view, whether

it is best late in the day or early in the day. All right, fine. That is what we are doing. We have a live witness in the morning and the deposition will be later in the day.

MS. GOWAN: Thank you, your Honor.

THE COURT: I wish you all a lovely evening. Court will stand in recess.

(Adjourned to 9:30 a.m., April 14, 2004)